Strengthening Subregional Connectivity in East and North-East Asia through Effective Economic Corridor Management Training-Workshop Series: Workshop 1

Lecture 3: Energy Transit

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Content

• Energy security and the role of transit
• Explaining energy transit
• Main challenges of transit
• Organisational and regulatory aspects of energy transit
• Instruments facilitating energy transit
• Case studies
Energy security and the role of transit
Dimensions of energy security

- Security of supply
- Security of transit
- Elimination of energy poverty
- Security of demand
Energy-Related Organisations with More Legally-Binding Requirements

- IAEA
- UNFCCC/Kyoto Protocol/Paris Agr.
- IRENA
- OPEC
- ECOWAS
- ASEAN
- WTO
- UNCTAD

Categories:
- Nuclear
- Climate change
- Renewables
- Environment Protection and Energy efficiency
- Energy security
- Transit
- Trade
- Investment

Regions:
- North America
- Pacific OECD
- Europe OECD
- Europe non-OECD
- CIS
- MENA
- Latin America
- Africa
- China
- Pacific non-OECD
Achieving energy security

- Diversification of supply sources and routes
- Supply expansion
- Stockpiling of energy reserves
- Energy subsidies
- Demand control
- Security measures
- Energy trade
Recap and practice

• What are the priorities of your government in terms of energy security?
• Which energy security policy options and measures are currently being implemented in Mongolia?
• In your opinion, which of them are the most promising to meet the strategic goals?
EU Energy Security

- Secure gas supplies
- Diversification of gas supply sources and routes
- EU oil stocks
- Offshore oil and gas safety
- Oil and gas licensing
- Security of electricity supply
- Critical infrastructure and cybersecurity
- Energy supply and pandemics
What is energy transit?
International legal frameworks on transit

• General conventions and agreements:
  – 1921 Barcelona Convention & Statute on Freedom of Transit;
  – 1947 GATT (replaced by 1994 GATT/WTO Treaty);
  – 1965 Convention on Transit Trade of Land-Locked States;
  – 1982 UN Convention on the Law of the Sea (UNCLOS);
  – 1994 Energy Charter Treaty (ECT);
• Special transit agreements (pipeline-specific).
1921 Barcelona Convention & Statute

- General rules related to transit
- Not applicable to pipelines, but...
- Main provisions:
  - ‘Non-discrimination’
  - ‘Reasonable transit tariffs’
  - ‘Non-deviation’ from the conventional provisions, except in case of an emergency affecting the safety or the vital interests of the transit State.
1947 GATT, Art. V

- Applies to the transit of goods (“traffic in transit”)
- Transit States’ obligations regarding:
  - “non-discrimination”
  - imposition of “reasonable charges and regulations”
  - “exemption” from customs duties and all other transit duties or charges (with some exceptions with respect to transportation charges, administrative expenses, or costs of services)
- Art V incorporates a “most-favoured-nation treatment” clause with respect to all charges, regulations and formalities in connection with transit, as well as with respect to products, which have been in transit through the territory of any contracting party
- New GATT/WTO Agreement adopted in 1994 did not introduce any changes to the provisions of Art V
- The freedom of transit under Art V reflects to a large extent the principles embodied in the 1921 Barcelona Convention.
Transit Trade of Land-Locked States

1965 Convention:
• Objective: access to the high seas for LLS;
• Does not immediately apply to pipelines but parties may agree to include them;

1982 UNCLOS:
• The right of access & transit of LLS to & from the sea;
• LLS and transit States may, by agreement between them, include as means of transport pipelines;
• A general right of all States to lay submarine cables & pipelines on the continental shelf of third states.
Transit in multilateral trade framework

- Energy trade is covered by general WTO rules
- BUT general transit rules are not designed to tackle:
  - Access to infrastructure and conditions of access, tariffs
  - Creation of new infrastructure
  - Non-interruption of flow (incl. dispute), etc.
- + Energy companies-incumbents can obstruct transit
- Many transit states are not WTO Members
- The ECT contains a balanced approach facilitating transit based on non-discriminatory & transparent rules
- Art. 7 of ECT: Freedom of energy transit, based on GATT
What is special about energy transit?

- Energy transportation is capacity restricted and energy is difficult to store => time aspect matters
- Reliance of energy trade on fixed infrastructure - built specifically for transporting energy;
- Energy transportation remains very expensive - significant share of the overall cost/large economy of scale
- Fixed infrastructure investment – capital intensive;
- Energy transportation is capacity restricted;
- Pipelines/grids often controlled by incumbent companies, natural monopoly, access to pipelines;
- Sensitive for energy security.
Energy Charter Treaty

• Specifies GATT V:
  – for Energy Materials and Products and
  – for grid bound energies
• Non-discrimination as to origin, destination or ownership
• Facilitate transit and secure established transit flows
• Not to impede the creation of new capacity
• Non-interruption of flow (including in a case of dispute)
• Obligation not to obstruct the establishment of new capacity
• Conciliation procedure for transit disputes
ECT Article 7 on Transit: coverage

Transit of *Energy Materials and Products*
- Crude oil, oil products, natural gas, electricity, coal

Transit through fixed infrastructure (*Energy Transport Facilities*)
- High pressure gas pipelines
- High voltage electricity grids and transmission lines
- Crude oil transmission lines and product pipelines
- Coal slurry pipelines
- Other fixed infrastructure
- Maritime transport excluded
ECT Article 7 on Transit:
What constitutes transit

Transit country must be an ECT Contracting Party

At least, either source or destination country must be an ECT Contracting Party
Recap and practice

• What kind of energy infrastructure is covered by the ECT transit provisions?
• What are the obligations of a transit state under Article 7 ECT?
• What is the status of the countries along proposed Economic Corridor in the Energy Charter Conference?
Challenges of energy transit
Draft Transit Protocol

Mandate (1999) by the Energy Charter Conference to negotiate a Transit Protocol to:

- Ensure secure, efficient, uninterrupted and unimpeded transit
- Promote more efficient use of transit infrastructure
- Facilitate the construction or modification of transit infrastructure
Transit Protocol negotiations

Further elaborate and detail the ECT Article 7

Basic text agreed at the end of 2002:

• Definition of available capacity;
• Principles of transit tariffs;
• Transparent and non-discriminatory congestion management rules;
• Detailed provisions for new capacity creation.

Remaining open issues were discussed in bilateral consultations between certain CPs:

• Avoidance of mismatch between the duration of supply and transit contracts
• Application of the TP inside the EU
UNGA Resolution 67/263

• Sponsored by Turkmenistan and 72 UN members;
• The need for extensive international cooperation for promoting the reliable transportation of energy;
• Turkmenistan committed to host international meeting of experts;
• Four expert meetings held so far:
  • Ashgabat (December 2014)
  • Brussels (April 2015)
  • Beijing (November 2015)
  • Tirana (July 2016)
Issues and difficulties of transit

• Investment procedures;
• Access to infrastructure and capacity allocation;
• Transit tariffs;
• Safety, operational and environmental standards;
• Authorisation procedures;
• Cross-border cooperation between network operators;
• Dispute settlement.
Recap and practice

- Chapter 3 of the Module refers to four types of risks – technical, deliverability, commercial and political.
- In light of the proposed energy corridor, how would you rank these four types of risk?
Organisational aspects of transit
Organisation of transit
Types of transit systems

a. Pipeline crossing the territory and carrying transit gas without any connection to the gas system of the transit country.

b. Pipeline which is owned by a separate entity and which is used for gas transit, but also to supply gas to the transit country.

c. Transit pipeline system which is integrated into the domestic supply system and which is owned and operated by the national TSO.

d. Systems where transit volumes commingle with a highly meshed national grid.
(a) Central Asia – China pipeline
(b) South Caucasus Pipeline
(c) Gas transmission system of Ukraine
(d) Gas system of Belgium

Fluxis 2018
Transit is not the only option…
Regulatory aspects of transit
Pipeline Economics

• High share of transportation costs in market value (LNG and Pipeline)
• Costs predominantly investment and financing
• Profitability depends on high utilization
• Difference pipeline and LNG:
  - LNG bound to a specific project due to high share of transport costs, but flexible in principal
  - Pipeline investment ties a specific production to a specific market.
ACER

Agency for the Cooperation of Energy Regulators established in 2009 under the 3rd Energy Package:

• complements and coordinates the work of national regulatory authorities,

• participates in the creation of European network rules,

• takes, under certain conditions, binding individual decisions on terms and conditions

• for access and operational security for cross border infrastructure,

• gives advice on various energy-related issues to the European institutions,

• monitors and reports developments at the European energy markets.
ENTSO-G

European Network of Transmission System Operators for Gas established in 2009 under the 3rd Energy Package:

• facilitate and enhance cooperation between TSOs across Europe;
• promote the completion of the internal market for gas and stimulate cross-border trade;
• ensure the efficient management and coordinated operation of the European gas network.
TPA Exemptions

- the investment must enhance competition in gas supply and enhance security of supply;
- the level of risk attached to the investment must be such that the investment would not take place unless an exemption was granted;
- the infrastructure must be owned by a natural or legal person which is separate at least in terms of its legal form from the system operators in whose systems that infrastructure will be built;
- the exemption must not be detrimental to competition or the effective functioning of the internal market in natural gas, or the efficient functioning of the regulated system to which the infrastructure is connected.
Recap and practice

• What is the organisational structure of the energy sector in Mongolia? Briefly describe key entities and their responsibilities.
• What is the role of the Energy Regulatory Authority?
• What are the key functions of the Regulator?
Principles of transit tariffs

- Objective
- Reasonable
- Transparent
- Non–discriminatory
- Cost-based - operational and investment costs, including a reasonable rate of return
Revenue Requirement and Unit Tariff

Revenue requirement = RAV \times ROR + Operating costs

Revenue requirement = Capital costs + Operating costs

T = \frac{R}{V}

R = total planned yearly revenue of the TSO
V = total annual volume of transportation of natural gas
Unit tariff methodology

Postal tariffs
- may be justified by social aspects

Distance-based tariffs
- most useful for linear (transit) flows, cost-reflective

Point-to-point tariffs

Entry-exit tariffs
- Complex, but believed to favour efficient allocation of costs and rational use of capacity
- Risk of cross-subsidisation
- Mandatory in EU, but derogations possible
Available capacity

- Total physical operating capacity
- Available capacity
- Operating margin
- Infrastructure owners own transportation needs
- Binding obligations pursuant to laws and regulations to ensure the supply of energy (i.e. public service obligations)
- Obligations under any valid and legally binding agreements

Time
Capacity allocation

Capacity Allocation

Capacity Requests (Volume and Duration)

Available Capacity

- YES
  - Booking: booked/allocated capacity deducted from Available Capacity
  - Capacity allocation mechanism: non-discriminatory, transparent
    - Auction, Pro-Rata, Other
  - Prevention of speculative hoarding and capacity blocking e.g. operational use-fist or lose-it

- NO
  - Open subscription period
    - Minimum waiting period
    - Reasonable relation between length of subscription period (and period from capacity allocation to start of use) and duration of transit period

Long term decision: capacity deficit remains and capacity allocation maintained

Open Season

Investment:
- Objective, transparent and non-discriminatory authorization procedures (see draft Article 9)
Case Study: Transit Tariffs
Oil and Gas Pipelines

Oil Transportation

1. Western Route Export Pipeline (Baku-Supsa Pipeline) (“WREP”)
   - The WREP is a transit pipeline built to transport crude oil from oil fields in the Caspian region, including the main source of supply, the Azeri-Chirag-Guneshli oil fields, through Azerbaijan to Georgia.
   - The pipeline connects the Sangachal Terminal in Azerbaijan with the Supsa oil terminal in Georgia, which is owned by the Company.

2. Baku-Tbilisi-Ceyhan Pipeline (“BTC”)
   - The BTCP is a transit pipeline that transports crude oil extracted from the Azeri-Chiraq-Guneshli oil fields from the Sangachal Terminal through Azerbaijan and Georgia to the Ceyhan marine terminal in Turkey on the Mediterranean Sea.

Gas Transportation

1. North South Gas Pipeline (“NSGP”)
   - Serves to transit natural gas from Russia to Armenia

2. South Caucasus Pipeline (“SCP”)
   - Transports natural gas from Azerbaijan to Turkey and onward to Europe.
North-South Gas Pipeline (NSGP) Overview

<table>
<thead>
<tr>
<th>Design parameters</th>
<th>Real and Planned Capacity (bcm/y)</th>
<th>Expected load for 2020 (bcm/y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (km)</td>
<td>Diameter (mm)</td>
<td>Pressure (bar)</td>
</tr>
<tr>
<td>253</td>
<td>1200/1000</td>
<td>55</td>
</tr>
</tbody>
</table>

**Highlights**

- NSGP is a part of MGPS (Main Gas Pipeline System of Georgia) owned by GOGC.
- It is operated by GGTC.

**Utilization and Rehabilitation**

- NSGP is dedicated to Russian gas transit to Armenia.
- After rehabilitation NSGP is capable to transport 8.5 bcm gas per year. Installation of two compressor stations along the NSGP will allow further increase of throughput capacity up to 12 bcm/y.

**Contractual Framework and Income**

- GGTC receives a Transit Fee for transit services and purchase gas volumes with sales and purchase agreement.
Transit tariffs in Turkey

Transit Tariff? 

- **Transit Tariff** is a payment made to the transit country for the usage of its territory and/or facilities and business transactions carried out for transit passage of the commodity. 

> Price of the commodity in transit should not be a component of Transit Tariff calculation methodology.
Transit tariffs in Turkey (cont.)

Transit Tariffs in Turkey

Baku-Tbilisi-Ceyhan Crude Oil Pipeline:

(TRANSIT TARIFF = TAXES AND OPERATING FEE)

- MEP Participants exempted from all taxes in Turkey instead they are liable to pay a fixed amount of Corporation Tax.
  - Corporation tax is a fixed rate for per barrel crude oil in accordance with the terms defined in the HGA.
  - As the Turkish section of the pipeline operated by BIL (a state owned company), MEP Participants are also subject to pay an ‘operating fee’ for per barrel crude oil transported through the Turkish section of the pipeline.
  - Lower rates for the Corporation tax and operating fee were set for the initial operation period in order to promote the investment.
  - Nonenforcement of discriminatory tax measures have ensured.

Collection process of tax related to oil and gas transportation, under the ‘Corporation Tax’ as a single tax item, is preferable both in terms of project finance and predictability of the investment.
Instruments facilitating transit
Dispute Settlements

- Normal operation
- Irregularity noted
- Disagreement on related issue
- Dispute arising from transit
- Transit dispute (Possible violation of ECT)

- Early warning
- Mediation
- Conciliation
- Rapid response
- (Fast track) arbitration

Co-operation, transparency, prevention
Model Agreements

IGA
States A, B & C

HGA
State A
And
Investor

HGA
State B
And
Investor

HGA
State C
And
Investor

Project Agreements

Project Agreements
Model Agreements for Cross-Border Pipelines

- Work on Model Agreements in conjunction with the development of the Transit Protocol
- A Legal Advisory Task Force on Model Agreements (LATF) established by the Energy Charter Secretariat elaborated Model Agreements for:
  - **Intergovernmental Agreements (IGA)**
    among the states through whose territories an identified pipeline system is to be constructed and operated
    
    *Horizontal issues concerning the pipeline infrastructure as a whole – co-operation, land rights, tax structures, issues relevant to the implementation of the project*
  
  - **Host Government Agreements (HGA)**
    between individual states within whose territory the pipeline system is to be realized and the project investor(s)
    
    *Vertical issues concerning the project activity within the territory of each state – governmental obligations, investor duties, relevant standards, liability, issues relevant to the implementation of the project in each specific territory*
The Model Agreements package

- Model Agreements (MA) – a practical guide to international best practice
- Model IGA and HGA – a package approach
- Basis of the package approach:
  - IGA and HGAs are interdependent and linked
  - IGA is an international treaty; HGAs are State contracts
  - Entry into force of HGAs is conditional on that of the IGA
  - All agreements refer to one identified project with identified project investors
  - MA updated periodically
Legal framework of TAP

Solid contractual framework
Key elements underpinning the TAP project

- Regulatory exemptions:
  - Third party access
  - Regulated tariff
  - Unbundling

- High level agreements:
  - Host government (HGA) and Inter-Governmental agreements (IGA), APAs

- Gas Transportation Agreements (GTAs)

  - Access to capacity for SD buyers/shippers in TAP
  - Approval of TAP’s tariff
  - Set up regulatory framework to offer additional capacity as demand arises

  - Reduce the financial and political risk of the project
  - Provide legal and commercial stability
  - Consolidate the necessary political support
  - Agreements between the host countries to avoid any double taxation for the entire period of the project (min 25 years)

  - Provide the necessary demand for capacity
  - Ensure capacity is available in coordination with the development of the SD field
  - Substantially mitigate commercial risk
  - Ensure bankability of the project

Note: GTAs and GSAs have been directly negotiated by the SD Consortium
Exhaustion of relevant dispute resolution remedies

Dispute over any transit matter arises

CP refer dispute to SG, SG to notify all CPs

SG to appoint conciliator, consulting parties to dispute, CPs concerned (30 d)

Conciliator to seek agreement of parties to the dispute (90 d)

Conciliator recommends resolution, interim tariffs, other terms & conditions

CPs, entities to observe interim decision (12 m)

Public statement (optional)

Bypass by mutual agreement

Roster of conciliators

Restart
Early Warning Mechanism

Underlying principles:

- Mechanism for preventive diplomacy, confidence building and emergency measures
- Based on voluntary acceptance by the Parties
Mandate

Prevention of emergency situations and rapid response, model mechanisms for preventing and overcoming interruptions of energy supplies through pipelines and grids:

• Draw on the examples of existing bilateral early warning mechanisms
• Explore the possibility of making use of this experience in the multilateral context
• Use the Energy Charter’s policy forum (Conference, subsidiary bodies, the Secretariat) to exchange information among the member states on developments that might imply risks to the energy security of a country or region
Case study - Functioning of the EWM
Energy Security Contact Group on the energy situation in Ukraine: Meeting on 4 April 2014

8 April 2014 | News | Transit | Trade

The Secretary General Dr. Rusnák chaired the fourth meeting of the Energy Security Contact Group on the Ukraine Crisis attended by representatives of Kazakhstan (holder of the organisation’s chairmanship in 2014), the Russian Federation, Ukraine and the European Union on 4 April 2014. The meeting was held at the office of the Energy Charter Secretariat.

The Secretary General reiterated the proposal which he had first outlined at the second meeting of the Contact Group on 13 March 2014. His proposal was that having learned the lessons from the previous crises in 2006 and 2009, a system for collecting relevant data on the physical flow in gas, oil and electricity be put in place by the Energy Charter Secretariat. This would benefit the Contact Group discussions and build confidence among the parties concerned.

It was agreed that the Contact Group would convene again when the representatives of the Russian Federation and Ukraine had received instructions from their respective capitals on the provisions of the necessary data, or on any other alternative proposal which might be addressed in the format of the Contact Group.
Thank you