

Energy Transit: The Multilateral Challenge

By Paul Vlaanderen*

The importance of transit in the development of economically viable international energy transmission networks has become evident with the growing dependence on imported energy by major consuming areas and the emergence of new energy producers in new, often remote and land-locked nation states. As larger volumes of energy will have to cross more borders from production areas to consumer markets, the political and commercial risks and uncertainties of such grid-bound transit must be minimised to ensure the long-term economic viability of multiple routes and diverse production areas and to attract investments.

Energy transit and conventions dealing with it are not new phenomena: in the 1920s the first international conventions on the freedom of transit were signed. Most transit connections were negotiated and regulated on a case by case basis. In more recent years land-bound transit of energy has become an economic policy issue. Its growing importance lies in its strategic significance, in particular on the Eurasian continent.

The emergence of new independent states in Central and Eastern European countries, creating new borders between new, remote and often land-locked energy producing countries and their markets, as well as the required increases in energy investment needed to trigger and sustain economic growth, make international energy transmission networks a decisive policy issue. Such networks will provide for secure access to consumer markets; diversity of transit operations will support the competitiveness of energy markets on the vast Eurasian continent and increase supply security in importing countries.

Market Trends

Due to the ascendancy of *market competition over economic plan*, the role of governments as owners, managers and capital providers in the energy sector is diminishing in most countries. However, their role as policymakers, setting the conditions that enable market forces to play in line with regulatory, social and environmental policies, remains paramount. Thus, governments will have to decide on the pace and extent of competition and liberalisation of their various energy sectors. Transit, both nationally and internationally, is, therefore, more than a transport requirement between energy markets, it is a critical factor for ensuring cost effective and rational energy market performance as well.

Energy markets and their transit requirements vary according to factors including geographical distribution of reserves, physical properties of the energy forms, their transportation cost, the degree of self-sufficiency, and the need for diversification of supply sources. These factors largely determine the range of transit options, which in turn requires the cooperation of governments before market operators are prepared to commit their investments for the realisation and operation of selected routes.

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Risks

The policy and commercial risks that may deter the huge investments needed for energy markets to develop efficiently into the next millennium, are high and often directly related to the issue of transit:

1. technical risk: supply disruption due to technical reasons, such as pipeline failure or compressor failure;
2. deliverability risk: securing long term supplies from existing or new fields;
3. commercial risk: commercial disputes and contractual breakdowns;
4. political risk: disruption of existing or potential supply for political reasons; and
5. regulatory risk: administrative intervention that may have adverse effects on transportation.

These risks apply specifically to oil and gas, as countries are generally able to influence and control their self-sufficiency in electricity. Furthermore, in most countries the supply possibilities are more numerous for oil than for gas: the fact that maritime shipping is the dominant mode of oil transportation explains why gas transit is more widespread than oil transit. In addition global ecological considerations support the use and consequently increasing transit of gas in energy markets.

Multilateral Cooperation

Any transit system, by its very nature, requires multilateral agreement to ensure that the sum of national transit rules and regulations result in a multilateral framework for unhindered transit investment and commercial operation. Therefore, governments have a major role to play in reducing companies' transit risks to manageable levels, including preempting and settling disputes. Governments are, therefore, proactively seeking agreement on international rules and principles safeguarding transport and transit of energy that will ensure an investment climate which allows for transit projects and operations to develop.

Competition and/or regulatory authorities will have to help safeguard the operation and expansion of transit capacity by ensuring undisturbed transit, objective terms and conditions of capacity utilisation, fair and equitable capacity allocation, and just, non-discriminatory and reasonable transit tariffs. Few international treaties and agreements contain rules for transit. The most recent and relevant in this context are the transit and competition provisions in the European Energy Charter and the Energy Charter Treaty (ECT); they deal specifically with grid-bound energy transit and cover all new Eurasian energy provinces.

Companies will increasingly play a key role in the development of energy transit systems as investors and capital providers. Governments involved with the Energy Charter process and the G8, while respecting the role of commercial contracts and competition rules, may again consider taking a proactive role by initiating further multilateral consultations with the objective of developing an international regime for grid-bound energy transit. Such a regime – including a dispute settlement mechanism – should be based on the European Energy Charter and the provisions of the Energy Charter Treaty in which its main elements can be found already.

Commercial Issues

The organisation of gas and electricity transit is usually entrusted to the transmission company in the country concerned. The company is typically state owned, and holds a regional or national monopoly. Some transit facilities are owned by the buyer or the seller. Oil transit pipelines are typically owned by the private or state owned companies buying the crude oil transported.

The majority of onshore gas transmission pipelines in Europe are owned or controlled by state enterprises that have de jure or de facto transportation monopolies. The pipelines are operated as an integral part of the activities of the gas company in the country in question. Examples are the transmission pipelines in France, Denmark, Poland, Slovakia and Russia. In North America another model prevails: all interstate or inter-provincial pipelines are owned by private gas companies and utilities and are operated as separate businesses through individual companies or joint ventures. More importantly, North American pipelines are increasingly run independently from both sellers and buyers, even when they are owned by sellers or buyers. They are no longer allowed by regulators to combine the transportation function directly with the buying and selling (merchant or supply) function. Between these two organisational forms lie several variants.

Under the terms of the proposed EU gas directive, for which a common position was adopted by EU Ministers in February 1998, all transmission companies in the EU will be obliged to offer either negotiated or regulated access to eligible consumers. The draft directive also contains a clause providing for separate internal accounts for transmission, distribution and storage. On adoption, the EU draft directive will become part of the "Acquis Communautaire" and will impact new and future EU entrants, such as some Central and Eastern European countries.

The gas delivery point is crucial for the way transit pipelines are organised and owned. Some examples:

- From the Netherlands, gas is delivered at the Dutch border. The buyer has to arrange for transportation from that point. In the case of Italian imports from the Netherlands, a separate transit pipeline (TENP) has been built from the Dutch border through Germany and Switzerland into Italy. In Germany the pipeline is owned by a joint venture between Ruhrgas and SNAM. In Switzerland the pipeline is owned by a joint venture between Swissgas, Ruhrgas and SNAM;
- Algeria also delivers its gas at its border. In the case of Italian imports from Algeria, SNAM has created a wholly owned subsidiary to take the gas through Tunisia, and a joint venture with Sonatrach, the state-owned Algerian gas company for the crossing of the Strait of Sicily;
- Norway prefers to deliver its export gas at the border of the importing country and, therefore, undertakes to arrange for transportation to that point. This means that transit is arranged through German and Belgian pipelines for volumes to France and transit through French pipelines for volumes to Spain. The seller in this case has no ownership in the transit pipelines, he purchases capacity;
- Traditionally, Russian gas has been delivered to Western European customers at a Western European border. In the case of exports to Germany, transportation to the German

border is arranged by the seller (with the notable exception of the German gas company VNG which buys its contracted Yamburg volumes at the Ukrainian-Slovak border). Today, exports to Germany have to transit Ukraine, Slovakia and the Czech Republic. Before the break-up of the Soviet Union, it only had to arrange for transit through Czechoslovakia.

Looking specifically at the organisation and ownership of transit pipelines, the following observations can be made:

- Often the transit line is owned by the dominant gas company in the country or the region. The company in question is typically a monopoly, mostly combining the functions of transit and domestic transmission;
- In a few cases transit lines are owned by the gas buyer, such as the lines for gas from Algeria through Tunisia and Morocco to Italy and Spain. The SEGEO transit pipeline through Belgium provides an example of mixed ownership, between companies of the transit country (Distrigaz) and the buyer of the gas (GDF, France);
- In Moldova, Belarus, Armenia and Bulgaria, companies of the seller country (Gazprom, Russia) hold ownership interests in the national gas pipeline system.

Commercialisation of Transit

Many complexities are faced by the newly independent states of Central and East Europe that are in transition from a centralised economic system lacking price mechanisms towards differentiated economies governed by the rule of law, price mechanisms and competition. Dominant positions may lead to monopolistic pricing practices and inefficiencies in investment strategies. Sound market oriented, anti-monopolistic tariff and fee methodologies are essential and must take precedence over barter deals and payment in kind. Thus market forces will emerge to generate the necessary incentives for developing efficiently and timely viable energy interconnections and transmission networks in Eurasian energy markets and overtime provide sufficient cash flows and liquidity for energy companies to maintain operations viable in a market economy.

Fees and Tariffs

Although the lack of transparency makes it difficult to get a good overview of what is paid in the Eurasian continent for the transit of energy the following systems are common.

Transportation tariffs in North America have been unbundled from commodity prices. They are calculated using methodologies approved by regulatory authorities and provide the basis for tariff negotiations. In most countries in the Eurasian continent, transportation and transmission rates remain bundled with the price of the commodity. A notable exception is the unbundling of electricity transmission and distribution tariffs in the Nordic countries (Denmark, Norway, Sweden, Finland), a result of their recent liberalisation initiative that preceded the EU electricity directive.

In principle, for oil and gas transit, when the transit country owns the transit pipeline in question (the majority of cases), transit fees are supposed to cover the transportation as such, including profits, plus a payment for the right of way. What often complicates the comparison of transit fees in different countries is that the services included in the transit

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tariff vary. In some cases transit may include storage and other load balancing services. Another complicating element is that transit is often paid for in kind.

The following example may illustrate this issue: Ukraine is the biggest gas transit country in the world and has the capacity of transiting some 130 bcm of gas from Russia towards Central and Western Europe. Formally the country has a tariff of US\$ 1.75/mcm (one thousand cubic meters) per 100 km for transit. In practice, however, transit is paid for in kind. For 1997, the transit of more than 100 billion cubic meters (bcm) of gas for Gazprom was supposed to generate a transit fee in kind of 30 bcm of gas. The real price paid for transit will thus depend on the valuation of that gas.

In 1995 the price of Russian gas delivered at the German border was around US\$ 94/mcm. If the published transit tariff is used, the transit fee through Ukraine amounts to some 18 percent of the gas price to Germany. To this has to be added the transit fee through Slovakia and the Czech Republic. It can therefore be argued that transit fees/cost amount to 25 to 35 percent of the Russian gas price into Germany. This also illustrates that transportation is a significant part of the total cost, bearing in mind that the transit distance through Ukraine, Slovakia and the Czech Republic is less than one third of the total transportation distance from Siberia.

Legal Issues

In the past, transit has mostly taken place under contracts between market participants, with specific international transit agreements playing a modest role. Transit contracts are commercial deals between market participants, be they private or state owned. Such contracts are backed up by agreements or treaties between the states involved or by the principles of international law. Contracts and intergovernmental arrangements should be of help in case of difficulties over transit.

There are several examples where transit has met difficulties or obstacles:

- An assessment of the historical record of petroleum pipelines in the Middle East until the end of 1995 reveals that every one of the 8 international pipelines in the region was shut down at least once during the period since the first pipeline was built (1931) and 1995. In most cases, including those of transit pipelines involving three countries, transit was disturbed for political reasons.
- Another study recorded 27 natural gas "transit events" in the FSU during 1992-94. Ten of these disturbances were related to negotiations or renegotiations of transit agreements, 6 were threats to supply, 3 were irregularities in supplies and 8 were actual cuts or reductions in supply.

Examples also exist where it has been, and remains, very difficult to establish sufficient transit connections, one case in point being the transportation of oil and gas from the Caspian region. In Western Europe it has also proved difficult to agree on transit: it took several years to negotiate an agreement to allow French electricity to transit across Spain to Portugal.

The above examples indicate that neither contracts nor existing international agreements, such as the 1921 Barcelona Convention on the Freedom of Transit and Article V of GATT, could prevent these incidents, either because they did not apply or had only limited coverage. Indeed there is little

specific national legislation and regulation dealing with transit as Table 1 shows.

With increasing energy volumes and market liberalisation there will be greater need for internationally accepted transit rules. The most important development in the context of Eurasian energy markets is the European Energy Charter and the ECT.

Table 1

Legislation Dealing with Transit

Multilateral Instrument	Main Provisions
1. Barcelona Convention on Freedom of Transit, 1921	• Non-discrimination • Reasonable Transit tariffs
2. GATT, 1947, Article V	As 1. plus: • Most favoured nation treatment • Exemption from customs duties – may only charge transport costs and administration costs
3. The European Energy Charter, 1991	Political Declaration As 2. Plus: • Facilitate transit and the building of new capacity
4. The Energy Charter Treaty, 1994	As 3. Plus: • Legally binding • Conciliation procedure in the event of a dispute • Must not interrupt or reduce flows of energy materials and products • permit interconnection and new capacity be installed provided conditions are met.

Policy Issues

An increase in world energy demand does not automatically imply an increase in energy transit. However, given the uneven geographical distribution of reserves on the Eurasian continent, there is a strong presumption that energy trade and transit will increase. Dependence on imported oil and gas is set to rise, notably for Europe and Asia, in particular for China. Important in this respect is the need to diversify supplies and the need to develop and market reserves in new energy provinces, such as Central Asia and the Caucasus.

Long-distance oil and gas pipelines as well as high voltage electricity lines built across several territories imply inter-dependence and risk. Strong and stable relations between the parties as well as regional stability are necessary to ensure reliable and safe transportation of energy flows. Such large scale transportation infrastructure is extremely capital intensive and the search for financing of such projects is, therefore, one of the major challenges faced by their developers.

Gas will have to come to consumer markets from more remote areas than today. This implies higher cost, despite the gas industry's efforts to reduce them. At the same time, the ongoing energy sector reform process is expected to reduce consumer prices. In this sense, the profitability of the gas industry might be under double pressure. As long as gas prices remain relatively low, the expected rate of return on new gas development projects and new pipeline projects will also be low. If governments can create a good investment climate and help minimise risks, costs will be lower, rates of

return will be higher and the prospects for new gas developments will improve.

Estimates show that the possible world gas pipeline length required to meet the increase in gas demand by 2010-2015 may be as high as sixty thousand km which will imply investments of at least US\$ 70 billion. Many of these new pipelines will be transit pipelines. The building of new oil transit pipelines requires significant investments as well. Several of the pipeline options proposed to transport oil from landlocked countries in the Central Asian region will need investments of more than US\$ 1 billion each.

New transit routes to Europe will involve a chain of countries, from producing, via transit to importing countries. In most cases, investments will have to be made in all the countries concerned. To realise such projects the investment climate has to be favourable in all these countries. All countries have committed themselves to create such an investment climate; the ECT contains legally binding rules on foreign investment for its member countries which are applicable to pipeline and electricity transmission investments. Signatory governments are engaged with creating stable, favourable, non-discriminatory and transparent conditions for foreign as well as for national investment within the framework of the ECT.

Reform policies

Energy sector liberalisation trends, as observed worldwide, generally include deregulation, de-monopolisation and competition. The central focus of recent reforms has been the introduction of more competition through market liberalisation. The expectation is that this will improve competitiveness, economic performance and efficiency of the energy sector.

Such reforms influence the conditions of transit in a country. The reform process in each country has started from different levels. Many countries are still in transition from centrally planned economies to market economies. Some still try to cope with fundamental problems in the organisation and regulation of their economy in general and their energy sector in particular. Although several countries in Central and Eastern Europe have made considerable progress in their reforms, some in Central Asia and the Caucasus have yet to reach that point.

In North America the energy sector reform process started during the 1980s. In the mainly private gas sector, for example, one of the first steps was to grant third party access to interstate pipeline systems. Over time, the pipeline companies were asked by regulators to separate their transportation function from their merchant (or supply) function. Pipelines and electric utilities continued to be regulated on a cost-plus basis (cost of service regulation). Access to grids and pipelines laid the ground for competition in the wholesale market. More recently, smaller end-users, traditionally served by local distribution companies, have also been allowed to choose their supplier.

In Europe, the UK was first to liberalise its electricity and gas sectors. From a situation of fully integrated state-owned gas or electricity companies having a monopoly on purchase/generation, transmission and distribution, it is in the process of introducing competition in all parts of the business. Transmission and distribution of electricity and gas are now taken care of by separate de facto monopolies regulated and obliged to grant access. Transmission compa-

nies are not allowed to participate in merchant activities.

In other Western European countries, the reform process in the electricity and gas industry has been slower. Most of the transmission companies in Europe have a de facto or de jure monopoly for electricity and/or gas transmission. Some have a monopoly on imports and exports. The general rule is that they are at least partly state owned, however, in recent years, some of them have been partly privatised. The trend is that, in spite of their state ownership, they operate independently from the government, behaving more like commercial companies.

While the details of reforms are as varied as the countries in which they are implemented, it is possible to identify four distinct, yet related, classes of reforms. These are changes to:

- the operation of the market, i.e., the introduction of more competition;
- the structure of the industry, i.e., the extent of vertical and horizontal integration;
- utility ownership and the role of the private sector; and
- the extent of regulation/deregulation.

Energy sector reform in most countries largely follows the same direction; i.e., more reliance on market forces and a changing role of government. The opportunity here is to match national circumstances and market forces with measures to facilitate transit through acceptance of international rules.

Different legal and regulatory regimes and different industry structures may hamper investments in energy transit infrastructure. An improved investment climate, as well as a more harmonised set of transit rules developed on the principles of the European Energy Charter and the ECT, focusing on specific conditions for the modernisation and use of international energy transit networks, are likely to facilitate long term investor confidence by reducing risk and uncertainty.

Conclusion

Transport and transit of energy over land is bound to become a relevant issue for policymakers in companies and governments. Large risks and investments are involved; access to markets and security of supply will depend on it. In increasingly reformed and liberalised energy markets, energy companies will be responsible for operational and commercial aspects of energy deals. Governments will have to ensure that there is an investment climate and a multilateral transport/transit regime to enable energy companies to take commercial responsibilities and risks.

Due to the universal significance and the noncontroversial principles vested in international law by the Energy Charter Treaty, in full operation since April 16, 1998, further options for enhancing Eurasian energy sector cooperation in the area of transit have matured. During the Business Consultative Meeting on the eve of the G8 Energy Ministerial Meeting of April 1, 1998, in Moscow, proposals were made to encourage countries to further cooperate on the principles and provisions of the Energy Charter process. This will contribute to the stable, yet competitive performance of rapidly globalizing energy markets fuelling socially as well as environmentally sustainable economic growth on the Eurasian continent.

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