

Expanding the Extractive Industries Transparency Initiative (EITI) Agenda to Transportation of Hydrocarbon Resources

A joint proposal by non-governmental organizations from Kazakhstan,
Azerbaijan, Georgia and Ukraine

Edited by Jenik Radon, Esq.

Adjunct Assistant Professor
School of International and Public Affairs
Columbia University

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By Willy Haakon Olsen Oil and Gas Advisor	

Terms and abbreviations used

EITI- Extractive Industries Transparency Initiative – EITI supports improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas and mining.

Hydrocarbon transportation – any form of delivery, measurable in kilometers, of raw and/or processed liquid and gaseous hydrocarbons, measured in million tons (mil/tn) or natural gas, measured in thousands of cubic meters (th. m³) within a network of national or transit transportation pipelines and/or railway.

Oil transportation pipeline – a pipeline designed to deliver liquid hydrocarbons in substantial quantities over long distances, including oil storage facilities and all branches specific to such pipeline, from initial injection stations to oil refineries, oil storages, railway loading facilities and seaport terminals.

Gas transportation pipeline – a pipeline designed to deliver gas in substantial quantities over long distances, including all gas storage facilities and branches specific to such pipeline, between the compression and decompression facilities.

National pipeline – oil or gas transportation pipeline running through the territory of a single state, with origin and/or destination confined to borders of that state, including seabed areas related to that state, as well as intermediate transit sections crossing the territory of the other state.

Transit pipeline - oil or gas transportation pipeline running through the territory of a single state including seabed areas related to that state, with origin and destination beyond the borders of the given state.

Railway and/or maritime hydrocarbon transportation system - network of facilities ensuring storage of supply in demand, its movement, processing before transportation (including compressing natural gas, renting railway tanks, ship freight, loading and unloading railway tanks and sea vessels), logistics and transportation to final destination.

Introduction

Current Policy Brief has been prepared by a group of experts from Kazakhstan, Azerbaijan, Georgia and Ukraine on behalf of the Regional EITI Network for the Caucasus and Central Asia. Objective of this brief is to expand the scope of the EITI agenda to include companies involved in the transportation of hydrocarbon resources by pipeline, railway and maritime (sea and river) transport. This document is supplemented by an overview of the specific features of hydrocarbon transportation in the afore-mentioned countries.

ECONOMIC ASPECT

The role and importance of hydrocarbon transportation has recently been on the rise. Evidence suggests that transportation systems have frequently developed into separate sectors of economic activity with significant socio-economic impacts across participating states. As demonstrated by the latest events in the South Caucasus, hydrocarbon transportation is an issue of high importance within international security and geopolitical discussions. The increasing role of hydrocarbon transportation calls for the urgent enforcement of transparency principles within the sector. The following circumstances are imperative:

- 1 Extraction is one of the initial (upstream) stages of hydrocarbon development and realization. Prioritizing exclusively transparency-related concerns at this stage will not produce a complete picture of all extractive sector revenues; it is essential for countries to also scrutinize the delivery of natural resources to world markets.
- 2 In this global society, natural resources are routinely mined in one part of the world and largely consumed in another, sometimes at great distance, thus resulting in the increasing importance of transportation in the "extraction – consumption" value chain (upstream – downstream).
- 3 Since 2004, the favorable outlook of the worldwide oil markets has dramatically increased the relative advantages of hydrocarbon revenues, including revenues from transportation of energy resources which have contributed significantly to the income of transit states.
- 4 Hydrocarbon transportation relies on distinctive infrastructure characterized by functional and regulatory peculiarities. This complicates the adequate transparency of transit-derived revenues and calls for a specific approach.
- 5 Hydrocarbon transportation has become a key industry in constant need of strong legislative regulations and an institutional framework relevant to its specificities.
- 6 Hydrocarbon resources in Central Asia grossly outweigh current capacities for their export. As a result, intentions to increase the volume of hydrocarbon transportation through Central Asia – Caucasus – Black/Mediterranean Sea corridor, in the near term, would necessitate a dramatic increase in the oversight of the East-West route.
- 7 Transit functions for Azerbaijan (for Central Asian oil) and Kazakhstan (for Turkmen and Uzbek natural gas) will most likely continue to expand and develop. The transit role of these countries would be measurable by specific economic outputs. In order to fully assess and visualize economic profit of transit via the aforementioned countries, a plan to fully embrace these up and coming roles should be created in a timely way.

8

National oil and gas companies are the last step in a vertically integrated holding system. Consequently, they are in full control of the entire technological chain – from exploration and extraction to transportation, processing and delivery of hydrocarbons, as well as their derivatives, to the global markets. This exacerbates the lack of transparency and accountability, hinders access to information, and facilitates corruption.

9

Transit proceeds for Georgia and Ukraine represent a substantial portion of these countries' budgetary revenues. The hydrocarbon transportation life cycle is discretionary, and a decline in reserves could eventually terminate hydrocarbon transportation, thus risking an imminent loss (or reduction) of this income. Therefore, it is important to ensure adequate transparency of hydrocarbon transportation revenues in order to facilitate sustainable economic development of the country through effective revenue management.

GEOPOLITICAL ASPECT

Newly discovered hydrocarbon reserves in the Caspian Sea basin suggest significant energy potential and attract attention from consumer countries in Europe and Asia. Global competition among consumers is stimulated by several geopolitical factors. Increasing oil and gas production in the Caspian Sea contributes to the economic growth of the countries in the region, mirroring the stimulus for Europe's economic development in the 1960's discovery of oil reserves in the North Sea. However, the geographic distance of Caspian energy resources from major consumer markets and the limited potential for growth in the transportation infrastructure spawns many geopolitical and economic concerns.

1

Policy of state energy monopolies enforced by the leadership of the Russian Federation is the main reason for exploring alternative export routes to Europe. The most optimal route is the Central Asia – Caucasus – Black/Mediterranean Sea corridor. In this context, countries whose territory is host to this route can expect a heightened international profile. Against a backdrop of an increasingly aggressive energy policy of the Russian Federation, there is a growing need to explore hydrocarbon transportation via alternative routes.

2

Long-term transit stability is contingent on the social and economic development of the host countries located in the transportation corridor. This might be achieved through ensuring transparency of transportation-related revenues.

3

Armed conflict between the Russian Federation and Georgia and the present threat to regional security have facilitated a new world order – a shift in the balance of power which reinforces the importance of an East-West corridor bypassing Russian territory.

4

Conflicting interests between transit countries and attempts by external forces to heighten tensions between them raise concerns among energy consumers as to the security of supply from the existing transportation network. Monopolistic energy suppliers in seeking to maintain their positions attempt to use their strong position and thereby limit alternative transportation routes for producing states. Key issue is also transparency in pricing in the transportation sector and the avoidance of transport and producer energy monopolies. Transparency in pricing and decision-making processes in both transport and energy producers as well as the avoidance of such energy monopolies will create a trust mechanism in the public and the consumer states. Consideration needs to be focused on structuring such entities as international public utilities. Stable and secure transportation requires strengthening trust and partnership between the parties involved. This can also be facilitated by enforcing transparent and accountable systems of revenue management in transit states.

EUROPEAN INTERESTS IN STABILITY OF HYDROCARBON RESOURCE SUPPLY ON EAST-WEST ROUTE

The European Union is particularly interested in accessing Caspian energy resources through alternative routes (bypassing Russian territory). The importance of Caspian Sea hydrocarbon resources for energy security of the European Commission, as well as social and economic development in the region, has been highlighted by the EC in its "Communication from the Commission to the Council and the European Parliament on the Development of Energy Policy for the Enlarged European Union, its Neighbors, and Partner Countries" of 13 May 2003:

"As highlighted in the Commission's Green Paper in the Security of Energy Supply, the European Union has a specific interest in the extensive oil and gas reserves of the Caspian Basin which will, in the future, contribute to security of supply in Europe. <...> secure and safe export routes for Caspian oil and gas will be important for the EU's security of energy supply as well as crucial for the development (economic, but also social and political) of the Caspian region".

The European Union highlights transparency as one of the basic principles of its relations in energy cooperation with partner states.

In recent years, the EC has made significant strides in securing transparent energy sector operations. EC legislation establishes a balance between transparency and confidentiality pertaining in the first place, to the sensitive sector of natural gas transportation. A basic framework is laid out in Directive 2003/55/EC of the European Parliament and the European Council of 26 June 2003 concerning uniform rules on

the internal market of natural gas (Second Gas Directive). This document aims at further liberalization and the establishment of a fully transparent natural gas market in the EC.

European transparency regulations are reflected in the text of corresponding memorandums with partner states and can be used in various transparency initiatives.

THE LACK OF TRANSPARENCY IN TRANSPORTATION OF HYDROCARBON RESOURCES

A bulk of accessible information related to means of transportation can be found in oil and gas pipeline enterprises. In comparison, access to information regarding railway transportation is a greater challenge. National operators do not provide sufficient information on financial transactions related to hydrocarbon transportation via rail. Even more challenging is access to information on maritime transportation, where information is usually second-tier, while data on volumes, tariffs and budgetary payments can be accessed only in an aggregated format. Summary values are a distinctive feature of the official statistics.

- 1 Formal information on the state's share in company capital is generally accessible, albeit not to a full extent. At the same time, specific information on company payments to the state budget and payments on dividends is missing entirely. The same is true for information regarding benefits or concessions accorded to the state in payment of its share in company investments.
- 2 In certain cases, particularly in Kazakhstan, a system of non-transparent property transactions hinders access to reliable and full information either on property owners or financial revenues generated. This gives grounds to suspect irregular combinations of initial property owners as non-identifiable through intermediary dealers registered in offshore zones.
- 3 The end result is the inability to verify official data, budget evasion, abuses and corruption.
- 4 Lack of transparency is further aggravated by conflicting data on tariffs applied on transit routes, as well as dependence of these tariffs on non-economic factors.
- 5 The majority of transportation companies deny public access to information. Accessible reports are either incorrect or drafted in accounting or financial reporting formats. These documents do not offer information that is accessible or meaningful for the larger public. Aggregated data on company payments to the budget creates hurdles to objective evaluation of company contributions in budget formation.

6

Effective control on financial flows between companies taking part in the "extraction – consumption" chain, including their payments in favor of the state budget and non-budgetary funds, cannot be meaningful without proper accountability and audit. Companies must fully abide by internationally recognized standards of bookkeeping, financial reporting and audit. However, some national (or state-owned) companies have not yet adopted international standards for bookkeeping and accountability, and the quality of audit is a serious concern for international financial institutions.

7

The EITI framework ensures reliable data on company payments through an independent verification of corresponding state data. At the same time, reporting involves a number of shortcomings that make it difficult for third parties to ensure the reliability of such verification. For example, information on transportation expenses of extractive companies is not included in the current EITI reporting standards. This eliminates the possibility to objectively assess the overall volume of profitable oil within the framework of the Production Sharing Agreement (PSA). The inclusion of transportation companies into EITI reporting shall facilitate an increase in the transparency of revenues of extractive companies and the government, as well as of the entire "extraction – consumption" chain.

8

Calls by several non-governmental organizations for inclusion of transportation companies' revenues into EITI reporting are not adequately understood at the official level. One example is the government of Kazakhstan, which is against the inclusion of transportation companies' reporting citing that the current EITI agenda is limited only to payments of extractive companies.

CONCLUSIONS

The international EITI initiative has been expanding over the last five years. The implementation area is widening and new challenges are being dealt with by all stakeholders. Producing countries at different levels of development of the initiative are becoming increasingly active in improving the transparency of their extractive sectors.

This initiative, which focused exclusively on the publication of company payments and state revenues from the development of oil, gas and mineral resources, is now increasingly in need of broadening its agenda.

In this context, expanding the traditional agenda of the EITI to include the transportation of hydrocarbons is an issue of immediate concern. In the opinion of the authors of this document, who represent expert communities of Azerbaijan, Georgia, Kazakhstan and Ukraine, this issue is of particular interest to the countries in question.

RECOMMENDATIONS FOR THE EITI SECRETARIAT

1. Discuss possibilities of extending EITI to related enterprises that have inherent technological and financial ties with extractive companies, i.e. transportation of hydrocarbon resources via:

- railway and/or maritime transportation systems;
- oil transportation pipelines;
- gas transportation pipelines.

2. To this end, it shall be necessary to:

- Establish a working group to study the possibilities of including of pipeline/railway/maritime transportation companies into EITI and to broaden the transparency agenda on the decision-making and pricing processes and structures.
- Liaise, in the framework of the working group, with the European Energy Charter Treaty Secretariat, the International Energy Agency and the European Commission.

3. Consider possibilities for initiating a pilot project on ensuring transparency of hydrocarbon transit along one of these routes:

- traditional routes: Central Asia – Russian Federation – Ukraine – EC;
- new routes: Central Asia – Caspian Sea - South Caucasus – Turkey – Mediterranean Sea or Central Asia – Caspian Sea - South Caucasus – Black Sea – Ukraine – EC.

KAZAKHSTAN

POSITIVE DEVELOPMENTS IN EITI IMPLEMENTATION IN THE CONTEXT OF EXTRACTIVE COMPANIES

In three years of EITI implementation in Kazakhstan, 105 oil and mineral mining companies have become party to the Initiative. In 2007, as a result of active targeting campaign held by NGO Coalition, EITI was joined by the largest and least transparent taxpayer among oil extractive companies, Tengizshevroil LLP. Apparently, all oil extractive companies were made aware of the essence of the EITI, as well as of interest of the authorities in ensuring its implementation. The equal and professional participation of the NGO Coalition in all related processes was a revelation for company representatives. Mineral mining companies received basic information about EITI and NGO participation in its implementation. Two conferences planned this year in mining regions of Kazakhstan under the World Bank auspices should enhance this understanding.

All EITI parties acknowledged the active participation of NGO Coalition in the process of preparation of the first EITI National Report on Kazakhstan, as well as its expert review and organization of wide public debate, identified shortcomings in the revenue accounting of extractive companies. As a result, an agreement was reached on a new reporting format and technical description for the verification of reports for the second EITI National Report.

With the financial support of Soros Foundation Kazakhstan, the Coalition translated EITI materials into Kazakh and commenced dissemination of EITI either in Russian or in state language, which allowed for information coverage in those regions of Kazakhstan that are most affected by the so-called "resource curse".

From 2006 through 2008, the NGO Coalition undertook and still implements research, as well as informational and educational projects either on a regional or national level, such as:

- monitoring of community development projects by extractive companies;
- strengthening public participation in EITI implementation;
- monitoring of pipeline companies;
- research on compatibility of mining legislation in the Republic of Kazakhstan with International Monetary Fund (IMF) standards;
- "Excess Money" program on Radio 31, series of publications in "Against Corruption" magazine;
- seminars on taxation of extractive companies, as well as seminars on principles and criteria of sustainable development in the context of EITI implementation in Kazakhstan under auspices of the World Bank, to be held by the end of 2008;
- conference with MPs of the Majilis of the Republic of Kazakhstan, round table on UNDP program on EITI implementation in Kazakhstan, etc.

As a result of the aforementioned activities, stakeholder and broader public awareness of EITI has increased greatly, and the public prominence of the NGO Coalition has been given a significant boost:

- a) Research of publications and broadcasts of regional and national media revealed that EITI issues have been noted in dozens of publications more than hundred times, usually in conjunction with the NGO Coalition, its member organizations or representatives.
- b) A solid foundation for the establishment of regional Consultative Councils on EITI has been laid. The NGO Coalition has been recognized in various forums by key government officials including its line Ministries; the Prime Minister; MPs of Majilis and Vice-Premier U. Shukeev.

CLARITY OF FUNCTIONS AND RESPONSIBILITIES

State share in the capital of private companies, state-owned companies

Hydrocarbon shipments through transportation pipelines are operated by seven companies, including KazTransGas JSC and KazTransOil JSC, property of KazMunaiGas JSC. Moreover, Kazakhstan holds shares in the capital of the following companies:

1

Caspian Pipeline Consortium Company – 19% (Russia – 24%; Oman Sultanate – 7%; Chevron Caspian Pipeline Consortium Company - 15%; LUKARCO B.V. - 12,5%; Rosneft-Shell Caspian Ventures Limited - 7,5%; Mobil Caspian Pipeline Company - 7,5%; Agip International (N.A.) N.V. - 2%; BG Overseas Holding Limited - 2%; Kazakhstan Pipeline Ventures LLC - 1,75%; Oryx Caspian Pipeline LLC – 1,75%).

2

MunaiTas North-Western Pipeline Company JSC – 51% (49% - China National Petroleum Company International in Kazakhstan LLP);

3

Kazakhstan-China Pipeline LLP – 50% (50% - China National Oil and Gas Exploration and Development Corporation, CNODC).

4

Asian Pipeline LLP, a project company for construction of Kazakhstan-China Gas Pipeline – 50% (Trans-Asia Gas Pipeline Limited, an affiliated enterprise of China National Petroleum Company, CNPC).

5

Batumi Terminals JV – 50% (50% - Batumi Oil Terminal).

6

Amount of shares held in Turgai-Petroleum JSC could not be determined, since available data reveal equal participation of two founders – LUKoil Overseas Kumkol BV and PetroKazakhstan Inc. There is no information on the share of Kazakhstan in the founders' capital. Meanwhile, other sources point to the Hurricane Kumkol Munai Company as one of the founders.

Kazakhstan has no shares in the capital of Karachaganak Petroleum Operating BV (Agip - 32,5%; British Gas - 32,5%; Texaco - 20%; LUKoil -15%).

While information on state share in the capital of companies is available to some extent, more specific data on company payments in favor of the budget and payments on dividends is missing entirely. The same is true for information regarding benefits or concessions accorded to the state in connection to payments on its share in company investments.

A complex structure of ownership in transportation companies is further convoluted by the fact that the founders of such enterprises are subject to even more complex property structures. It is possible to suggest largely arbitrary combinations of the same initial owners, which are further rendered unidentifiable by intermediaries registered in offshore zones.

Additionally, participation of Kazakh Government and specific companies in transportation projects is entirely nontransparent due to the fact that, besides holding shares in various pipeline operator companies' capital, there is a share-based participation in specific pipelines and, even further, joint participation in the servicing of specific pipelines. For example, gas pipelines "Central Asia – Center", "Bukhara – Ural", "Soyuz", "Orenburg – Novopskov" and other transit routes are serviced by foreign companies in cooperation with Intergas Central Asia JSC, a subsidiary of KazTransGas JSC, while the main state-owned extractive and transportation -company, KazMunaiGas JSC holds share in the capital of the state-owned railway carrier – KazakhstanTemirZholy JSC.

An overall lack of transparent information on the structure of the ownership of companies operating in this industry, as well as structure of subordination among them and their network of transactions, suggests the possibility of so-called cyclic references, used to hinder proper accounting, where company A is an owner of company B and the latter turns out to be an owner of company A through intermediate chain of joint ventures or projects in an infinite loop of transactions between these two.

Non-transparency of this information is further aggravated by contradictory data on tariffs applicable to transit routes and dependence of such tariffs on political background, local events of natural or political character, and often on statements of certain political leaders.

It should be highlighted that all fiscal duties of transportation companies and all other costs are paid by extractive companies, effectively reducing budget revenues from these companies. Since information on such financial transactions is not accessible, this effect cannot be assessed within substantial margins

of error; however, it is suspected that companies holding shares simultaneously both in extractive and transportation enterprises are making use of resulting non-transparency for tax evasion purposes.

Consequently, there's no definitive answer to the extent of overall profitability of the transport sector for the state.

Quasi-fiscal Activities

Another relatively negative aspect of transportation company operations is the excessive non-commercial burden they are expected to bear – both state-owned and private enterprises. As IMF Guide on Resource Revenue Transparency points out, "poor commercial performance may in part be attributed to poor governance and lack of competition, but the companies' substantial role in promoting a variety of noncommercial/quasi-fiscal activities (QFAs) reduces managerial accountability for both types of activity. Provision of noncommercial services is primarily a government responsibility, and clarity of fiscal policy requires that the extent of such activities should be overseen by the finance ministry."

Mechanisms used by international or national transportation companies for payment of social or environmental costs or for subsidizing producers or consumers are neither defined nor reflected in the fiscal documents. As noted above, access to comprehensive and reliable information on these funds is impossible. At the same time, the sheer volume of these monetary transactions is evidenced by a number of disjointed facts, such as yearly spending of 100 million USD by Karachaganak Petroleum Operating BV for community purposes in one of Kazakhstan's regions, while Intergas Central Asia JSC has allocated 20 million USD solely to solve employee housing concerns.

There is other evidence as to inaccessibility of company QFAs revealed by monitoring activities conducted by Soros Foundation Kazakhstan:

NGO representatives discovered schools and roads in dire need of repairs, a lack of drinking water, while an extensive community project undertaken by KazMunaiGas JSC was a summer stadium to be built on a swamp. NGO inquiries into the matter produced the following response from the company: "Information requested, in accordance with internal company regulations, relates to activities accountable exclusively to its sole shareholder, namely, Kazakhstan Holding for Management of State Assets - Samruk JSC". The inquiry went unanswered.

In Ural region, NGO inquiries for access to information on community-based projects are answered by references to Production Sharing Agreement (PSA) conditions, under which such information is not subject to disclosure; meanwhile, information about construction of Aksai – Berezovka road was revealed: this road doesn't actually exist.

Environment-related expenses are another non-transparent aspect of the QFA. These payments are obligatory for the companies, as well as expenses for the development of the regions (noted above), with a fraction of these expenses subtracted from taxable base. Consequently, such costs are partially borne by the state though not reflected in fiscal documents alongside other public expenses, leading to a distortion of the real outlook of the budget.

QFA activities extend beyond fiscal operations - from the selection of facilities and contractors, and setting fees to supervision and handover; these procedures are beyond the competence of executive authorities. Again, all expenses of transportation companies for QFAs are paid by extractive companies through transportation tariffs, thus effectively reducing the taxable base.

PUBLIC ACCESS TO INFORMATION

Accountability on payments to the budget, on dividends and QFAs undertaken by companies for the public benefit, is a crucial element in ensuring transparency in fiscal and taxation sectors. Moreover, in the context of broader public, accountability shall produce information that is correct to the extent possible and adapted for easy understanding. Studies revealed that many transportation companies do not ensure public access to information. Company management at times openly neglects legal requirements on access to information, including economic information, while publicly accessible reports are either incorrect or are drafted in formats used in bookkeeping or financial reporting; as a result, these documents, in both cases, do not carry information that is accessible and meaningful for the broader public.

Relations between companies and the government are not explained or disclosed in fiscal documents, leading to an inability to assess the reliance of the budget on tax revenues from these companies, revenues from the transport of supplies, environmental payments and natural profits received through QFAs. Aggregation and summarization of data related to the influence of transport companies, as well as an overall lack of information, creates difficulties for public understanding of corporate influence in budgetary terms, for development of the regions and, in general, negatively impacts the state of affairs. For example, attempts to correlate data on volumes of hydrocarbon delivery from the extractive companies with corresponding data from pipeline companies were futile from its inception, since there's no data on specific pipelines, namely, separate volumes of transported supplies by their company attribution or, vice versa, data on companies by specific pipeline delivery.

Evidenced in Table 1 below, the results of research into official reports, company web-sites, media and Internet publications in 2006:

Table 1

	KazTransGas JSC	KazTransOil JSC	Caspian Pipeline Consortium Company	Karachaganak Petroleum Operating BV	MunaTransGas North-Western Pipeline Company JSC	Kazakhstan-China Pipeline LLP	Turgai-Petroleum JSC
Volume of oil shipments	-	43,266 mil. tons	31,121 mil. tons	Not disclosed	5,296 mil. tons	10 mil. tons	Not disclosed
Volume of gas shipments (bil. m ³)	121,38	-	122,0	14	-	-	-
Budget payments, data from companies (mil. \$)	135,18	67,28	Not disclosed	Not disclosed	14,94	Not disclosed	Not disclosed
Budget revenues, data from the Ministry of Finance (mil. \$)	30,12	73,36	7,75	Not disclosed	Not disclosed	Not disclosed	Not disclosed
QFA volumes (mil. \$)	Not disclosed	Not disclosed	Not disclosed	10,42	Not disclosed	Not disclosed	5,36

Insufficient data prevents drawing reliable conclusions as to the indicators of company activity, since, for example:

- gas shipment volumes for KazTransGas JSC (121,38 billion m³) and Karachaganak Petroleum Operating BV are partially within the volumes provided by Caspian Pipeline Consortium, and partially – within data on other gas pipelines that are either missing or aggregated;
- information on company tax payments is either missing or is not reliable and inconsistent with data from the Ministry of Finance.

Lack of transparent statistics on hydrocarbon transportation volumes, on budget revenues and on social projects of companies leads to public distrust, passive attitudes by corporation personnel, inefficiency of fiscal process, and extra-budgetary, sometimes criminal, use of budget funds.

OPENNESS OF BUDGET ACCOUNTABILITY

Fiscal risks

Yearly fiduciary documents shall openly discuss various risks related to variability of revenues from the transportation of natural resources as well as the instability and unpredictability of pipeline market outlook. The relevant actions to remedy these risks must be explained and their results monitored.

Apparently, substantial price variations for supplies would not only have an impact on their proceeds and other key variables, such as exchange and interest rates, but also on revenues from their transportation. Besides, change of intent of other states regarding transport routes may lead to substantial threats; a relevant point for transit states like Ukraine and Georgia.

In general, all factors listed above may impact forecasts on state expenses in short-term and mid-term perspectives. Nevertheless, fiscal documents do not include assumptions on volumes of resource transportation, basic tariffs for transport and expected variation margins, while procedures for automatic regulation in cases of unexpected growth or decline in volumes of transportation and its proceeds are not envisaged in fiscal legislation.

Overall accounting of natural resource revenues

Existing systems of accounting are obviously inadequate for the industry in question due to complexity of ownership and operations, as noted above, as well as market instability. Special mechanisms of data verification and approval used by EITI in order to ensure coherence of revenue transactions between extractive companies and the government cannot sufficiently identify these revenues, unless data on natural resource transportation revenues is entered into these mechanisms.

Internal control and natural resource revenue audit

Internal control and audit of activities funded by energy resource revenues shall be subject to standard regulations and procedures applicable to government agencies in general. In other words, all tax and fiscal regulations must be applied by private companies all the more as International Monetary Fund (IMF) standards dictate procedures related to proceeds from activity funded by revenues from natural resources, e.g. hydrocarbon resource transportation.

The current study has revealed an absolute disregard of the application of these standards in Kazakhstan.

ASSURANCES OF INTEGRITY

The management of transport companies, their transactions with hydrocarbon extractive companies and, consequently their related fiscal payments is not possible without proper accounting and audit procedures. Companies must fully abide internationally approved standards of bookkeeping, financial accounting, audit and payment reporting. Most companies in Kazakhstan have yet to adopt international accounting standards, while poor audit practices

remain a constant and serious concern for international financial institutions, namely the IMF and the World Bank.

There is a detrimental lack of defined mechanisms and authentication procedures of any official data in Kazakhstan. Such systems shall be defined by law and subsequently applied by appropriate state accounting agencies for verification and approval of state reporting, including information about revenues from extractive companies.

Yet another component for ensuring authenticity is independent verification of company data on fiscal payments, dividends paid to the state and QFA expenses, against corresponding data of the government. The verification of extractive company revenues in the framework of EITI, as noted above, as well as this study, demonstrated an inability to correlate extractive companies' and government data without the inclusion of transportation companies into EITI reporting. The government of Kazakhstan opposes this by citing a lack of precise references in the EITI agenda on the inclusion of transport companies into this process.

STATE REVENUES FROM TRANSPORTATION COMPANIES

The obligation of transportation companies to the state are defined by tax legislation, contracts and local agreements (Memorandums). Presumably, in line with the general requirements of legislation, transportation companies should pay common taxes, excises, royalties, payments and dues. However, these and other expenses (such as maintenance of cultural heritage, education and health care, various charity and public events) are not defined by law, but rather by contracts that are inaccessible either to the public or the Parliament. Therefore, all information related to fiscal payments, dividends paid to the state, QFA expenses and other state payments are closed.

Moreover, in Kazakhstan, in contrast to other states, only payments by companies directly into the budget – thus, to the State Treasury account – can be identified and therefore controlled by executive authorities and supervisory agencies on the basis of tax and fiscal legislation. All parameters of such payments, rules for their calculation and control, as well as authorities competent to receive such payments are defined by the terms of specific individual contract.

The following are taxes and other payments separated into fiscal levels, according to Kazakhstan legislation:

List of payments	Central budget	District budget	Budget of Almaty and Astana	Regional (regional city) budget
Corporate income tax	X			
Personal income tax		X	X	X
VAT	X			
Excises	X		X	X
Royalties	X			
Share of the Republic of Kazakhstan in PSA	X			
Social tax		X	X	X
Land tax			X	X
Vehicle tax			X	X
Property tax			X	X
Dues	X		X	X
Payments	X	X	X	X
Rates	X			X
Dividends on state-owned stock packages	X		X	X
Proceeds from shares in state-owned legal entities	X		X	X
Proceeds from rent of state-owned assets	X		X	X

According to fiscal legislation, district authorities define fiscal levels accordingly while the district budget is determined by central authorities. Corporate income tax is the largest contributor towards tax revenues; paid directly to the central budget. This approach perpetuates extreme discrepancy among different economic strata of Kazakhstan society.

There is no information available on any of the fiscal levels or taxes, therefore, extending EITI activities to transportation companies would promote transparency in extractive industries and ensure public remedies.

SOCIAL IMPORTANCE OF TRANSPORT SECTOR IN THE ECONOMY

Transport infrastructure, be it pipeline, railway or road transport, is unique in its coverage of vast areas of land and number of settlements.

In Kazakhstan, transport infrastructure dominates the landscape, including exclusion zones adjacent to highways. This heavily influences environmental factors – from threats posed by risk of accidents in transport of supplies, to destruction of biological diversity in affected areas. Further the development of transportation infrastructure minimizes the justifiable use of arable lands for agricultural purposes, negatively impacting on the often impoverished rural population.

Construction, repair and maintenance units are present throughout the urban centers of the country while only about 5% of the population of Kazakhstan is employed by this industry.

Nevertheless, the industry attempts to promote the principles of social responsibility by the government and managers of state and private companies in Kazakhstan, as well as approaches for putting these principles to work. In essence, calls for social responsibility are not driven by an intention to set civilized relations, but rather to impose atypical functions upon the companies, in order to compensate for shortcomings in the State.

Statements on respect for these principles and information on their implementation, available from websites of the government and transport companies are mostly declaratory, while reports of the government, ministries and companies are formalized though incorrect, with a notable exception of Karachaganak Petroleum Operating BV.

As there is no notable control by the government or the public over relations between authorities and companies corruption at all levels of state governance is practically unavoidable. Chronic nepotism and self-centered focus, inherited from Soviet times, have been further strengthened due to a distorted interpretation of business confidentiality. Information on either tax or quasi-taxation relations, human rights, environmental conditions and safety regulations is inaccessible.

Mechanisms for cooperation between the public, transportation companies and the state are entirely non-existent in Kazakhstan, as well as provisions enabling public monitoring of transactions between the state and the companies. Watchdog NGOs are denied access to information on the inexplicable grounds of inviolable constitutional rights of private property and privacy of personal and family life. Moreover, these grounds are invoked to prevent access to even the most general information and more surprisingly for denying access to not only for private companies, but even state-owned entities.

Conversely, constitutional rights for free access and dissemination of information (Article 20 of the Republic of Kazakhstan) and the right to participate in public affairs (Article 33) are not incorporated into law and are openly dismissed both by the authorities at all levels and the companies. Industry employees report being threatened by company administration and subsequently refuse to provide information on even with the most basic issues hindering interested NGO representatives from gaining any type of data. As such, NGO monitoring of the activities of transport companies is rendered all but impossible.

.At the same time, the process of enforcing EITI in Kazakhstan, mechanism for open and equal collaboration of the state, companies and NGOs has been set up, and there have been cases where companies have removed obstacles for monitoring. This further serves to argue for the inclusion of transportation companies into EITI agenda.

NEED FOR EXPANDING EITI AGENDA TO RESOURCE TRANSPORTATION

Revenue from the extractive industry within the EITI framework should be transparent inclusive of revenues paid to the government by energy resource transportation companies:

- a) All revenues from hydrocarbon transportation are extractive companies' expenses. Further, extractive enterprises largely own pipeline companies; hence lack of accessibility to both sectors precludes a comprehensive implementation of EITI;
- b) As transportation companies enjoy monopolist status, the government, regardless of market reality is able to influence tariffs, routes and volumes of shipment , as well as access to transport infrastructure, often for inappropriate political gain.

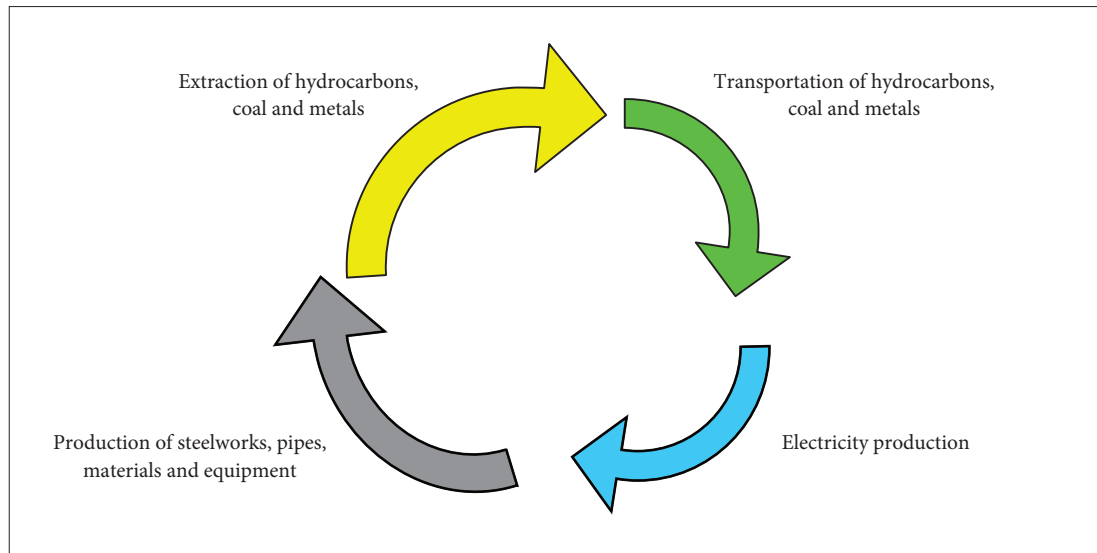
Transport companies' operations and state transactions with them need intense public scrutiny not only in the context of transparency of extractive industry revenues, but also of government structures, since:

- a) oil and gas pipelines run through many regions in various nations; investments into transport systems and services are practically untraceable for civil society in these countries despite amounting to billions of dollars and having a significant impact on local economies;
- b) gross fiscal payments in the countries concerned are impossible to assess, as transportation contracts are strictly confidential and transportation revenues, together with transactions between transportation companies and the state, are not included into fiscal documents.

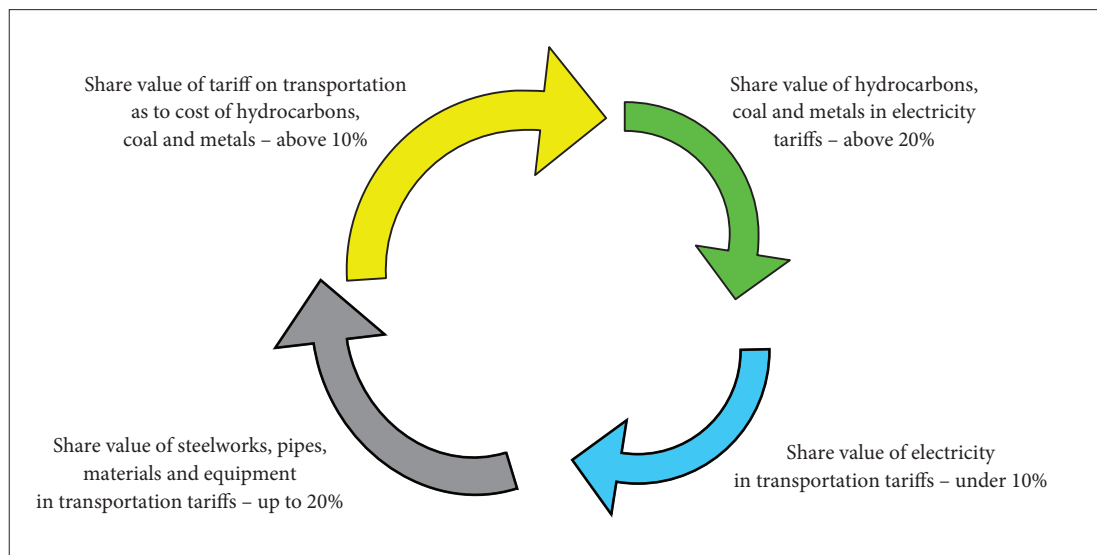
These factors exert significant influence on the rising cost of energy resources internationally, destabilizing global political and economic processes.

Graphs 1-4 below illustrate four interlinked systems, each element dependent on and influencing all others:

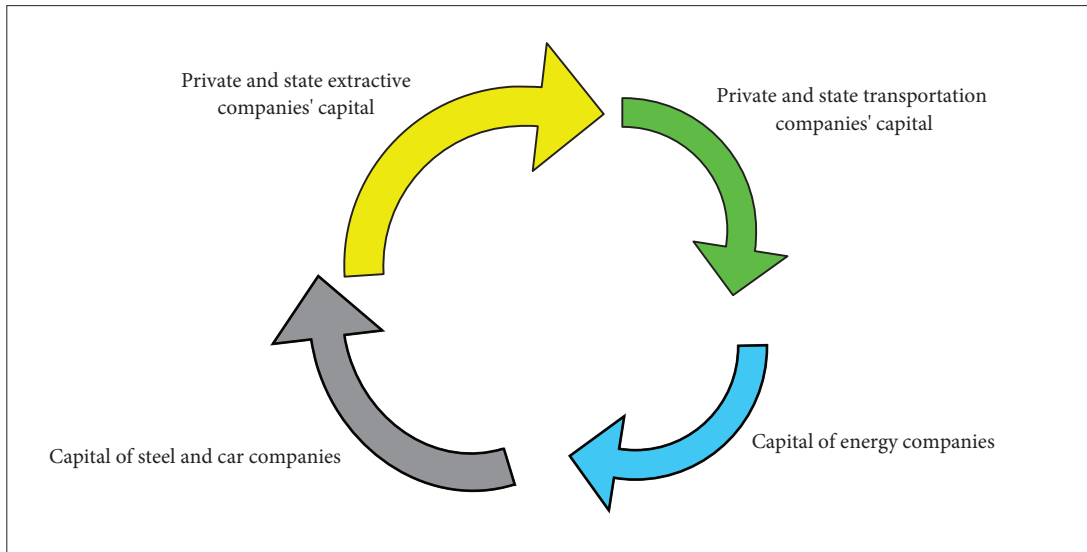
1. Technology system:



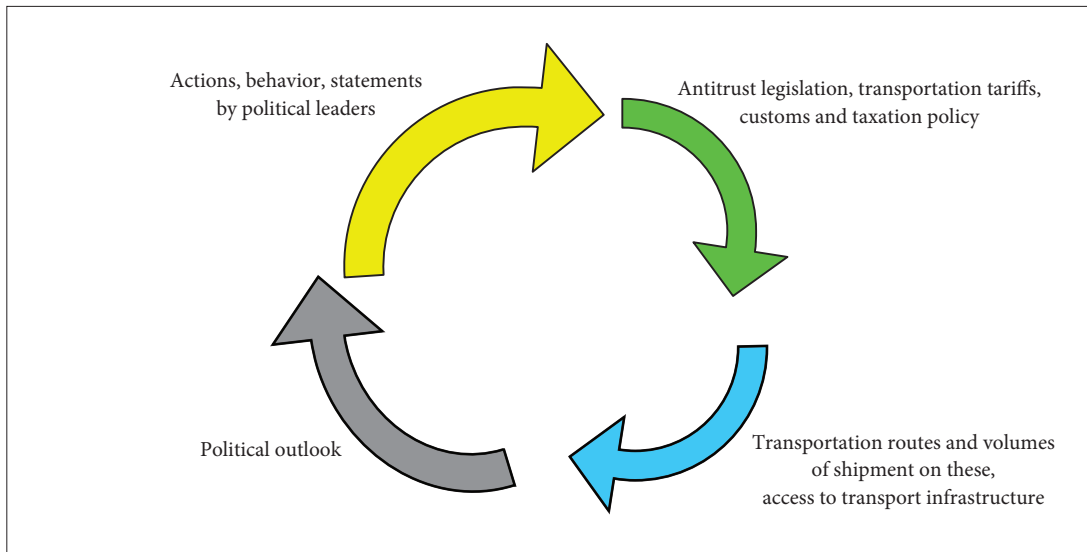
2. Tariff-value system:



3. Financial-investment system:



4. Political system:



It is clear that transportation of resources is inherently tied into these four "vicious circles", where activity parameters of transportation companies determine and moreover, due to state monopolization, aggravate energy concerns.

AZERBAIJAN

BACKGROUND

Traditionally, Azerbaijan is an oil-mining country. The country actively explores offshore reservoirs in its sector of the Caspian Sea and approaches daily production levels of up to 1 million barrels of oil. At the same time, the place and role of Azerbaijan on the region's energy map is notable not only for its hydrocarbon resources, but for its unique transport possibilities.

Azerbaijan's initiation of an important pipeline and other transport projects result in a transport network in place in the Caspian region, able to deliver large volumes of Central Asia mineral resources to European markets through Caucasus and Turkey, as well as through the Black Sea.

There are currently five pipelines operating in Azerbaijan: 1) Baku-Tbilisi-Ceyhan (oil); 2) Baku – Supsa (oil); 3) Baku – Novorossiysk (gas); 4) Baku-Tbilisi-Erzurum (gas) and; 5) Baku-Gazakh-Gardabani (gas).

Railway communications are in place on the Baku-Batumi/Khulevi/Poti route, as well as a network of marine routes over the Caspian (Baku – Aktau, Baku – Turkmenbashi, Baku – Okarem, Baku – Neka and Baku – Resht). Via these routes, hydrocarbons and other cargo from Kazakhstan, Turkmenistan and Iran are shipped. There are no marine transport communications between Russia and Azerbaijan. In addition, Azerbaijan has taken the lead in an active discussion regarding their critical role in a trans-Caspian gas pipeline construction and a large-scale Nabucco project.

The recently launched Baku-Tbilisi-Kars railway construction project will finally transform the corridor into a stable transit hub for transportation of hydrocarbons or any other goods directly to European markets.

Thus, Azerbaijan is becoming a key transit country for the international community and, in the short-term, its transit potential will be a determining factor for both its economic well-being and energy security of Europe in general.

HYDROCARBON TRANSPORTATION METHODS AND THEIR MANAGEMENT MECHANISMS

Pipeline transport

At its basic level, operating pipeline infrastructure of Azerbaijan can be presented as follows:

BAKU – NOVOROSSIYSK

(NORTHERN ROUTE)

Date of decision on pipeline route choice:	8 October 1995
Date of signature of interstate agreement on transport of Azeri oil onto the territory of the Russian Federation:	18 January 1996
Aim of the project:	Modernization of existing pipeline with a view to delivering Azeri oil to global markets
Length of pipeline:	1411 km (231 on the territory of Azerbaijan)
Pipeline diameter:	720 mm (530 mm on Sanchagal-Sumgait section)
Daily output capacity:	15,75 tons (115,000 bar.)
AIOC investments:	50 million USD (plus 5 million USD from Transneft on Russian territory)
Transit tariff:	15,67 USD for a ton
Pipeline loading start date:	16 October 1997
Date of transit of SOCAR oil through Azeri-Russian border:	25 October 1997
Date of first SOCAR oil tanker departure from Novorossiysk:	25 December 1997
Date of transit of AIOC oil through Azeri-Russian border:	28 February 1998
Date of first AIOC oil tanker departure from Novorossiysk:	24 March 1998
Total volume of oil shipped (as of 1.01.2008):	25,3 million tons

The Baku-Novorossiysk pipeline is the property of Russia and Azerbaijan and runs through the territory of these states. Pipeline operations in Azerbaijan, on behalf of the government of Azerbaijan, are managed by SOCAR. In Russia, the corresponding operator is Transneft. Access to the pipeline within Azerbaijan's competencies. In coordination with its Russian counterpart (Transneft), oil is transported to Novorossiysk, where it is mixed with lesser-quality Kazakh and Russian oil shipped by the Caspian Pipeline Consortium. Traditionally, this pipeline was used for delivery of Azeri oil, however, foreign-owned oil among the consortium members has been also transported recently.

High tariffs and the mixture of high-quality Azeri light crude with lesser-quality supply renders this particular pipeline route less attractive in comparison with the other two. Besides, ownership by the Russian state restricts possibilities for its free operation. Passage through the oft unstable North Caucasus route may also be considered a negative feature of this pipeline.

BAKU – SUPSA

(WESTERN ROUTE)

Date of decision on pipeline route choice:	8 October 1995
Date of signature of interstate agreement on transport of Azeri oil onto the territory of the Georgia:	8 March 1996, Tbilisi

Aim of the project:	Modernization and additional construction of existing pipeline with a view to delivering Azeri oil to global markets
Length of pipeline:	827 km (443 on the territory of Azerbaijan)
Pipeline diameter:	530 mm
Daily output capacity:	130,000 bar (6.5 mil tons per year)
AIOC investments:	560 million USD
Transit tariff:	0.43 USD per barrel (0.17 USD for Georgia) or 3.1 USD per ton
Pipeline loading start date:	10 December 1998
Date of contract oil transit through Azeri-Georgian border:	5 January 1999
Date of first oil tanker departure from Supsa:	9 April 1999
Total volume of oil shipped (as of 1.01.2008):	25,3 million tons

Oil transportation has been suspended during 2007/2008 due to technical problems on the pipeline discovered at the end of 2006. The pipeline is operated by Azerbaijan International Operating Company (BP- managed). The western route is comparatively favorable due to low tariffs, consortium ownership and access of pure Azeri crude to the Black Sea. However, the recent brief war in Georgia in August 2008 and subsequent bombing of the Poti port by Russian military, destabilized Batumi and Kulevi and increased risks for this pipeline.

BAKU – TBILISI - CEYHAN

(Main export pipeline)

Date of contract signature:	18 November 1999, Istanbul
Contract signed by:	Presidents of Turkey, Georgia, Azerbaijan, Turkmenistan, Kazakhstan and USA
Aim of the contract:	Construction of new pipeline would ensure delivery of large quantities of Caspian oil to global markets
Date of establishment of Sponsors' Group for the project:	17 October 2000
Date of establishment of BTC Co pipeline company:	1 August 2003
Length of route:	1765 km (443 on the territory of Azerbaijan, 243 km – Georgia and 1071 - Turkey)
Pipeline diameter:	1100 mm
Yearly output capacity:	50 million tons
Transit tariff:	3 USD per barrel delivery from Sanchagal to Ceyhan
Pipeline construction start date:	April 2003
Expected date of first oil tanker departure from Ceyhan:	Q2 2005
Pipeline cost:	2.95 billion USD (1.132 billion USD spent in 2003, expected 1.171 billion USD in 2004)
Total volume of oil shipped (as of 1.01.2008):	57,8 million tons

BTC transports light crude produced at the Azeri-Chigar-Guyneshli oil field. This pipeline is operated by BP. Only two foreign companies that participate in Azeri-Chigar-Guyneshli extraction – American companies ExxonMobil and Devon - do not make use of BTC for transporting their share of oil. These companies have not invested into BTC construction and sell their oil through the Georgian port of Batumi by railway shipments.

BTC Co shareholders are BP (30,1%); AzBTC (25%); Chevron (8,90%); Statoil Hydro (8,71%); TPAO (6,53%); Eni (5%); Total (5%); Itochu (3,40%); Inpex (2,50%); ConocoPhillips (2,50%) and Amerada Hess (2,36%).

BTC is the most comfortable and profitable route of all. Access to Mediterranean Sea (Ceyhan port in Turkey), full ownership of the pipeline by Azeri-Chigar-Guyneshli consortium partners and high capacity put this route far ahead of the competition. However, a recent fire on the Turkish section of the pipeline as well as the recent war in Georgia has caused serious concerns among partners, forcing them to temporarily suspend oil shipments.

BAKU-TBILISI-ERZURUM

(SOUTH CAUCASUS GAS PIPELINE)

Date of contract signature:	29 September 2001
Length of pipeline:	970 km (442 on the territory of Azerbaijan, 248 km – Georgia and 280 - Turkey)
Pipeline diameter:	42”
Yearly output capacity:	20 billion cubic meters
Pipeline cost:	around 1 billion USD (no publicly available information on BOTAS expenses on Turkish section – unofficially put at 400 million USD)
Pipeline construction start date:	end of 2004
End of construction:	summer 2006
Operation started:	January 2007
Total volume of gas shipped (as of 1.01.2008):	4,7 billion m ³

This pipeline is used for transporting natural gas produced at the Shakh-Deniz gas field in the Azeri section of the Caspian Sea. The supply is transported into Georgia and Turkey. This pipeline is expected to become a part of the Nabucco gas project.

Railway transport

Transportation from Azerbaijan to the Georgian ports of Batumi and Poti is a traditional route for the transport of light and dark oil products, as well as crude oil. Oil from Kazakhstan and Turkmenistan is also transported through this transit route.

Railway shipments of oil and oil products on Baku – Batumi/Poti routes

Years	2004	2005	2006	2007	2008 ¹
Mil. Tons	8	10,7	12,8	10,9	10,9

There is a vast network of state/private transport companies operating in the railway sector of Azerbaijan, which seriously hinders the transparent monitoring of financial transactions in this industry. Railway transportation tariffs are set on the basis of the state regulation of tariffs.

Generally, there are a number of circumstances that deter effective monitoring of company activity. Azerbaijan State Railroad (ASR) is a closed joint stock enterprise with 100% state ownership of shares. A monopoly, it operates in accordance with tariffs approved by the state. The Tariff Council, an agency in charge of regulating these issues, does not allow increase in tariffs on railroad transportation. As a result, Azerbaijan has one of the inexpensive travel costs via railway. The approach stands in the way of developing the industry, attracting investment and improving services. However, by maintaining consensus on social process, ASR is able to attract fiscal subsidies, which moreover hinders commercialization of company operations and transition to international financial accountability standards.

Nevertheless, despite being a non-profitable enterprise, the company has no obstacles in establishing new, privately owned structures, which operate profitable commercial shipments, including, first of all, oil and oil products. There are currently a number of such enterprises in Azerbaijan, enjoying an exclusive right to transport transit cargo from Central Asia to Georgian seaports.

The monopolistic status of such transport structures and closure of access to competitors leads to triple losses for economy of Azerbaijan and the entire region.

First of all, tariffs are inflated, leading to higher pricing of supplies for consumers.

Secondly, state budget losses – as demonstrated below, fiscal revenues are minuscule, while overall cash flow in this industry amounts to billions of dollars.

Finally, as in any monopoly, quality of service, shipment reliability and need for technical improvement of services are on the downward trend.

¹ Forecast, source: "Argus" agency

*Railroad Fleet*²

Owner / property tenant	No. of tank-wagons
Azerbaijan State Railroad	2500
Georgian State Railroad	Up to 2,000
Azertrans	800
MEPF	500
Others	500

Marine transport

The situation is similar in the maritime shipment of oil products. A major feature of the Caspian freight market is a very limited number of agreements. The main fleet is usually freighted for a long time – from several months to a year. The Caspian freight market is traditionally non-transparent and lacks any clear "rules of the game". Caspian carriers usually do not disclose the cost of their services. As a result, freight rates are set on a case-by-case basis depending on individual agreements, volume of shipment and type of cargo. Costs of Caspian marine transport are on a steady increase recently, together with rising demand on tanker shipment of resources in the Caspian basin (apparently, freight rates on global tanker market have fallen by 2-3 times). Currently, transport costs on Baku – Aktau route are at 8,5-9 USD per ton (in April, spot market rates reached 10 USD per ton). This is more costly than the shipment of oil from Novorossiysk to Italy or from Primorsk to Rotterdam (6-9.8 USD per ton). Rates for oil and oil products shipment on Turkmenbashi-Baku route by CASPAR vessels of 5-7 thousand ton deadweight (owned by Azerbaijan State Caspian Sea Shipping Company) amounts to 7-8 USD per ton, Aktau-Makhachkala route – 8 USD, Aktau – Neka route – 11 USD. The highest tariff of 13 USD per ton is paid on Astrakhan – Neka route. Palmali ships light crude delivered by TNK-BP from Makhachkala to Neka for 11.5 – 12,7 USD per ton.³

Overall tariffs on shipment from shores of Kazakhstan and Turkmenistan to Georgian seaports vary by following rates: Turkmenbashi (Turkmenistan) – Batumi (Georgia, Black Sea) is 40-50 USD/ton, Aktau (Kazakhstan) – Batumi is 39-39,5 USD/ton.⁴ Currently, mostly Azeri and Kazakh shipping companies operate in the freight market of the Caspian – CASPAR Ltd., Palmali Ltd., Meridian Shipping Company and Kazmortransflot JSC. Shipments are delivered by tankers with deadweight tonnage ranging from 5,000 to 13,500.

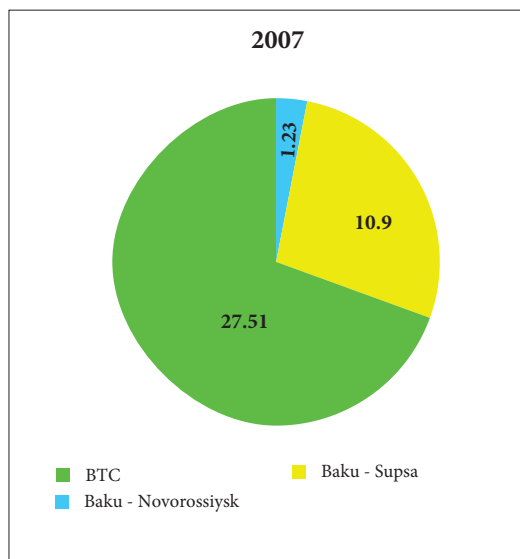
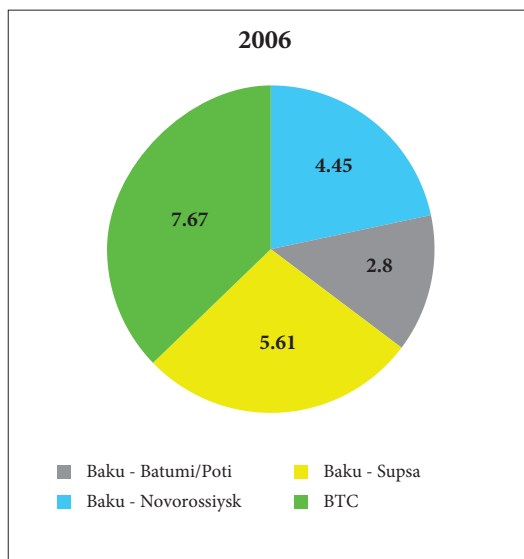
² Source: "Argus" agency.

³ Source: Report by Post-Soviet States Chamber at Russian State Humanitarian University, October 2006.

⁴ Source: "Argus" agency.

Business interest in the Caspian freight market on the route to Azerbaijan is steadily increasing. Possibilities of railroad transportation to seaports of Georgia, as well as perspective of BTC pipeline transportation are apparently driving up the demand on tanker shipments in the Caspian.

TRANSPORTATION OF OIL AND OIL PRODUCTS IN AZERBAIJAN (MILLION TONS)



ECONOMIC BENEFIT

The state of Azerbaijan receives the following payments for transportation of hydrocarbons:

Transit duties to the state budget for passage of goods that are not in state property (delivery of crude oil of foreign companies operating in Azerbaijan, as well as oil and oil products from Central Asian states via existing pipelines and railways)

Starting in 2003, when EITI was launched in the country, the government of Azerbaijan received 54.2 million USD in transit payments, divided in EITI reports in the following manner: in 2003 – 12.9 million USD, in 2004 – 16.5 million USD, in 2006 – 14.2 million USD. No transit revenues were reported in 2007. Notably, this concerns payments by foreign companies operating in Azerbaijan and transporting their oil via Baku-Novorossiysk and Baku-Supsa pipelines. This amount, as reflected in EITI reports, is comparably negligible in comparison to other payments and amounts to 0.6% of overall payments under EITI reporting.

BTC shareholder dividends

Since 2007, the government of Azerbaijan receives dividends on BTC project. Through AzBTC Limited, Azerbaijan owns 25% share in BTC project. Furthermore, about 30% of AzBTC belongs to SOCAR and 70% - to the Ministry of Economic Development. Projected estimates on BTC operation in 2008 would pay dividends of 104.608 AZN (approx. 130 million USD) to Azerbaijan.

Income tax imposed on oil companies for shipments of crude oil via BTC

According to contract terms, parties receiving profits due to preferential terms of oil shipments via BTC states, shall pay taxes to the relevant state budgets at the rate of 27%. Initial estimates by AIOC put proceeds from BTC operation for Azerbaijan, Georgia and Turkey, whose territories host the pipeline, at 2.104 billion USD in income taxes until 2027. Azerbaijan's share in the overall proceeds is 625 million USD, with 517 million USD for Georgia and 961 million USD – for Turkey.

The AIOC assessment model estimates that BTC project partners are expected to generate revenues of 9.123 billion USD. In this regard, AzBTC profits are estimated at 2.281 billion USD. These forecasts date back to 2006, when oil prices at global markets were at least twice as low.

(Source: "Trend" agency)

Taxes paid by transport companies (railway, marine and road) to the state budget

Payments by ASR and Caspar to state budget of Azerbaijan

	2005		2006		2007	
	ASR	Caspar	ASR	Caspar	ASR	Caspar
Paid to budget (mln. AZN)	17,9	1,76	21,5	1,5	24,9	2,4
Share in overall amount of tax revenues (%)	1,3	0,1	0,8	0,1	0,5	0,05

(Source: State budget of Azerbaijan)

ACCESS TO INFORMATION

Access to information on pipeline transportation is relatively comprehensive, provided by BTC, since the company enjoys a status of international consortium and is obliged to inform the public.

Documents regulating the operation of the pipeline can be found at the BP corporate website, including host government and inter-government agreements.

Besides, EITI reports periodically indicate a summary volume of transit revenues, which are, published in aggregated format, making it difficult to track specific figures down to particular pipelines. Only alternative information, obtained from additional sources, allows for the verification of specific pipeline contributions to overall amount of transit revenues in the period concerned.

Baku-Supsa pipeline operations (a property of AIOC consortium), have been suspended for a long time due to repairs; only the recent restarting of the pipeline have quashed various rumors on its lack of usability compared to the BTC. Military operations in Georgia forced managers to halt oil shipments due to risk of explosion.

The Baku-Novorossiysk pipeline is perhaps the least transparent route and processes that take place under the aegis of an agreement between SOCAR and Transneft are beyond public scrutiny. Access to information is discretionary and can be obtained, as a rule, only indirectly and from external sources.

Compared with pipeline transportation, access to information is more problematic in the railway transportation sector. The main player, ASR is not particularly transparent and a large bulk of information on financial transactions in hydrocarbon transportation is kept outside public reach. (<http://www.addy.gov.az>).

Even more challenging is access to information at Caspar, where publicly available websites and other media provide, as a rule, second-rate information, while data on shipments, tariffs and budget payments is provided in veiled format (<http://caspar.baku.az>). The same principle of domestic statistics – summary values – is used here.

CONCLUSION

Energy resource transportation on the territory of Azerbaijan is becoming an issue of utmost relevance. In the near perspective, the country would become an essential transit corridor, as dictated by geopolitical needs in the light of recent events in the region. For Azerbaijan, there are important factors that strengthen its role in reference to hydrocarbon transportation:

- 1 Increasing production in the Azeri sector of the Caspian basin and its stabilization at the level of 1 million barrels per day until 2020 (BP estimate), as well as significant volumes of natural gas production and export, would lead to stronger interest in supplying hydrocarbons for the global markets.
- 2 An even larger hydrocarbon potential in the countries of Central Asia and need for partial transportation through Caspian Sea – Caucasus – Black/Mediterranean Sea corridor would lead to an increased demand for transit delivery through Azerbaijan.
- 3 By putting Baku-Tbilisi-Kars railway into operation, the volume and structure of oil and oil products would significantly increase, and with oil chemistry products to be added, this could strengthen the status and influence of the corridor.
- 4 In further perspective, the decreasing production of the domestic supply of hydrocarbons would significantly strengthen the role and importance of revenues from the transit of Central Asia hydrocarbon resources, which would greatly tone down the negative effect of resource expiration and adaptation of economy to new, resource-less condition.
- 5 Recent events in the region have dramatically changed the geopolitical role of the country and have turned Caspian Sea – Caucasus – Black/Mediterranean Sea corridor into extremely important route for European energy security.

Therefore, the transportation of hydrocarbons for Azerbaijan is as essential as its extractive sector. In the longer-term perspective, resource transportation has a chance of turning into a self-sufficient industry and a source of durable, stable welfare for the public.

GEORGIA

OVERVIEW OF HYDROCARBON TRANSPORT INFRASTRUCTURE

At the moment, Caspian hydrocarbon resources are transported through Georgia via two oil and two gas pipelines, crossing each other as two perpendicular axes: north-south and east-west.

- 1) Baku – Supsa oil pipeline, operating since 1999, length 830 km, 375 km – on the territory of Georgia. This pipeline transports oil produced at Chirag oil field in the Caspian Sea to Supsa terminal in Western Georgia. This pipeline has a rather low output – 155,000 barrels per day; Supsa terminal capacity is rated at 1 million barrels.
- 2) Construction of Baku-Tbilisi-Ceyhan pipeline has a much greater importance on the development of South Caucasus transport system; the pipeline does not transport Caspian resources to Black Sea port, but rather ships them to the Mediterranean port of Ceyhan that has a higher output capacity. The BTC pipeline transports oil produced at Azeri-Chirag-Guyneshli oil field in Azerbaijan. The total length of the pipeline is 1768 km, with 249 km on the territory of Georgia, and can ship up to 1 million barrels of oil a day, although the current daily output is only at 600.000 barrels.
- 3) BTC pipeline construction also facilitated the construction of the Baku-Erzurum gas pipeline in this corridor, finalized in 2006. Overall length of the pipeline is 690 km, with 249 km on the territory of Georgia; its output is rated at 7.4 billion cubic meters per year and, once production increases, it would be possible to reach an output of 30 billion cubic meters of natural gas per year. Future plans also include connecting Baku-Erzurum pipeline to Trans-European gas pipeline, allowing Caspian natural gas to be transported to Europe through the so-called Nabucco pipeline.
- 4) The north-south gas transportation pipeline runs between the Georgian-Russian and Georgian-Armenian borders. Its overall length is 235 km. This gas pipeline supplies Georgia with natural gas and is currently the only source of natural gas for Armenia.

By putting recently constructed transportation pipelines into operation, Georgia gradually steps out of its energy reliance on Russia by diversifying sources of natural gas supply, which is a significant step in the direction of an independent energy policy for the country. For example, against the background of tensions with Russia in 2007, Georgia held negotiations with Turkey and Azerbaijan on additional supply of inexpensive natural gas via the South Caucasus gas pipeline; Georgian experts agree that this

demonstrates complete understanding of energy transit potential of Georgia by its government, which is committed to make use of tools at its disposal to the fullest extent.¹

Notably, the government of Georgia managed to ensure a non-stop supply of natural gas to the country in 2007 and provided timely response to challenges posed by tensions with Russia. In similar circumstances during the 1990s, when gas supply from Russia had been cut off, it had an immediate effect on the provision of natural gas to the population. The positive impact that pipeline construction and growth of transit potential has in the country is already recognized.

ECONOMIC IMPACT OF TRANSPORTATION

Macro- and microeconomic impact

Construction and operation of pipelines in Georgia led to a number of specific economic impacts. Its economic effect has been demonstrated, to a certain extent, on macroeconomic scale, as long as:

- a) there has been a large investment into construction (construction of pipelines, compensation to land owners, purchase and other investment of capital related to construction process); and
- b) state budget revenues increased in the aftermath of putting pipelines into operation.

Additionally, the economic impact has been felt on a microeconomic scale, unemployment rates have decreased (various sources indicate that unemployment rate during construction period plummeted by 33%); and pipeline operating companies invested in various social projects, which led to overall 6-7% increase in profits for the population.

Besides, oil and gas pipeline construction attracted foreign capital to Georgia. The development of Georgia's transit functions as a part of transport corridor has been supported by the European Union as a part of TRASECA and INOGATE programs, funded by a number of other international and private

¹ During 2006, with a view to ensuring energy independence of Georgia, certain efforts for provision of natural gas from alternative sources were undertaken, namely: 12km-long pipeline branch from South Caucasus pipeline was constructed and subsequently connected to the system of gas transportation pipelines of Georgia at 1000mm width hub at 66th km of Kazakh-Saguramo gas pipeline and 700mm width hub at 484.1st km of Karadag-Tbilisi gas pipeline. Pipeline network was upgraded and, in fact, all necessary works were performed at the Red Bridge sector for independent gas supply from Azerbaijan. Mechanisms for consecutive and simultaneous gas supply to Georgia from Russia and Georgia were also developed. In order to prevent leakage of natural gas from pipeline system of Georgia into pipeline network of Azerbaijan, a shutter has been set up on 1000mm width Kazakh-Saguramo gas pipeline at the border of Georgia with Azerbaijan.

companies.² This was subsequently followed by political interest of Western states (USA, EU, Turkey) in protecting investment and investors' interests in Georgia.

STATE BUDGET REVENUES

In addition to the positive factors listed above, Georgia is interested in generating revenues from oil and natural gas transit to the state budget. Therefore, it would be of absolute interest to assess a share of energy resource transit revenues in the state budget of Georgia. To this end, each transit route and revenues from its operation will be discussed separately.

By 2008, the natural gas and oil transit system of Georgia included the following transportation pipelines:

Pipeline	Maximum output	Tariff (USD)
Baku-Supsa	5.75 mil. tons per year/ 155,000 bar. per day	0,19 \$/barrel 1.4 \$/ton
Baku-Tbilisi-Ceyhan (BTC)	50 mil. tons per year/ 1 mil. bar. per day	0,12 \$/ barrel 0,89 \$/ton
South Caucasus Pipeline (SCP)	7.4 - 20 bil. m ³ /year	5% of gas transported
North-South pipeline	55 mil. m ³ /day 16-20 bil. m ³ /year	10% of gas transported

TARIFFS

The critical feature of any transit line is its potential transportation tariff. As far Baku-Ceyhan oil pipeline and Baku-Erzurum gas pipelines are concerned, the government of Georgia and partner energy companies, BTC in particular, entered into agreements concerning the conditions of transit and volume of projected revenues. The gas transportation pipeline "North-South" is operated by Georgia Gas Transport Company, established in 1999 for the transit, delivery and transportation of natural gas to Armenia.

² Objectives of the INOGATE program include improvement of energy resource supplies to Europe and solution of energy security concerns by oil and natural gas transportation systems running through Eastern Europe, South Caucasus and Central Asia. TRASECA initiative is aimed at development of trade between the states in the region and integration of Europe-Caucasus-Central Asia transport corridor into Trans-European network.

Until 2001, Georgia received 0.18 USD per barrel transported through Baku-Supsa oil pipeline. From 2001 on, oil transportation tariff has been increased and stands at 0.19 USD per barrel.

The transportation tariff on the much higher-output Baku-Ceyhan pipeline is far lower, at 0.12 USD per barrel and the rate will be revised in 2010 up to 0.14 USD per barrel.

Gas transportation tariff through Baku-Erzurum and "North-South" pipelines is not monetary – according to agreements in force, Georgia receives 5% of natural gas transported through these pipelines free of charge, and 10% from the overall volume of gas in transit through "North-South" pipeline from Russia to Armenia.

Besides, Georgia is entitled to beneficial rates on a certain quantity of gas from Shakh-Deniz gas field. Since initial operations, the limit was set at 200 million cubic meters though in the last year of Phase I, it increased to 500 million m³ (daily consumption in Georgia is 3 million m³). Official data indicate that the contract price is 61.5 USD with a possible yearly upward revision of 1.5%. According to the Georgia International Oil and Gas Corporation report 2006, the rational management of natural gas received for contract price and subsequent transit revenues allowed for a significant reduction of wholesale gas prices imported by the GIOC to its domestic market.

Income taxes

British Petroleum (BP) pays income tax to the state budget as a transportation fee. According to BP's Sustainable Development report of 2006, oil transportation revenues on Baku-Supsa pipeline were paid to Georgia Oil and Gas Corporation; previously, these had been paid to Georgian International Oil Corporation.

According to the 2006 report, BP estimated that, parallel to the increase in volumes of oil shipped via pipelines, income tax revenues will increase to 25 million USD. As shown below, information available indicates that revenues from oil shipments through Baku-Ceyhan pipeline amounted to 22.7 million USD in 2007.

In 2006, 5.6 million tons of oil was transported in Georgia via the Baku-Supsa pipeline, while the BTC pipeline managed to ship 8.7 million tons of oil. In 2007, Baku-Supsa pipeline wasn't operating due to repairs – officially, only 25,000 tons of oil were shipped in that year, while BTC pipeline shipments were substantially larger – 25.3 million tons. The relatively insignificant reduction of oil shipments on Baku-Supsa pipeline in 2006 is attributed to the planned repair works underway at the time.

The table below demonstrates proceeds from Baku-Supsa and Baku-Ceyhan projects in 2006-2007:³

Baku-Supsa		
Oil shipment volume (million tons)	5.612	0.025
Budget revenues (million USD)	7.9	0.035
Baku-Ceyhan		
Oil shipment volume (million tons)	8.7	25.3
Budget revenues (million USD)	7.8	25.4

Apparently, fiscal revenues from pipeline transportation in 2006 and 2007 were 15.7 and 25.4 million USD, accordingly.

A slightly different approach has been used in calculating proceeds from natural gas transportation. Revenues generated to the state budget of Georgia from shipment of Shakh-Deniz natural gas can be determined by multiplying the volume of gas, received by Georgia free of charge, by a tariff value used for state sales to gas distribution companies (which further sell it to consumers). According to Decree of Georgian National Energy Regulatory Commission No. 30 of 30 December 2005, different tariffs are set for different distribution companies, and there is also a difference in tariffs for consumers with high, medium and low gas consumption. Therefore, for clarity purposes, an average of maximum tariff for the largest distribution company Itera-Georgia was used in these calculations, which stands at 209 GEL per 1000 cubic meters of gas. Adding VAT into the equation, the average tariff for 1000 m³ of natural gas amounts to 140 USD (bank exchange rate in 2006-2007 was at 1 USD to 1.67 GEL).⁴

Consequently, below are the figures illustrating state budget revenues from the transit of natural gas:

Shakh-Deniz	2006	2007
Volume of gas received for transit (m ³)		60,626,550.00
Gas transit price - free, approximated at 120 USD per 1000 m ³ (million USD)		\$8.5
Volume of gas received on preferential prices		129,595,224.00
Transit price for gas purchased at preferential rate of 61.5 USD per 1000 m ³ (million USD)		\$10.2
Revenues of Georgia from transit of natural gas from Shakh-Deniz gas field (million USD)		\$18.7

³ Source: National Bank of Georgia, 2008.

⁴ Regulations state that tariff for shipping of natural gas to basic consumer, excluding VAT, is at 209 GEL for 1000 m³, source: <http://www.gogc.ge/index.php?m=206>.

It should be noted that the amounts of gas procured by Georgia, as demonstrated above, are approximate, since we weren't able to obtain exact data neither from the operating company nor from the corresponding state agencies in the preparation of this document. A common summary value of 129.595.224 m³ of natural gas was derived from the difference between the volumes of natural gas imported to and exported from Georgia, minus the approximate quantity of gas used for loading the pipes. Despite being rather conditional, an overall figure of 29.595.224 m³ of natural gas was used to avoid further errata in calculations.

The quantity of gas reserved for Georgia from transit via the "North-South" pipeline amounts to 10% of the total gas shipped.

Volume of shipments of gas to Armenia in 2006-2007 was as follows:

	2005	2006	2007
To Armenia (billion m ³)	1.7	1.8	2.1
Baku-Erzurum (billion m ³)			1.212

Insofar as Georgia is entitled to 10% of gas transported to Armenia, this means that in 2007, Georgia was entitled to 210 million m³ of gas and in 2006 - million m³ from the "North-South" pipeline.

North-South pipeline	2006	2007
Gas shipped to Armenia	1,800,000,000	2,100,000,000.00
Share for Georgia 10%	180,000,000.00	210,000,000.00
Budget revenues at rate of 120 USD (million USD)		\$29,400,000.00

Therefore, state revenues from oil and gas transportation can be found in the table below:

	2006	2007
Budget	\$2,250,855,000.00	\$3,190,208,937.50
GDP	\$8,618,687,500.00	\$10,624,125,000.00
Value of overall transit (USD)		\$73,463,282.46
Share of overall shipments (%) in relation to budget		2.30%
Share of overall shipments (%) in relation to GDP		0.69%

In 2007, revenues from energy resource transportation via pipelines amounted to no less than 2.3% of the state budget and 0.69% of the GDP.

Therefore, proceeds have been substantial, especially discounting VAT (also paid to the state budget) and with transit volumes expected to increase in the future.

ACCESS TO INFORMATION ON TRANSPORTATION AND ENERGY STATISTICS SYSTEM

As demonstrated above, once Georgia began effectively employing its transit functions in 2007, budget revenues have increased greatly. It is utterly important that the transparent and public reporting of taxes and budget revenues facilitates the responsible management of these funds, as well as stronger responsibility and more consistent accountability of the government before the public. There is a need for an agreement between the Georgian government and private companies active in extraction and transit of hydrocarbons on the territory of Georgia to ensure a maximum degree of transparency on revenues generated and accordingly, their spending.

According to the international practice of revenue transparency reporting, researched by Transparency International (TI) in April 2008, leading global oil and gas companies are not sufficiently transparent on fiscal payments to resource-rich countries. Closed procedures allow private companies to facilitate corruption and extreme poverty in developing countries.⁵ Research by TI also revealed that only 30% of world's leading oil and gas companies maintain a high standard of transparent management.

Nevertheless, TI experts recommend companies to publish reports without delay, even before specific laws are enforced in the country where they operate, as long as there is obvious evidence that company transparency and profits are not counter-excluding, but rather the opposite: a higher degree of transparency strengthens the trust of shareholders and financial market players in favor of the company.

Nowadays, a number of private and state companies are involved in transporting energy resources in Georgia, namely:

⁵ http://www.transparency.org/news_room/latest_news/press_releases/2008/2008_04_28_prt_report_launch

- Georgian Oil and Gas Corporation, a state company;
- BP, in charge of technical operation of BTC and South Caucasus (Baku-Supsa) pipelines;
- Statoil, company operating South Caucasus gas pipeline;
- Batumi Oil Terminal: on 5 February 2008, Batumi Oil Terminal and Batumi Sea Port were acquired by Kazakh state company KazMunaiGas. Yearly turnover of this terminal is already in excess of 15 million tons.
- Khulevi Oil Terminal: on 16 May 2008, Azeri Oil Company SOCAR opened a third oil terminal on the Black Sea coastline of Georgia in Khulevi. SOCAR expects yearly shipments of 5 million tons of oil and oil products in the first stage of operation and this figure would be raised to 10 million tons in the following two years.
- Georgian Railways: mirroring economic growth in Georgia, revenues from railway transportation are on the rise – 112 million USD in 2006 and 110 million USD – in 2007. The major commodities transported by Georgian railways are oil and oil products. Notably, increasing production of oil in the Caspian region drives demand for transport services and attracts more investments, thus contributing to the further development of Georgian Railways.

It should be noted that major responsibility has been borne by BP as the largest pipeline operating company in Georgia. Reports generated by the company in 2005 and 2006 were sufficiently transparent for the public. It turned out that reports for these years included more financial data than its 2007 report, which doesn't even mention quantities of oil and gas transported through Georgia in that year.

BP, a private energy company operating in Georgia, differs from other players in regards to its transparency and open access to information. BP was one of the first companies to start publishing annual reports. Due to its recognition and influence, BP has utmost opportunity to serve as an example to other local and foreign companies; thus, it is important that transparency standards of this company are maintained as of now and carried into the future. Currently, no other company in the sector of energy resource transportation in Georgia publishes information on its activities to the extent that BP does. Other companies (including Batumi and Poti ports, Georgian Railways) do not publish annual reports, and have no website presenting sufficient information on their operations – even though some of the companies maintain web sites, reliable information could not be reliably referenced in preparing this document.

Annual reports for 2006 and 2007, similar to BP practice, can be found on the web site of Georgian Oil and Gas Corporation, however, the 2007 edition contains much less data on transit operations compared to the 2006 report – much as in case of BP. In and of itself, this may not be a cause for serious concern, provided that this is a temporary approach. However, lack of accessible information can become a much more critical concern if this indicates a developing trend.

Experience shows that the state should be in charge of encouraging the willingness of private and state companies to ensure transparency; in this regard, accession to the EITI is an effective tool to strengthen accountability of state agencies responsible for supervising energy resource transportation.

The Ministries of Economic Development and Finance as well as the National Bank of Georgia should provide the public with adequate data for complete understanding of resource transportation volumes and state budget revenues in this sector. However, difficulties arise:

Data on corporate taxes paid to the state budget are kept at the Tax Department of the Ministry of Finance of Georgia. Article 122 of the Tax Code of Georgia defines categories of confidential information related to taxes, which are not subject to disclosure. According to this provision, the Ministry of Finance is not entitled to publish information on revenues from private companies unless there is the written consent from the company in question.

Revenue transparency while maintaining confidentiality can be achieved through access to aggregated information. According to the law, such information should be published by the Department of Statistics under the Ministry of Economic Development; however, legislation adopted in 2005 does oblige a legal entity operating on the territory of Georgia to submit correct and timely information to the Department of Statistics, which effectively means that such information can be obtained only by or through the organization in question.

Nevertheless, international organizations in general and the International Monetary Fund in particular, recommend to the publication of separate information on revenues from specific companies. EITI implementation provides the opportunity to limit the effect of Article 122 of the Tax Code of Georgia on the confidentiality of information, as long as companies party to the Initiative are obliged to publish information on their payments to the state.

Sustainable development reports (2006-2007) on Georgia demonstrate the interest of the government in ensuring that energy companies operating in the country provide the public with open access to information – good management can put the proceeds from oil and gas transit to use for higher standard of service and development of country infrastructure, facilitating better conditions of life for the population.

UKRAINE

The provision of oil and gas transportation and transit is an essential source for state budget revenues. State holding National Joint Stock Company Naftogaz Ukrainy is an authorized entity for hydrocarbon pipeline transportation industry. Its economic activity indicators in hydrocarbon transportation sector are shown below.

Table 1. Oil and Gas Transportation Revenues of NJSC "Naftogaz Ukrainy"

Year	External sales		Inter-segment sales		Segment revenue	
	UAH	USD	UAH	USD	UAH	USD
2001	11,513	2,176	2,069	0,391	13,582	2,567
2002	11,521	2,161	2,120	0,397	13,641	2,559
2003	11,260	2,112	2,320	0,435	13,580	2,547
2004	8,626	1,627	3,336	0,629	11,962	2,256
2005	8,081	1,600	3,181	0,630	11,262	2,230
2006	11,432	2,263	3,776	0,747	15,208	3,011

Note: the following official UAH to USD exchange rates were used for calculations in USD: 2001 - 5,29; 2002 - 5,33; 2003 - 5,33; 2004 - 5,30; 2005 - 5,05; 2006 - 5,05.

It is nonetheless impossible to clearly identify tax revenues of oil and gas transportation companies within the overall tax revenues of the holding company. Official reporting indicates only summary tax revenues from all commercial activities of oil and gas holding companies, including production, export-import transactions and sales of hydrocarbons on internal market. Only the sum of rent payments for oil and gas transit and transportation can be clearly determined.

Table 2. Rent payments for hydrocarbon transportation

Indicators	2001	2002	2003	2004	2005	2006
Rent payments natural gas transit, USD per 1000 m ³ at 100 km	0,2948	0,2889	0,3133	0,3150	0,3306	0,3306
Overall rent for gas transit, million USD	326,0	321,8	369,8	398,3	421,9	395,1
Rent payments oil transportation, USD per ton	0,685	0,685	0,685	0,685	0,890	0,891
Overall rent for oil transportation, million USD	44,2	32,8	38,8	37,7	40,2	40,0
Amount of summary rent payments per year (gas & oil), mil. USD	370,2	354,6	408,6	436,0	462,1	435,1

Oil and gas transportation enterprises pay other common state taxes and dues to the state budget, including social security payments for personnel and the population of Ukraine. Oil and gas transportation system proceeds are among the largest sources of revenue to the state budget. NJSC Naftogaz Ukrainy is the single biggest tax payer in Ukraine.

Nevertheless, more attention should be paid to assessing the efficiency of oil and gas transit facilities which represent one of the biggest economic and strategic assets of the country. A proper efficiency assessment is impossible without comparing current oil and gas transportation system revenues to the potential that is kept idle for various reasons. The very definition of the economic potential of energy transit system is the basis for establishing a system of transparent and publicly accessible transactions in this sector. In particular, downplaying the economic potential of transit systems or the lack of such a publicly available assessment altogether throughout years of Ukraine's independence has had an impact on Ukrainian-Russian agreements regarding gas transit rates for Ukraine and the costs of imported natural gas.

Basic conditions for determining rates of gas transit through Ukraine are not based upon economically sound data per se, but rather non-transparent agreements as to the price of the gas imported to Ukraine. As a result of these agreements, there is disproportion between the revision of transit rates versus the cost of gas imported for domestic need. These should be in direct proportion to each other, taking into account declared, mutually beneficial concessions from both parties and a correlation between issues of transit and import of gas.

While the cost of natural gas for the Ukraine has been raised 3.6 times in recent years, transit rates have been increased only by 56%. This rate is disproportionately low compared to similar rates in European countries. Transit tariff in Ukraine during 1994-2005 amounted to 1.09 USD per 1000 m³ at 100 km and is currently at 1.7 USD per 1000 m³ at 100 km. In contrast, natural gas transit rates in majority of European states are 3-7 times as high.

Table 3. Gas transit rates in EU countries

Transit rate	Austria	Netherlands	France	Belgium	Hungary	Denmark	Average
USD per 1000 m ³ at 100 km	2,69-5,12	4,43	5,62-6,68	7,6	11,11	13	7,04

Note: data on the basis of Gas Transmission Tariffs, an ERGEG Benchmarking Report, C GWG-31-05, 18 July 2007

The above figures result in revenues lost for the state and the public, and can be caused by corruption due to non-transparent and economically unsound mechanisms. Nowadays, there are no official assessments on economic impact of lowered transit rates for Ukraine, while the cost of this issue for Ukraine amounts to billions of dollars. For example, once the transit rate is revised

upwards in proportion to inflated gas prices (3.6 times – from 1.09 to 3.9 USD per 1000 m³ at 100 km, which would still keep it below average European rates), additional revenues for Ukraine could constitute 3.5 billion USD.

The assessment of losses and profits for Ukraine in transit and import of natural gas is amongst the most complex of challenges, taking into account non-transparent price formation either in gas transit or gas sale sectors. The shadowy nature of such counter-concessions – cheap gas for cheap transit – against a backdrop of large transit services, estimated at 115-130 billion m³, is unacceptable for a European country and should be unacceptable to consumer states. Economic profits for Ukraine from gas transit and storage, although significant, are a subject of constant concern, due to rather low transit rates and non-transparent conditions for use of Ukrainian subsurface storage facilities.

Low transit rates are inherently connected to the cost of gas import for the needs of Ukraine, since agreements on transit of Russian gas are always deliberated in conjunction with agreements on shipments of gas for domestic needs. Therefore, transit profits lost should be compensated by the under-market value of Russian gas for need of Ukraine.

Tying issues of cost, transit and storage of gas destined for European states to issues of importing gas for internal needs should always provide grounds for shadow business operations in the gas sector and pose a real threat to energy security either for Ukraine or for other European consumer states. Only the transition to economically sound tariffs and market prices of gas for Ukraine would allow for the separation of transit from import and ensure transparency of operation in these sectors, setting a basis for strategic stability of shipments of gas though the territory of Ukraine to the EC countries.

Determining a share value of energy transit within the Ukrainian economy is only one of many economic and strategic issues needing to be more transparent. Apparently, there are quite a few matters of undeniably key importance in the oil and gas transit sectors, which, once solved, would have an impact on the overall economic situation in the country. Among these is the storage of gas in subsurface gas storage in Ukraine, the operation of which is subject to serious tensions. There's no comprehensive official data on the efficiency of their operation. For example, gas storage tariffs for subsurface storage facilities were at 12 UAH per 1000 m³ (approx. 2.2 USD) until 2006, but since 2006 the rate has been revised to upwards of 39.6 UAH per 1000 m³ (approx. 7.84 USD), which is several times lower than in EU states. Equally relevant are issues of assessment of overall volume of oil and gas shipments coming into Ukraine, as well as energy resource quantities and quality controls and the management of technological losses. Each issue is individually valued at hundreds of millions of dollars. Increasing the efficiency of the energy transit sector through transparency efforts may possibly lead to better social security for citizens of Ukraine.

PIPELINE INFRASTRUCTURE OF GAS TRANSPORTATION

Due to its geographic location, the gas transport system of Ukraine is a connecting hub between regions of gas production (Russian Federation, Central Asia) and regions of consumption (EU, Eastern European states).

The gas transport system of Ukraine includes 38,000 km of high-pressure gas pipelines, 72 compressor stations of total output of 5600W, 13 subsurface gas storage facilities with active capacity in excess of 32 billion m³, and a network of gas distribution and gauge stations.

Output capacity of the system at its entry point is rated at 288 billion m³ yearly, at the exit - 178 billion m³ yearly, including 142 billion m³/year to EU countries plus Turkey and Switzerland.

Subsurface gas storage facilities of Ukraine are among the largest networks of its kind in the world, which makes them one of the main elements in Ukraine's gas transport system; they are used to balance gas shipments either for transit or for domestic needs. Natural gas transit on the territory of Ukraine is operated by NJSC Naftogaz Ukrainy, a subsidiary of Ukrtransgaz.

Table 4. Output capacity of the largest gas transportation pipelines in Ukraine

Route (border compressor station)	Project load, billiom.m ³ /year	Actual load, %
CS Uzhgorod (Slovak Republic, Austria, Czech Republic, Germany, France, Italy, others)	92,6	78%
CS Orlovka (Turkey, Greece, Romania, Bulgaria)	26,8	86%
CS Beregovaya (Hungary, Serbia, Chernogoria)	13,2	80%
CS Drozdovichi (Poland)	5,0	84%
CS Tekovo (Romania)	4,5	47%
CS Grebeniki (Moldova)	3,5	77%
Total	145,6	79%

PIPELINE INFRASTRUCTURE FOR OIL TRANSPORTATION

Ukraine hosts the second largest oil transport system in Europe, spanning 4671 km of transportation pipelines, 51 pump stations and 11 reservoir parks with a total volume of 1 million m³. Besides, the oil transport system of Ukraine includes the Pivdenniy Seaport Terminal, constructed in 2002 in Yuzhniy seaport (Odessa region), which loads oil shipped through pipelines to tanker vessels and has the capacity to accept oil shipments for further transportation.

The system consists of the following interconnected pipelines:

- Druzhba transportation pipelines from the border of Republic of Belarus to Slovakia, Czech Republic and Hungary, as well as to two oil refineries in Western Ukraine in Drogobych and Nadvirna;
- Trans-Dnieper transportation pipelines from the Russian border to four refineries in eastern and southern Ukraine (Lisichansk, Kherson, Odessa and Kremenchug) and the Black Sea ports in Ukraine – Odessa and Yuzhniy, as well as to Novorossiysk, Russian Federation.
- Odessa-Brody oil pipeline and Pivdenniy terminal, constructed in 2002 with a view to new possibilities for transit via Ukraine, namely, by attracting volumes of Caspian oil by tanker shipments to seaport terminal Pivdenniy and further transportation to EU countries via Odessa-Brody pipeline.

The transit capacity of Ukraine's oil transport system at its entry point is rated in excess of 100 million tons a year. Oil is shipped to six Ukrainian refineries with a total output of 50 million tons/year subsequently transited to central Europe (Slovakia, Hungary, Czech Republic), as well as export ports on the Black Sea coast (Odessa, Yuzhniy). In recent years, the load of Ukrainian pipelines is at 45-55% capacity, mainly due to significant under-loading of Ukrainian refineries. Currently, the following transit pipelines are operating on the territory of Ukraine:

- Southern "Druzhba" pipeline to Hungary, Slovakia and Czech Republic. Transit via Ukraine through this system covers almost 100% of need for crude in Slovak Republic and Hungary and 60-65% - in Czech Republic.
- Trans-Dnieper transportation pipelines system to the port of Odessa, which deals with export shipments of Russian and Kazakh oil transited via Atyrau-Samara pipeline by the Russian Federation;
- Odessa-Brody oil pipeline operating in the direction opposing to projected output, for transit of Russian oil through Pivdenniy terminal.

Table 5. Output capacity of largest transit oil pipelines of Ukraine

Name	Capacity, million tons/year	Actual load, %
Mozyr (Belarus) – Brody (Ukraine)	28,0	85-90%
Brody – Uzhgorod (Slovakia, Hungary, Czech Republic)	24,7	65-70%
Brody – Pivdenniy Seaport Terminal	14,5	60%
Velikotsk (Russian border) – Odessa port	16,2	55-60%

HYDROCARBON TRANSPORTATION TRENDS

With regard to oil transit volumes on the territory of Ukraine, two transit routes should be noted: 1) transit through the southern "Druzhba" pipeline to target refineries of the Central Europe and 2) transit to Odessa and Yuzhniy ports with further oil tanker shipments to Mediterranean market. In the first case, volumes are rather stable, while the second route is competing with other routes of the Black and Baltic seas. This concerns the Russian ports of Novorossiysk and Primorsk. Despite the existence of alternative routes, oil transit volumes through the territory of Ukraine remained stable in recent years at 33 million tons annually, peaking briefly at 39.7 million tons in 2007.

Table 6. Oil pipeline transit thorough Ukraine, million tons

	2002	2003	2004	2005	2006	2007
Oil pipeline transit volumes through Ukrainian territory	27,4	33,2	32,6	31,4	33,2	39,7

Source: Ministry of Fuel and Energy of Ukraine

Constant interest towards transit routes running through Ukraine is a testament to their economic effectiveness in comparison to the existing alternatives. Russian export mixtures of URALS and Kazakh oil are transported through the territory of Ukraine from the Russian Federation via substitution schemes.

The major factor contributing to the load of the Ukrainian oil transport system is linked to the strategy of the Russian Federation regarding the transit of energy resources through the territories of its neighboring states. In recent years, the Russian Federation has enforced a comprehensive policy of developing its own oil transport facilities and export ports in order to reduce its reliance on transit states.

Major factors that impact the redistribution of oil transit routes include the commencement of the operation of Sukhodolnaya-Rodionovskaya oil pipeline in 2001, effectively diverting oil transportation from the territory of Ukraine towards Novorossiysk port, as well as the construction of the Baltic pipeline system with its planned expansion.

Acknowledging the importance of diversifying oil supply sources, as well as the need to develop national oil transit potential with a view to reducing reliance on strategic and political decisions of the extracting countries, Ukraine implemented construction projects including the Pivdenniy oil terminal and the Odessa-Brody oil pipeline. Construction of these facilities, in addition to objectives enumerated above, also created new possibilities for diversifying oil supply to interested EU member states (Slovakia, Hungary, Czech Republic and Poland, with further plans for Austria and Germany).

As for natural gas, its transit dynamics through the territory of Ukraine are shown below:

Table 7. Natural gas pipeline transit via Ukraine, billion m³

Year	Overall transit volume	Transit to EU+ states	Transit to CIS states
2001	124,4	105,3	19,1
2002	121,4	106,1	15,3
2003	129,2	112,4	16,8
2004	137,1	120,4	16,7
2005	136,4	121,5	14,9
2006	128,5	113,8	14,7
2007	115,2	112,1	3,7
2008*	132,0	128,5	3,5

* Note: estimate based on 5 and 8-month results

Throughout 2006 and 2007, the overall transit through Ukraine was reduced to 128.5 billion m³ and 115.2 billion m³ respectively, which is explained both by changing climate conditions (warm winters) leading to reduction of gas demand in consumer states and the operation of Sokhranovka-Oktyabrskaya gas pipeline (Russian Federation) bypassing Ukraine.

Natural gas transit volumes to CIS countries, the Russian Federation (southern provinces) and Moldova have been fluctuating in recent years within a margin of 19.1 billion m³ in 2001 and 14.7 billion m³ in 2006. In 2007, the Russian Federation cut down the volume of gas transited through Ukraine by 11.6 billion m³ after a bypass pipeline started operating. Gas is transited through Ukraine to EU countries, Turkey, Switzerland and Balkan states.

The importance of a hydrocarbon resource transit route via Ukraine to the EU is noted in "Memorandum of Understanding on Co-operation in the Field of Energy between the European Union and Ukraine" of 01.12.2005:

"Ukraine is a key transit country for hydrocarbon's supplies to the EU with 40% of the EU's imports of natural gas transiting through the Ukraine network and for oil, in addition to the transit through the existing Druzhba network, the ongoing extension of the Odessa-Brody oil pipeline to Poland would open a new major transit route for EU oil imports from the Caspian basin and the international market. In this context, ensuring a safe, transparent and reliable transit system is of paramount importance for both the EU and Ukraine".

* * *

NB: As for other types of hydrocarbon transportation (railway and marine shipments), there's no objective information available due to lack of public access to such data. For example, statistic reports on railway shipments of oil is aggregated with data on oil products' transportation.

INTRODUCTION

The transit issues in the region are dominated by politics, rather than competitive transit costs. It is likely that the political trend will continue to be dominating Russian strategy both for oil and gas, and where they will try to make it increasingly independent of countries that have left the Russian sphere of interests. We will however in the future see increasing transit of oil and gas from Central Asia and Russia to the markets in the east. The new pipelines to China and the new Russian connections to the east will change the future and create a new competitive environment for the resources.

The oil and gas markets are changing. No growth in oil demand in Europe is to be expected in the future due to the climate issue. Use of natural gas could still grow as it is more climate friendly than coal, but at the same time significantly more expensive to use than coal. For oil and gas exporters, the Asian market and especially the Chinese market will be of substantial interests. The pipeline connections to Asia are competitive with transporting crude oil to Europe, especially since Russian oil and gas production in the future will be in the north and in the east and the first connections between Kazakhstan and China and Turkmenistan and China are established.

The challenges civil society will be facing are linked to the political issues. Politics will which make transparency more difficult to achieve because no one will open their books.

The best hope for transparency is from pipelines that need project finance with international banks, and involvement of EBRD. But we will not see many projects like BTC.

Most pipelines may be financed by countries or by companies like the Chinese which will be as reluctant to open their books as the Russian monopolies.

The transportation by tankers are unlikely to be very transparent, because it can be a way for the elite to enrich themselves and lack of information may also be a way of keeping competitors away. TEEKAY, a major tanker company and a company that has long experience from use of shuttle tankers, would have liked to be engaged in the Caspian, but is finding the door closed. It will more look for the future in the Black sea where it will also be more and more activity.

Infrastructure is important for producers of oil and gas. It is however important to remember that for a producing country, most of the revenues will come from the production of oil and gas. Taxation of production, either through the profit oil model in production sharing contracts or through special taxes in concessions, are far higher in the upstream than in the midstream (transport) or downstream.

Oil companies will normally pay some 75-80% tax upstream. For every government, the aim is therefore to capture as much value as possible upstream and reduce the costs of infrastructure. It is therefore

in the interests of producers like Russia, Azerbaijan, Turkmenistan and Kazakhstan to fight for as low transit fees as possible and in the interest of transit countries to get their fair share.

The Norwegian government is a good example. It does not allow the oil companies to make a lot of money on the infrastructure development. Export systems for oil and gas should cover cost, but not provide larger returns. Norway insists that the companies cannot use a discount rate of more than 3-4 percent for making infrastructure investments, whilst companies normally will use 10–15 percent discount rate for upstream investments.

Norway does not need project finance for its infrastructure investments which puts it into a strong position. China does not need project finance.

Russia has been in the same situation, but that will change with some of the new projects. The Nord Stream gas pipeline to Germany and Holland will be financed for 30% by the gas companies, whilst Gazprom will be looking to secure finance for the remainder. That will impact the terms of the pipeline because the banks and financial institutions will have a competitive return on their investments.

The oil companies will like to make more money on their infrastructure and export pipelines because the tax level will be lower in infrastructure projects than in upstream projects. High tariffs to transit countries are also part of the infrastructure costs and deductible against upstream taxation. Oil companies may therefore have some common interests with the transit countries.

The producing countries should in principles be looking for a way of creating competition between transit solutions to ensure that the costs are as low as possible. The gas pipeline through Poland from Russia was the first example of Russia trying to find an alternative to Ukraine to reduce its exposure. But in the Former Soviet Union pipeline politics are more important than anything else.

Transit tariffs are seldom transparent, but it is no reason why they should not be more transparent than today. The first step should be for government making the revenue stream public, and it should in principle be easy for pipeline systems like BTC, South Stream and others, but more difficult if payments also include payment in gas rather than in form of cash since the price of gas may vary over the year and over the months.

The introduction of ship transportation and railway transportation will tend to cloud the picture even more because the ownership structure and the fees will vary substantially depending on the utilization of the systems. It will be fees for using of ports, both on both sides of the systems, and for railways. The players involved can be the same as the producers, but can also be others. Oil companies tend not to own tankers or railways, but will pay the price for using the systems. The worst scenario is a world where it is no – or very limited – competition because the fees for transporting will be high and the "oil rent" disappear into private pockets. Oil companies should be interested in reducing the risk and therefore benefit from more openness of transit fees.

The biggest challenge to transparency is however the political aspects of infrastructure. Let me therefore look at the developments in the Russia, Caspian and Chinese world.

2. THE INFRASTRUCTURE SITUATION

Russian dominance of the infrastructure was broken when the oil companies operating in Azerbaijan decided to build pipelines outside Russian control. Back in early 1990s, in the immediate aftermath of the collapse of the Soviet Union, when Western companies for the first time had the possibility of exploiting Caspian energy, sharp-eyed observers inside the Washington could spot a bumper sticker proclaiming, "Happiness is multiple pipelines." The slogan referred to Washington's preference for Caspian energy exports to flow westward via a skein of new pipelines designed with two purposes.

First goal was to isolate Iran, subject to the Iran-Libya Sanctions Act, designed to punish Western companies seeking a foothold in Iran's hydrocarbon sector and break Russia's stranglehold monopoly. The western route through Georgia was a compromise solution, but also a political success story. Oil from early production in Azerbaijan's giant oil fields went both north and west. The pressure for the Baku – Tbilisi – Ceyhan pipeline was intense, especially from the US. Many saw the decision to move ahead as a political decision rather than a commercial decision.

ExxonMobil did not join the project since it did not see the commercial value of the export pipeline. Others went ahead and BTC has become a major success story. Revenue from the oil pipeline topped \$620 million during the first year from start of operations on June 4, 2006. During the first year, more than 170 tankers were loaded with oil.

Russia has in recent years expanded its crude oil export capacity substantially with the new Baltic terminal in Primorsk and the Eastern corridor. As well as some ship transportation from the Arctic fields directly to the market.

Russian crude oil production will peak in less than 10 years and it is therefore likely that the country will in the future have too much export capacity. Russia will therefore be in a position to look at potential arbitrage decisions on where to send the crude oil; along the historic routes like Druzhba or through 100% Russian controlled export routes like the Baltic Pipeline System, Novorossiysk or the Eastern Pipeline System.

Despite European opposition, supply questions and environmental concerns, Russia has approved an expansion of the Baltic Pipeline System (BPS-2), reducing reliance on the Druzhba system and

bypassing Belarus. So far, political motives and interests have outweighed disincentives at a time when Russia's economy threatens to put other optional projects on hold.

Prime Minister Putin has signed an order for designing and building the 1,016-kilometer line north from Unecha to Ust Luga on the Gulf of Finland with a branch to Surgutneftegaz's Kirishi refinery. The route from Unecha, in the Bryansk region 40 kilometers from the border with Belarus, would take 30 million tons of oil per year off the Druzhba system in 2012, rising to 50 million tons per year in a second stage. The BPS, opened in late 2001 to the nearby port of Primorsk, currently has capacity to carry 76.5 million tons per year.

Of all Russia's pipeline projects, BPS-2 may be the least practical. In October, Transneft asked the government to push the target date back by a year because of financing concerns. Putin has promoted the project as another bypass of transit countries that would improve energy security as a direct route, but his initial decision was taken in the heat of a four-day transit row with Belarus nearly two years ago. Poland also sees itself as a bypass target because of myriad conflicts with Russia.

It may be argued that Russia is pursuing BPS-2 to keep Belarus in line.

Minsk is trying to keep gas costs from rising above the current bargain rate of \$128 per thousand cubic meters to over \$200 per thousand cubic meters. But the bypass motives extend beyond Belarus to Poland and Baltic users of the Druzhba system. In July 2006, Transneft closed its Druzhba branch to Lithuania's Mazeikiu Nafta refinery and terminal operation after a minor spill, saying the line was not worth repairing. The move was widely interpreted as retribution for Lithuania's decision to sell the former-Yukos stake in the refinery to Poland's PKN Orlen. The first BPS project was also seen as a move to take business from Baltic ports, including Latvia's port of Ventspils. Taking oil from the Druzhba would impact supplies to Belarus' Mozyr refinery, as well as Poland's refineries at Grupa and Plock.

Reports have highlighted the political connections for BPS-2 decisions. Deputy Prime Minister Igor Sechin, the Rosneft chairman, is said to be a major promoter, in addition to Kremlin-friendly Surgutneftegaz. Swiss-based oil trader Gunvor is building an 18 million ton per year terminal at Ust-Luga, reportedly in cooperation with state-owned Zarubezhneft. Gunvor, which trades with Surgut, Rosneft and Gazprom Neft, is a major exporter from Primorsk. The connections and political considerations have so far outweighed economic conditions, market disincentives and costs.

None of the players involved are known for their transparency.

Russia is also working hard to develop a gas transportation network independent of transit countries.

The new Nord Stream gas pipeline from the Russian far north will be ready by 2011 according to the plans. Expect some delay, but the project will move ahead. It is backed by some of the strongest gas companies in Europe, Gasunie, Eon Ruhrgas and BASF/Wintershall. It is an effective route for Russian gas into the most important markets for gas, Germany and Holland with a potential connection to the UK.

It will be a blow to Poland and Ukraine since they are now key transit countries, but some gas will continue to flow through those routes since Eastern Europe is very dependent on Russian gas and will be depending on Russian gas for at least the next decade. Russia is also expanding its gas network to the south, even though South Stream will be substantially delayed and I am uncertain if it is ever going to be realized, especially since more gas also will be available from Libya in the next decade.

Russia is also working hard plug leaks in its control over Central Asia's gas.

In what was called a major victory for Russia, Prime Minister Vladimir Putin agreed with Uzbek President Islam Karimov on building a new gas pipeline during a visit to Tashkent on Sept. 2. The line would parallel the existing branches of the main Central Asia-Center gas system from Turkmenistan through Uzbekistan and Kazakhstan (CAC-1 and CAC-2). Gazprom's plan to restore and expand CAC to 90 bcm in 2006-2008 has fallen behind. The new line is being portrayed as another coup for Putin in capturing Central Asia's exports, similar to his 25-year gas deal with Turkmenistan in 2003 and his agreement to build a Pre-Caspian pipeline for Turkmen volumes last year. So far, the new pipeline has no start date for construction, no target for completion and no cost estimate. It can be seen as a declaration of intent and a reminder to China and Europe that Russia still has the strongest geopolitical claims on Central Asian export routes.

In decade-long talks on Caspian borders, Russia has maneuvered to narrow Turkmen export options. Turkmenistan, which essentially has no navy or maritime defenses, is continually presented with plans for joint fleets and collective security that are thinly-veiled pretexts for Russia's Caspian flotilla to roam near its shores.

A major Russian concern is to prevent development of a Trans-Caspian Gas Pipeline (TGP), which could link Europe's Nabucco project to Central Asia without Russian routes. The recent verification of Turkmen gas reserves may only intensify pressure for a TGP project, both from the EU and Ashgabat.

Turkmenistan is a key gas player for the future.

China is already heavily involved and constructing a major gas connection from Turkmenistan through Uzbekistan and Kazakhstan. China has organized the region's biggest coordinated project with the simultaneous launch of the 2,000-kilometer Central Asia Gas Pipeline in Turkmenistan, Uzbekistan and Kazakhstan in July. The pipeline will be one of the most important systems in the region.

China has stolen a march on Russia by setting fewer challenges for investment in Turkmenistan. With its production-sharing agreement (PSA) for the Bagtyyarlik area fields in July 2007, CNPC became the first foreign company to win a PSA for onshore gas development in the country. Last year, the Turkmen government said the Bagtyyarlik area fields are expected to contribute 13 bcm of the 30 bcm/yr for China. Production from South Yoloten-Osman appears to be an added dividend.

Turkmenistan probably has enough gas to supply Iran in the south, China in the east and Europe, but it also depends on Russia and will continue to depend on Russia for a long time. Russia is buying most of the gas today, and will continue to be the main customer also after the Chinese pipeline is in place. Russia has the sword hanging over the head of the Turkmen leadership. If they build the Trans Caspian pipeline, they can stop buying gas and leave Turkmenistan without revenues for several years. It is unlikely that Turkmenistan can take that risk. It is far less risky for the Turkmen leadership to send its gas north – as it has done for years. That is providing a substantial share of the country's revenue stream. I am therefore not too optimistic about the Trans Caspian pipeline for gas – it is still an American dream for me.

China's inroads in the region suggest that Russia's hegemony over Central Asia may not be what it once was. China had gained a level of access to Turkmenistan that Russia had been seeking for years.

Azerbaijan has significant gas resources in the Shah Deniz field which will have to find a market.

I am not too optimistic on the Nabucco pipeline. Oil and gas producers do not like to use transportation systems where they have no ownership interests and Nabucco is only owned by consuming companies. If BP and StatoilHydro joined the ownership of Nabucco, the situation would be different. The two companies also see future gas growth more in the south of Europe than in the north and may not want to go head-to-head in gas competition with Russia in the northern gas markets.

Both BP and StatoilHydro see Russia as important for them and are unlikely to challenge Russia. BP has been involved in enough trouble around BP – TNK during the last year, but still enjoys good connections to Prime Minister Putin. StatoilHydro works with Gazprom in the giant Shtokman field in the Arctic and will be reluctant to challenge Russia. The long term relationship in the far north is important.

The potential buyers of gas from Shah Deniz are currently

- Trans Adriatic Pipeline
- Turkey – Greece – Italy
- White Stream
- Nabucco.

White Stream, first proposed in 2005 as the Georgia-Ukraine-European Union (GUEU) pipeline, has received renewed attention in recent months. White Stream would consist of a 120 km onshore pipeline in Georgia, connecting the South Caspian Pipeline (or Baku-Tbilisi-Erzurum) to the Black Sea shore near the port of Supsa. This would feed into a 620 km subsea link to Ukraine's Crimea peninsula. From Crimea, further pipeline connections would lead to Romania, through a pipeline across the shallow waters of Ukraine's Black Sea shelf, and to the Ukrainian gas transportation system for further delivery to Slovakia and Poland.

There is no question there are lots and lots of reserves in the Caspian region. The question is who is going to develop them, when are they going to be available, and who will they sell to. While it is correct that upstream companies will not develop their fields without transportation routes, the starting point is generally for the resource holder to decide who they will sell to, which, in turn, is based on price. Producers in Turkmenistan, for example, must consider whether they will get the best price from Russia, China, South Asia or Europe. Then they will think about what transport routes can be used.

Maybe Georgia could become host to a future LNG plant where gas from Azerbaijan is liquefied and transported on ship in addition to an export pipeline through Turkey. I understand however that Turkey is not the easiest of countries to work with. Turkey would like to buy the gas and resell what it does not need itself, which is very much against the oil companies' interests. They will always prefer to have their own links to the customers. Turkey may however lack gas after 2012 and could aim for all the Shah Deniz gas from phase 2.

Kazakhstan will grow in importance as an oil exporter in the next decade, but the projects are delayed.

First oil from the giant Kashagan field will not be on stream before 2012-13 and the large volume will come towards the end of the next decade. Kashagan will need a new export route.

The Tengiz field will also need more capacity, but it has been very difficult to agree on an expansion of the Caspian Pipeline System due to the complex ownership structure and the diversified strategic interests of the owners. Russia and Kazakhstan have signed a MoU to expand CPC from its capacity of 32 million tons per to 67 million ton by 2012. Kazakh section expanded to 35 million mt by 2012 and to 50 million mt by 2013. Capacity would reach the planned 67 million mt when mixed with Russian crude. Under the terms of the agreements, an additional 17 million mt/year of Kazakh crude will be transported via CPC to fill the planned, Burgas-Alexandroupolis pipeline, which involves shipping oil from Novorossiysk across the Black Sea to Burgas in Bulgaria. The ownership structure is also under review as Oman has sold its share and BP would like to get out.

Kazakhstan will work hard to develop its infrastructure and ease the dependency on Russian routes.

The Iskene-Kuryk pipeline will be a part of the trans-Caspian system, which will export 23 million mt/year of oil initially, rising to 35 million or 38 million ton per year in a second phase. At its peak, the system would be expanded to transport 56 million tons per year from Tengiz and as yet undeveloped Kashagan fields. Construction of the 750 km pipeline will take two years at a cost of \$1.5 billion.

The Atasu - Alashankou oil pipeline between Kazakhstan and China is one the most attractive options for exporting Kazakh crude, especially crude in the east. It is to be expected that the pipeline will run full in the future. In 2009, CNPC will finish constructing an additional stretch of the oil export pipeline to China, connecting the existing Atasu-Alashankou project in central-eastern Kazakhstan to Kenkiyak in the west of the country and creating an export corridor for Chinese producers and others to ship their oil east from Kazakhstan's most prolific producing areas in the west. China has moved forward with constructing infrastructure networks to its market at a time when the CPC pipeline continues to struggle with a final agreement for its expansion across Russia to the Black Sea port of Novorossiysk.

Kazakhstan also seeks to unlock the country's gas potential, particularly in the Aktyubinsk region where China's CNPC owns AktobeMunaiGaz. It is prepared to rely on Chinese companies for help. An agreement was reached with CNPC for joint development with KMG of the Urikhtau gas and condensate field in Aktyubinsk. Gas production from Urikhtau and other fields in this region can provide supplies for Kazakhstan's west-east Beineu-Bozoy-Kyzylorda-Shymkent gas pipeline that is on the drawing boards for Chinese participation in its financing and construction. Up to 10 bcm per year could eventually be exported to China from Aktyubinsk. China is already participating in a major gas export network, the Central Asia China pipeline, from Turkmenistan that will have a 1,293 kilometer link across Kazakhstan to China. The Beineu-Bozoy-Kyzylorda-Shymkent pipeline will eventually tie into the gas pipeline from Turkmenistan.

The transportation of crude oil on tankers to Baku (or Neka) will be an important route in the future.

The consequence of delays to CPC will be more crude oil transportation on the Caspian towards Baku where the oil will either go into the BTC system, the western route through Georgia or on rail.

Neka in Iran can be an alternative, but that will require improvements in the relations between the US and Iran which can allow US companies to go south. Neka has been expanded significantly in recent years and Iran is discussing building a pipeline from Neka to the Persian Gulf for future Caspian oil. Iran can also refine the oil in its refineries in the north. Iran is constructing the first of three planned Caspian-class 63,000 mt tankers at Neka, which could remove the need for a trans-Caspian oil pipeline to carry expected increases in Kazakh oil to Azerbaijan's oil terminals at Baku for onward transshipment to global markets.

Tanker transportation is flexible in the sense that you have several options (also including Makhachkala). Tanker transportation could also be ways of making the elite earn more money since the tariff will be added revenue.

If you look at the export costs from Kazakhstan in US dollar per ton, the table gives you an indication of the relative competitiveness. The source for the data is PFC Energy in Washington DC.

Tankers moving from Aktau to Neka	25.1
Kumkol – Atasu – Alashankou	31.0
CPC from Kazakhstan through Russia to the Black Sea	32.4
Aktau – BTC for BTC shareholders	32.7
Aktau – Baku – Batumi	39.9
Aktau – BTC for non BTC shareholders	47.0
Rail to Iran	48.0
Atyrau – Samara – Novorossiysk	61.7
Atyrau – Makhachkala – Novorossiysk	70.3
Atyrau – Samara – Primorsk	71.7
Atyrau – Samara – Odessa	78.8
Rail from Atyrau to Europe	93.1

Kazakhstan has also invested in Georgia through its national oil company.

KazMunaiGaz exercises full control of the Batumi Oil Terminal and the Batumi Sea Port, which it acquired from Greenoak Holdings in March 2008. Kazakhstan views the oil terminal as vital to its plans to

export growing volumes of crude from fields in western Kazakhstan and the Caspian Sea. For the national oil company, use of Batumi is therefore economically beneficial and will influence the transportation strategy of the company, almost independently of the best economic solution.

Kazakhstan does not exclude the possibility of selling KazTransGazTbilisi, a Georgian gas distributor that supplies 300 million cubic meters/year of gas to Tbilisi and the surrounding area. KazTransGaz, the gas-transport arm of KazMunaiGaz, has operated and controlled KazTransGazTbilisi since 2005.

KazMunaiGaz has however cancelled its plans to build a refinery at the Georgian port of Batumi due to technical constraints.

The more Kazakhstan is involved in the whole chain, the more difficult it will be to get a good picture of the revenue flow because of the complexity and the tax optimization which will take place within the company itself.

Similar developments are taking place within Azerbaijan's national oil company, Socar. The company has entered into projects in Turkey which is part of its strategy. A consortium of Socar, Turkish oil distributor Turcas and Saudi-based financier Injaz Projects is to invest a total of \$20 billion in refinery and petrochemical projects in Turkey. Socar has also invested more than 300 million dollars in the Kulevi terminal in Georgia. The more the national oil companies expand outside their home country, the more difficult will it be to track the expenditures and the revenues.

Europe is sending a signal to Russia that it will pursue a two-track policy with its new "EU energy security and solidarity action plan," seeking to maintain relations while developing non-Russian routes for Caspian supplies.

The European Commission's plan released on Nov. 13 under its Second Strategic Energy Review would diversify imports to reduce reliance on Russia, noting pointedly that "with respect to gas ... a number of member states are overwhelmingly dependent on one single supplier." The EC estimates that imports account for 61 percent of EU gas consumption, with Russia supplying 42 percent of imports.

The strategy advances a long list of goals, including the EU's previously agreed "20-20-20" initiative to cut global warming emissions by 20 percent, raise renewables to a 20-percent share of consumption, and boost energy efficiency 20 percent by 2020. Among other things, the strategy would:

- Increase storage and create a "Baltic interconnection plan" for gas, electricity and storage facilities. EU gas links and grid connections are critical to easing concerns of countries like Poland as well as the FSU Baltic states.

- Develop a southern gas corridor for supplies from the Caspian, Central Asia and the Middle East. The initiative comprises current efforts to develop a trans-Caspian gas pipeline (TCGP) and the Nabucco project without specifically naming them.
- The strategy calls for "rapidly securing firm commitments" from Azerbaijan, Turkmenistan, Iraq and Mashreq (eastern Arabic-speaking) countries.
- It would seek supplies from others, including Uzbekistan and Iran, "when political conditions permit."
- Create a "Caspian Development Corporation" (CDC) as an EU-wide consortium to arrange block purchases of Caspian gas and transit deals with countries such as Turkey. Although still in early stages, the initiative is seen as a special-purpose private vehicle to ease concerns of suppliers like Azerbaijan. Gazprom has offered to buy all of the country's available gas at European netback rates.

The EU's aim is to attract 60-120 billion cubic meters (bcm) annually, equal to 12-25 percent of current consumption.

Although the strategy keeps conflicts unspoken, the context makes clear that the EC increasingly sees Russia as its primary energy security concern as well as its primary source. The question is how the EU will manage relations with Moscow. EU energy diplomacy faces difficulties with Russia both in the near and longer term. At an energy summit in Baku on Nov. 15, for example, the EC and 15 nations signed a declaration in support of diversifying energy routes from the Caspian, focusing largely on the Caucasus corridor. Russia did not attend. The event highlighted the challenge of promoting cooperation with Russia on the one hand and competition on the other, making differences increasingly difficult to paper over.

The Second Strategic Energy Review tries gamely to follow the two tracks of energy cooperation and competition with Russia at the same time. Despite the diplomatic fog, the thrust of the effort is abundantly clear to Moscow. The EU is trying to enhance the security of its current energy supplies from Russia while reducing Moscow's energy leverage and future market share.

The challenges of the EC plan are largely reminiscent of U.S. efforts in the 1990s to advance the Baku-Tbilisi-Ceyhan (BTC) oil pipeline and the energy corridor through the Caucasus without derailing other strategic objectives like nuclear arms control. The results for U.S.-Russian relations in the second Clinton administration were generally poor, contributing to frictions with President Boris Yeltsin that could not be resolved.

Aside from the contradictory implications of the EU energy strategy, Brussels faces at least three additional difficulties in keeping relations with Moscow on a stable course.

Unlike the United States in the late 1990s, the EU has an existing energy dependence on Russia that will tend to tie its hands in pursuing a Caspian strategy, as well as a more immediate geographical security risk.

Secondly, the EU is seeking to present a united front when the energy interests of its members are far from uniform, making it susceptible to separate appeals and incentives from Russia. EU nations may agree on the benefits of Caspian supplies or infrastructure projects but they are likely to find unanimity elusive when it comes to specific steps; neither Italy, Germany nor France will be willing to challenge Russia. Gazprom has developed close relations to ENI, Total and German companies – and those relations are more important than the Brussels strategy

Lastly, the EU has advanced its strategy without fully reflecting the U.S. factor.

Washington's Caspian policies have remained largely consistent since the 1990s, although they have faded in importance, while relations with Russia have grown increasingly strained. Although the Obama administration is likely to follow the main threads of past policies toward Russia and the Caspian countries, its emphasis and degree of engagement may change. The strength of the U.S. push for projects like Trans Caspian Pipeline may affect EU plans. Ironically, the harder the push, the harder it may be for the EU to pursue its Caspian strategy. The EU strategy may stand a better chance as a stand-alone policy that may be tempered by closer relations and cooperation with Russia, but even so, it faces a complicated course.

Notes