The White Stream gas transportation project

- a project to deliver Caspian gas to the EU

Giorgi Vashakmadze  Director – Corporate Development

13-14 May 2009  Energy Charter Secretariat
Amsterdam  Group on Trade and Transit

Project development by the White Stream consortium
GUEU - White Stream Pipeline Company Ltd
The White Stream gas transportation project

- **Transporting gas from Azerbaijan and the Caspian region directly to Romania, Ukraine and markets in Central and Eastern Europe.**

**White Stream is the logical source of gas for the PEGP.**

- **Length:** 1100 km (subsea to Romania)
- **Length:** 630 km (subsea to Ukraine)
- **Depth:** 2150 m
- **Diameter:** 26 inch
- **Volume:** 8 Bcm/y (times № of ‘strings’)
- **Commissioning:** 2015

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The White Stream gas pipeline project

*Staged development and commercial viability*

- The pipeline will be developed in 3 stages
- The volume of gas will build from 2 to 32 Bcm/y
- The volume can increase thereafter

Importantly, the **first 8 Bcm/y stage is viable by itself**

**WS stage 1 can be developed with gas from Azerbaijan**
White Stream will cross the Black Sea at the same depth as Blue Stream

alternate option for the Black Sea crossing using LNG tankers was also examined but pipeline was found to have the advantage, particularly for large volumes over this relatively short distance.
Georgia–Romania direct
Initial routings have been assessed

Distance km

Elevation m

East >

Constanza

Black Sea

 SCP offtake

Supsa

Romania

1 105 km

Georgia

133 km

flow
The White Stream project has been approved as a Project of Common Interest and a Priority Project.

**COMMISSION OF THE EUROPEAN COMMUNITIES**

Brussels, 28 May 2008
C(2008) 1969 final

**COMMISSION DECISION**

establishing the projects of common interest eligible in the area of the trans-European energy networks selected for receiving Community financial aid in the framework of Decision C(2007)3945 for the annual work programme 2007 and the call for proposals launched on 15 June 2007
White Stream is feasible

The work supported by the TEN-E programme of the European Commission demonstrates

- **Market** feasibility
  - **Demand** for gas
  - **Supply** of gas
- **Economic** and **commercial** feasibility
- **Technical** feasibility
  proven ultra-deep water pipeline technology
- **Legal** feasibility
  UN Law of the Sea Convention
Demand: 
European gas supply-demand outlook

• The future import gap is very large
  Europe needs to:
  • Replace its declining production
  • Plus meet its future demand growth

⇒ There is plenty of room for additional gas from new supply routes to the EU

‘The EU will need an additional 200 to 300 billion cubic meters per year in 25 years, so we have enough demand for at least seven Nabuccos’

– EU Energy Commissioner Andris Piebalgs

Demand: Meeting future demand in EU countries

- Most countries of Central and SE Europe will be seeking additional gas

- Cooperation between White Stream and the planned Pan-European Gas Pipeline to link to other EU markets

Future demand-supply gaps in example countries:

Romania

<table>
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<tr>
<th>Year</th>
<th>Gas Imports</th>
<th>New Contracts</th>
<th>Gas from Caspian</th>
<th>Romgaz</th>
<th>Gas from Associated Gas</th>
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Poland

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Gas reserves are huge …

… and well-placed to diversify EU gas supply if linked directly

The key question ...

• There are enormous gas riches in the Caspian

• There is a growing demand in Europe

Why are supplies from the Caspian to Europe not linked directly to match the supply and demand potential?
The EU plan includes both key concepts needed for a successful Caspian gas strategy to facilitate western investments in Caspian that White Stream promotes:

1. **BIG GAS** concept - EU to show resolve for securing much larger import volume from Caspian (over 100Bcm/y) to become a preferred buyer.

2. Effective **CORRIDOR** concept - dramatic reduction of perceived transportation risks on the Georgia-EU segment of the ‘Southern Corridor’ through the conjunct development of *White Stream* and other ‘Southern Corridor’ projects.
The ‘paradigm’ has changed from bilateral state-to-state to multilateral

“... we, the European Union, should have a view on the pipelines and their respective merits. My own view ... is that any pipeline that delivers the most gas into the most liquid markets ... provides regional security benefits in the Southern Balkans in particular and that links up to initiatives such as the Balkan Gas Ring and NETS should be favoured.”

— Jozias Van Aartsen, Activity Report Sep 2007 - Feb 2009
• “White Stream, Nabucco, TAP and ITGI … are mutually reinforcing if combined with the integration of isolated networks …”

• “Politically, though, we must increase diversification in the Southern Balkans as a priority.”

• “I therefore welcome the … [TEN-E funded] study on White Stream. I am especially intrigued by the prospect of developing a direct sub-sea route from Georgia to Romania and then overland to Italy (along the Pan-European Oil Pipeline Route).”

The important result is not only 60 Bcm+ of capacity, but also dramatic reduction of perceived transportation risks

A factor important for Caspian region governments and for potential upstream investors is the **security and continuity of demand**

The **concurrent** development of White Stream with Nabucco offers producers and exporters such **security of demand**

Therefore the two projects are **mutually reinforcing**

The White Stream gas transportation project in the context of the Southern Gas Corridor

The White Stream gas transportation project in the context of the Southern Gas Corridor
The EU gas plan’s key elements

November 2008 - The new Energy Review

The European Commission has proposed:

• a new company: the Caspian Development Corporation to:
  – make financial commitments to buy Caspian gas
  – encourage development of new production and invest in infrastructure (likely to include TCGP)
  – bring in private sector companies

• backed by the European Investment Bank (EIB)

• stimulating investment in ‘a network of new pipelines’

• ultimately transporting 60 to 120 Bcm/y direct to Europe

This is ‘BIG GAS’ through an EFFECTIVE CORRIDOR
The European Commission has proposed a new company to bring gas from central Asia to Europe via the Caspian Sea ... Caspian Development Corporation

... which would ... enable the EU to ... access the resources of Kazakhstan and Turkmenistan, which last month announced it had discovered one of the world’s biggest gas fields..

... as a centrepiece of an energy security plan

José Manuel Barroso, Commission president, said Europe risked “sleepwalking” into an energy crisis. “We have to address this urgently by increasing our energy efficiency and reducing our imports,” he said.

Its aim will be ultimately to bring 60bn-120bn cubic metres of gas per year to the EU
EU position at the recent Prague Summit

- The Southern Corridor ‘... comprises three key pipelines, all in "advanced stages" of planning, according to EU officials. These are Nabucco … White Stream and ITGI.’

- ‘Combined, all three could supply up to 10 percent of the total EU gas need by 2020, or some 60 bcm. But, as one official noted, the potential is higher.’

- ‘Officials in Brussels … underlined that the EU is giving the undertaking its full backing. The bloc will commit "whatever political, economic, or — if needed — financial support necessary," said one official.’

- ‘The three Southern Corridor pipelines, as well as the trans-Caspian link, would be purely commercial propositions, built and operated by private companies. The EU officials said securing finances for any of them would not be a problem, as long as supplies are guaranteed at profitable prices.’

Georgia is an essential and indispensable link for foreseeable future

The White Stream consortium has proven experience from the development of the first three East-West corridor pipeline projects

The three success stories from the East-west corridor prove that market-transforming pipelines can be built
White Stream has good political support
More support will accelerate the development

‡ § European Union: strong European Commission support

§ Estonia:

§ Latvia: active interest in diverse gas supply alternatives

‡ § Lithuania:

‡ § Poland:

§ Ukraine: public statement of support from Prime Minister

‡ Romania: Ministry of Economy and Finance

§ Georgia: statements of support from President

§ Azerbaijan: SOCAR (State Oil Company of Azerbaijan Republic)

US: Government encourages White Stream development

‡: via TEN-E programme
§: via Caspian-Black Sea-Baltic Energy Transit Space

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Project development by the White Stream consortium
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Project development phases
Timeline and milestones

Phases
1
Activities
1 Feasibility study, reaching agreement with buyers and sellers
2 Detailed design, FEED, permitting, gas contract negotiation
3 Project financing, procurement, construction planning
4 Construct undersea pipelines, onshore pipelines, terminals, commissioning

Milestones
Heads of Agreement: 2010
Contracts & design: 2011
Financial close: 2012
Commissioning: 2015
Commercial Operation: 2016 >
White Stream secures study funding

The European Commission is going for bust with gas from the Caspian, envisaging that it will need to present sellers with demand for more than just Nabucco if it is going to secure supplies that can compete with Russia. This needs a network of lines flowing west.

The European Commission’s plan for Caspian gas procurement has grown, with up to four pipelines projected to carry some 60-120 billion cubic meters/year to Europe, from some as-yet-unknown date.

Anything less than that amount, and it will be difficult to persuade the producing states of the advantages of selling to the EU rather than Russia, according to industry and EU sources.

The plan includes the White Stream pipeline which would carry gas from Georgia under the Black Sea to Romania and possibly also to Ukraine for onward shipment to Poland, cutting across Russia’s sphere of influence.
All the pipelines that cross Georgia and eastern Turkey though are at risk from aggression from conflict between Russia and Georgia, and between Kurds and Turks. White Stream could carry anything from 8 to 32 Bcm/year to Europe, with a later phase of the pipeline perhaps landing on Ukraine’s Crimean Peninsula – which many Russians view as their own territory – for delivery to Ukrainian and EU markets, including Poland.

The European Commission awarded funding to White Stream for a study in early December, an EU source told Platts December 9. The route that White Stream proposes is the “most valuable, cost-effective route for Caspian gas deliveries” from the EU’s perspective, the source said.

The EU’s continuing support for White Stream and the Georgia-Romania delivery route comes on the heels of the EU’s Second Strategic Energy Review communication, released November 13, which introduced the idea of a Caspian Development Corporation as a “block purchasing mechanism” for Caspian gas.

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The head of the White Stream project company Giorgi Vashakmadze said his company had been trying to establish the notion of ‘big gas’ and a diversified, effective corridor. Volumes of over 100 Bcm/year from the region could make the EU a preferred buyer in the region, and most importantly help spur upstream investment, he added.

For the Caspian strategy to be successful, a trans-Caspian pipeline will be necessary to bring gas from Turkmenistan and Kazakhstan, Vashakmadze said. But it is not worthwhile for these countries to assume the risks associated with a trans-Caspian project unless the volumes are significant, he argued. This is particularly true since other Caspian littoral states would object to a pipeline taking Turkmenistan’s gas across the Caspian seabed.

At the same time, Vashakmadze dismissed potential objections to the line as “nonsense,” because “there are already too many successful pipelines in the Caspian Sea, starting from the center and going to the shore in all directions.”

**Diversifying transport**

Regarding White Stream itself, Vashakmadze said the project’s initial focus would be on diversifying transport routes. Although a pipeline is seen as the preferred option, liquefied natural gas shipments across the Black Sea have also been considered. The US Trade and Development Agency agreed with Romania in September to fund a study to provide an updated view on LNG feasibility.

“The technology used to cross the Black Sea is not important – it should simply be the most cost-effective solution,” he said. “However, some believe a pipeline would build more confidence on the part of receiving states.” Crossing Ukraine, whose political turmoil is reflected in the battle with Russia over gas each year, would bring its own risks.

White Stream will consist of a number of pipeline strings, each with capacity of 8-9 Bcm/year, like Russia’s Blue Stream pipeline to Turkey. Under the EU’s current conception, however, gas from White Stream would be mixed with LNG shipped through the Turkish straits to Constanta, Romania. Together, the LNG and pipeline gas would supply a trunk gas pipeline running parallel to the planned Pan-European Oil Pipeline from Constanta to Trieste, Italy, according to the EU source.

While Vashakmadze said White Stream has attracted the interest of industry majors, he declined to name names, saying it will be up to the companies themselves to decide when they wish to talk about the project. Two European gas majors, Gaz de France and E.ON Ruhrgas, have interests in Romania, for example, and both are absent from Nabucco. So far, there are no western producers involved directly in Nabucco either. – Ted Fisher
Blue Stream has already crossed the Black Sea
International and National laws define the rights and obligations

**Key legal issues:**

- Coastal states do not have the legal means to prevent construction and operation of White Stream
- White Stream will be outside the 12 nautical miles of territorial waters
- The LOSC (law of the Sea Convention) guarantees the right to lay pipelines in the Exclusive Economic Zone
- The existence of Blue Stream is not a legal obstacle to White Stream – pipelines and cables are frequently crossed
- White Stream will implement the EIA requirements