

INFRASTRUCTURE INVESTMENTS IN THE ENERGY COMMUNITY

Report on undertaken steps

I. SCOPE AND BACKGROUND OF THE REPORT

The current report presents the criteria for selection of priority infrastructure projects in the Energy Community, the proposed actions for their facilitation, the initiatives already taken by the Energy Community and the foreseen obstacles, as well as some solutions to these.

▪ A new approach

The Treaty establishing the Energy Community (the Treaty) places at high level of interest the issue of investments in energy infrastructure. Article 2 highlights the need to “create a stable regulatory and market framework capable of attracting investment in gas networks, power generation, and transmission and distribution networks, so that all Parties have access to the stable and continuous energy supply that is essential for economic development and social stability...”.

Having this in mind, in December 2007, the Ministerial Council endorsed a fairly long list of priority investment projects, which were after that monitored by the Energy Community Secretariat (ECS). ECS reported after that, at the following two Ministerial Council meetings on the progress of these projects, as well as on the actions undertaken by the Secretariat in order to facilitate the investment process, Reference.

Based on further discussions in the PHLG and MC Meetings on 17 and 18 December 2009, as well as in the PHLG meeting on 17th March 2010, a much more focused priority projects' list was identified, with a more concrete approach towards implementation.

Given the slow process with many of the investments, it appears that further facilitation is needed for the selected projects. In this aspect, the following steps were considered:

- Identification of maximum 10 projects from both gas and electricity sectors, based on the criteria above, as well the interest of the projects' sponsors to pursue with the investment;
- Identification of the state of play with each project;
- Organization of joint meetings between the project sponsors (companies), the Donors' Community (chaired by the European Commission) and the Energy Community Secretariat;
- Identification of possible obstacles in the projects' way to financing and implementation;
- Looking for solutions to remove these obstacles, and work with the actors involved to implement the solutions;
- Follow up the progress with the relevant parties in the projects and report to the Donors' Community and the PHLG.

- **Criteria for selection of priority infrastructure investments in the Energy Community**

The criteria for identifying the short listed projects' were based on the following:

- Increase security of energy supply to customers as well as the safety / reliability of the energy networks;
- Contribution to the development of the regional, competitive electricity and gas market;
- Importance for electricity interconnection and trade;
- Importance for the gasification of the region (pipelines);
- Merits as new gas anchor loads needed for the further gasification of the Energy Community ;
- Listed as priority in the SECI project: Transmission planning taken into account new generation, or the UCTE/ENTSO reports, the GIS study, etc.;
- Link with other regional interconnections (gas and electricity) that are already being built;
- Maturity status;
- Contribution to reduce congestions in electricity;
- Contribution to improving the environmental conditions in the energy sector.

On this ground, more detailed information for both electricity and gas related projects is to be found below.

II. ELECTRICITY INFRASTRUCTURE

The projects selected to be in focus of special attention are listed below.

1. Interconnection between the former Yugoslav Republic of Macedonia and Albania

A 400 kV OHL interconnection between Bitola (Former Yugoslav Republic of Macedonia) and Elbasan (Albania) was proposed (OHL length ~ 200 km) by both Transmission System Operators and the respective ministries responsible for energy as a priority project. The main benefits of building the interconnection included:

- Creation of regional trading opportunities, whereby economic exchange of power among the countries can take place;
- Reserve capacity sharing (which will also contribute to a better security of supply of both power systems, which are faced with capacity shortage);
- Emergency support in case of power shortage;
- More economic electricity generation in the region;
- Optimal dispatch of generating units;
- Coordinated and economic maintenance scheduling;
- Higher reliability of system operation;
- Reduced short-run marginal generation costs, etc.

- The current project status:

The project was initially proposed in 2007 as a combination of HVDC 400 kV Durres (Albania) – Foggia (Italy) and an OHT 400 kV Bitola (MK) – Elbasan (AL). Since then, the undersea cable Albania – Italy has not been taken forward as earlier proposed, while the project to develop an undersea cable from Montenegro to Italy now appears to be more likely to proceed in the short to medium term. Under these

circumstances, it is necessary to prepare a feasibility study to analyse if only the OHT 400 kV between Albania and former Yugoslav Republic of Macedonia is still justified as a stand alone project.

- A Joint Statement for Energy Infrastructure Cooperation confirming the intentions to support the energy infrastructure projects along the route of European Corridor Nr. 8 was already signed in 2005 by the Ministers of Energy of Bulgaria, former Yugoslav Republic of Macedonia, Albania and Italy.
- A Joint Statement of Intent has been signed by the Italian, Macedonian and Albanian TSO and a Project Group (PG) was established in June 2007 with experts from the three TSO's. However this working group has not met since September 2007.
- A Feasibility study was undertaken by SETEEC in the frame of the Southeastern Europe Electrical System Technical support Project, and was completed in February 2007.
- The investment project has been indicated as one of the high priorities by the study for the "The Upgrade of High Voltage Transmission System in Albania, prepared in the framework of the Infrastructure Projects Facility in the Western Balkans in June 2009.

The project requires the construction of approximately 128 km of 400 kV OHL, of which 65 km is in the former Yugoslav Republic of Macedonia and 63 km is in Albania. The estimated cost is around 30 Million Euro.

- Actions undertaken in the first half of 2010

On 16th April 2010, the Energy Community Secretariat organized in Vienna a joint meeting between the high level representatives of the two Transmission System Operators: OST - Albania and MEPSO – the former Yugoslav Republic of Macedonia, with the IFIs's project coordinator and EBRD's representative and the representatives of the European Commission (DG ENER). Both TSOs re-confirmed their interest in the investment and continuation of joint activities.

Nevertheless, they believe that an updated feasibility study is needed under the new assumption that only the OHL 400kV Elbasan (Albania) to Bitola (former Yugoslav Republic of Macedonia) will be built, before other decisions are made; the update may be based on the SEETEC study, but taking into account the possible new electricity generation plants, the new interconnector Albania – Montenegro, the possible expansion of the interconnection with Kosovo B, as well as the new undersea cable currently planned between Montenegro and Italy.

Both EBRD and Kreditanstalt für Wiederaufbau expressed interest to finance the investment if the feasibility study (FS) shows that the investment is economically valid.

- Next steps:

- Update the feasibility study executed in 2007 by SETEEC concerning the interconnection, under the new conditions (in the absence of the undersea cable Albania – Italy). The study should also include the environmental and social impact assessment study (ESIA);
- Both TSOs will applying for a FS and ESIA study for their section of the interconnector in the 5th Round of the Western Balkans Investment Framework, in the autumn of 2010; the studies are expected to be finalized during the 4Q of 2011;
- Pending on the results of the FS, both countries will approach the IFIs, including those that expressed interest (EBRD and KfW) for the financing the interconnection, including substation facilities (Elbasan new substation and Bitola upgrade).

2. Electricity Interconnection between Serbia (Pancevo) and Romania (Resita)

This project was proposed by both Serbia and Romania TSOs and is also listed in the SECI Investment Planning Study.; Six options for a new 400 kV OHL interconnection between Serbia (55km) and Romania (80km) have been taken into consideration within a system study completed in July 2007. The study proposed three options to be further investigated as part of a feasibility study that will follow up the system study. The estimated cost is between 27 to 40 Million Euro for both sides.

- Actions undertaken in the first half of 2010:

- On 20 May 2010, the Energy Community Secretariat organised a meeting between representatives of Transelectrica (Romania) and the European Commission DG ENER, to discuss the current status of the project, and prepare a joint meeting with the EMS (Serbia), planned for the 21st June 2010 in Vienna.

- The current project status (based on ECS discussions with both TSOs):

In Serbia:

- The contract for Consultancy services for the preparation of the Feasibility study, Cross – border study, Preliminary design study and Environmental and Social Impact Assessment study (ESIA) was signed in Serbia, in May 2009;
- The Feasibility study was prepared at the end of 2009. The Preliminary design study and ESIA study are expected to be finished in June 2010;
- The second Joint Position Paper was signed and the conclusions of both pre-feasibility studies were jointly endorsed.

In Romania:

- March 2009: Transelectrica finalized and approved the pre-feasibility study for the interconnection and launched the procurement for the feasibility study and technical design and the terms of reference for the procurement of construction works ;
- February 2010: Transelectrica contracted the Romanian power studies company ISPE to prepare the feasibility study (FS), technical project and ToRs for the execution of works; the deadline for finalization of the FS is October 2010;
- March 2010, the two TSOs decided on the cross border point and other technical details in a joint technical meeting in Timisoara (RO);
- The Romanian TSO confirmed its interest in accessing the European Structural Funds.

- Next steps:

- The Romanian TSO will apply for the structural funds under the electricity interconnection window by 3rd Quarter 2010;
- ECS will organise a joint meeting between Romanian and Serbian TSO, on 21 June 2010 to agree on the next actions needed and a timetable for implementation;
- Once the two Feasibility Studies are final, a new joint meeting will take place to validate the results (most probably in the 4th Quarter 2010).

EBRD expressed interest to finance the interconnection.

3. New generation capacity HPP “ZHUR” in Kosovo¹

This HPP has been presented as a priority project in 2008. The HPP has a planned installed capacity of 305 MW, and is expected to be developed with a private investor. The estimated investment cost is 330 Million Euro and the commissioning term 2015. Kosovo² is currently importing approx 8 % of the consumption and it bases its domestic production largely on the two lignite fired power plants Kosovo A and B that are both requiring major retrofit and life extension, in the period 2010-2014. Therefore, a new HPP will not only contribute to the power balance, but also improve the power generation energy mix using renewable energy. The HPP is listed in the GIS update as cost efficient new generation plant (rank 2) under the medium gas price forecast scenario, in 2012. The HPP will be utilized as peak load plant with large storage capacity; this will offer flexibility and reliability in Kosovo³ and the region.

- Actions undertaken in the first half of 2010

ECS had a brief discussion with the Ministry of Energy and Mining regarding the current project status and the possible need for assistance from the ECS, on 21 May 2010 in Vienna. ECS offered support in giving an opinion on the draft Expression of Interest and the tender documentation with respect to the compliance with the Treaty's requirements, before these are made public.

- The current project status

The World Bank (WB) has provided financing for the review of the project pre-feasibility study and pre-Environmental and Social Impact Assessment study in June 2009. The Ministry of Energy and Mining has prepared Terms of Reference for hiring Transaction Advisors and the WB reviewed these. Nevertheless the WB is not providing the investment funds.

- Next step(s):

- ECS will provide comments on the draft EoI and the tender documents, when asked by the Contracting Party;
- Organise a joint meeting with the company and the respective ministry representatives involved, the IFIs, the European Commission and the Energy Community Secretariat tentatively in the 3rd Quarter 2010, after the tender is launched and the responses from investors received; the objective of the meeting is to sound the interest of private investors to finance it and identify possible bottlenecks.

4. Additional electricity projects possible to be considered

Two more projects seem worth considering for further facilitation as follows:

4.1. Gas fired CCGT power plant MW in Kakanj – BiH (FBiH)

The Federal Ministry of Energy, Mining and Industry of FBiH announced this project in April 2010 in its strategic development plan.

This project is interesting as a potential anchor load, for the Ionian Adriatic gas pipeline (IAP), especially if the capacity would be increased to minimum 300 MW.

The project is in very early stage and there is no information on the documentation.

¹ Pursuant to UNSCR 1244

³ Pursuant to UNSCR 1244

- **Next step(s):**

At this stage ECS will ask the FBiH about the state of play with the currently announced plan to build a 100 MW CCGT power plant in Kakanj, and also check if it is envisaged to have a larger (300 MW CCGT) unit built; this must be also linked to the projected IAP, as an anchor load.

4.2. HPP Komarnica in Montenegro

The project was listed as a priority by Montenegro in 2007.

- **The current project status:**

The construction of HPP Komarnica is included in the spatial and hydraulic plans of Montenegro. It is also listed in the Montenegro Government's Energy Strategy for commissioning in 2015. This project was announced as priority in December 2007.

In 2009, in the framework of the bilateral cooperation between Montenegro and Austria, the Prefeasibility study is done by Poyry Consultants and financed by Voith Siemens (AT). The scope is verifying the technical economic merits of the project and validating the investment decision, to be taken by the Assembly of Montenegro. The elaboration of the detailed spatial plan for the area of water storage and the Strategic Environmental Impact Assessment are underway. The Government is expected to take a decision on the concession.

KfW expressed interest in financing the investment.

- **Next step(s):**

At this stage, ECS will confirm with the Government if this still plans to build this HPP and, if so what is the expected timeline for this.

III. GAS INFRASTRUCTURE

In the context of regional gas projects, the investments in either transmission pipelines or LNG facilities are not only highly capital intensive, but were also traditionally undertaken by the public sector, either through direct investments from the state budget or through budgetary subventions and / or sovereign guarantees to support the investment programmes of state enterprises.

This pattern has nevertheless changed in the recent years, and increasingly, governments are seeking to reduce the demands on the national budget for the financing of infrastructure. The trend is to use structured project finance, the involvement of the private sector and the support of external agencies through equity provision and/or risk mitigation for the development of energy infrastructure. In the case of gas infrastructure, the regional approach to investments is key, as countries that plan to rely on gas fired power generation capacity need to be confident that other (neighboring) countries also follow this regional priority, rather than pursue self sufficiency through non gas power generation. The large investments required by gas transmission systems will not be justified in the absence of sufficient base load (anchor loads).

More over, in order to facilitate the investments, the regulatory systems that grant concession licenses with built-in financial incentives to invest in the distribution network and connect new customers at an agreed rate over time are needed.

The study "South East Europe: Regional Gasification Study" financed jointly by the World Bank and the German Kredit für Wiederaufbau, launched in its Final Report of January 2009, the concept of an "Energy Community Gas Ring".

The EC Ring would link currently ungasified areas with mature gas markets, facilitating supply diversity and providing favorable prospects for security of supply, including through providing access to regional underground storage facilities.

Having in view the need for facilitation and in order to bridge the gap between investments and financing, ECS organized a Donors' Community meeting on 17 December 2009, upon proposal of the European Commission, with the aim to draw attention to three gas infrastructure projects of regional value and of interest for the Energy Community Gas Ring, and namely:

- Serbia – Bulgaria gas interconnector (Nis-Dimitrovgrad –Sofia/Dupnica)
- The Ionian Adriatic Pipeline (IAP), and
- The Adria LNG terminal in Krk Island, Croatia.

For the gas infrastructure investments, ECS followed the same approach as for electricity.

1. Gas Interconnection Serbia (Nis – Dimitrovgrad) and Bulgaria (Sofia/Dupnica)

- Actions undertaken in the first half of 2010

- After the first meeting organized on 3rd December 2009 in Brussels, a second one in Vienna, on 27th January 2010 and was attended by representatives of Srbijagas, Bulgartransgaz, the Ministry of Economy, Energy and Tourism and the Ministry of Regional Development and Public Works (Bulgaria), the EBRD/ Donors' Community Coordinator, EIB/ JASPERS Vienna Office and DG ENER.
- In March 2010, a Joint Statement was signed by the energy ministers of the two countries, with the view towards the realization of the project.
- On 20th May 2010, the first official meeting of the Working Group, established by Srbijagas and Bulgartransgaz, took place in Sofia and discuss technical aspects of the interconnector.

- The current project status:

- In March 2010, at the recommendation of the Energy Community Secretariat and the European Commission, Srbijagas placed an application for a feasibility study at the Western Balkans Investment Framework, which is now proposed for the final decision of the Steering Committee, in June.

- Next step(s):

- Follow up the working group's meetings and facilitate the implementation of the proposed timetable for activities under the project;
- Together with the EC DG ENER investigate possible source for funding the investment on the Serbian side, including by talking to the IFIs; Bulgartransgaz has already structural funds approved by DG REGIO for the Bulgarian side of the interconnector.

2. Ionian Adriatic Pipeline (IAP)

The IAP is foreseen to run from Croatia (Ploce) – to Albania (Fieri) with a diameter 800-1000 mm/ and a pressure of 75 bar with reversed flow capability from N-S; the IAP will be part of the gas ring, when this will be constructed.

Two versions of IAP are being analyzed:

V1: Section in Croatia with a DN 500 mm and 2.5 bcm/annum capacity; Section in Montenegro of DN 700 and in Albania of DN750, with a joint capacity of 5.0 bcm/annum; this option will amount at 0.9 bn Euro.

V2: A single DN 800 pipeline from Croatia (Bosiljevo) to Albania (Fieri) with a total capacity 7 bcm/annum, of which 4.5 bcm/annum in Croatia and Montenegro. The cost is estimated at approx. 1 bn Euro.

- **Actions undertaken in the first half of 2010**

- The first meeting took place in Zagreb on 1 March 2010 at Plinacro premises and was attended by representatives of EC (DG ENER), Plinacro (Croatia), EBRD, and the Energy Community Secretariat;
- On 22nd April 2010, a Questionnaire was sent to the PHLG members from Albania, Bosnia and Herzegovina, Croatia and Montenegro (signatories of the IAP Ministerial Declaration). This included questions related to the Contracting Parties plans to develop the IAP pipeline on their respective territories, as well as their plans to gasify these and build potential gas anchor loads.

- **The current project status:**

- An Intergovernmental Declaration for Ionian-Adriatic gas pipeline was initially signed between Albania, Croatia and Montenegro, in September 2007. In December 2008, Bosnia and Herzegovina signed also the Intergovernmental Declaration and by this has become party in the project;
- A Memorandum of Understanding on implementation of this project between Swiss Company EGL and Plinacro Ltd. (Croatia) was signed in September 2007. A Working Group and Steering Committee at the project level was established.
- In Croatia the following sections of the Croatian network, which may become part of the IAP are in progress: (i) the pipeline Bosiljevo – Split is being built with the capacity of 5 bcm/annum; the section up to Split is under construction; the pipeline is financed by PLINACRO through an EIB loan as part of the investment plan 2007-2011, and its own funds. (ii) In 2008, the pre-feasibility study for the entire IAP was done by ILF Consulting Engineers; (iii) The Hydraulic study and cost comparison for the section Bosiljevo – Split - Ploče was done in 2009; (iv) for the Ploče – Dobroč (Montenegro border), the following studies were performed: Routing study; Mapping; Spatial planning documentation; Geology survey; Hydrology survey.

- **Next step(s):**

- The next meeting regarding the IAP project will take place on 29 June 2010 in Vienna. Beside the PHLG members of the IAP involved Contracting Parties, the European Commission representatives and Donors' project coordinator are invited at the meeting;
- The connection IAP with the Trans Adriatic Pipeline is still not sure, as the TAP time frame is not yet finalised; therefore ECS and the EC will take contact with the Greek TSO, to check its plans and possibilities to build interconnectors between Greece and Albania, respectively Greece and former Yugoslav Republic of Macedonia, in order to envisage other sources of gas supply for IAP, than the initially planned TAP.

3. LNG terminal on the Island of Krk, Croatia

- **Actions undertaken in the first half of 2010**

The first meeting took place in Zagreb on 1st March 2010 and was attended by representatives of EC (DG ENER), Adria LNG Company team, EBRD, and the Energy Community Secretariat.

- **The current project status:**

- Location: Island of Krk, Croatia, on an unused petrochemical site (Croatian Government took the decision of the location at the end 2008)
- Regasification Capacity: 10 to 15bcm/y
- Status: permitting
- Planned start up : 2014 (initially expected date 2012)

- Structure of the Consortium: E-ON Ruhrgas: 39.17; OMV: 32.47; TOTAL: 27.36; Geoplin:1%, Croatian Companies (reserved): 25%; on 1 June 2010, Croatia announced the establishment of LNG Hrvatska
- The project was reviewed in 2006 and the project company established in 2007 as ADRIA LNG, registered in Croatia
- Ship sizes from 75,000 cum to 265,000 cum to be unloaded within 24 hours
- Various LNG supply sources
- The European grid may be reached via the main crossing border point: CR/SL Rupa
- Meeting 12 % of the annual gas consumption in the region
- 2009 progress: finalized the ESIA study; the public consultation is in progress; Croatia granted the status of project of state interest.
- **Next step(s):**
 - The Croatian authorities need to prepare the new grid code for the gas quality that would allow the re-gasified LNG to be used on the Croatian market; ECS provided guiding materials (EASEE gas guidelines) related to the gas quality issue to the MINGORP.
 - Plinacro (Croatia TSO) and Geoplin Plinovodi (Slovenia TSO) established a working group to prepare proposal of relevant changes of the Network Rules, ensuring access and transmission of gas with wider scope of characteristics, i.e. gas from different sources re-gasified at the terminal. The WG is expected to deliver a proposal before summer 2010; ECS will provide comments on the draft if so asked.
 - ECS will organize the second meeting with Adria LNG Company in the second half of 2010.

4. Additional gas project proposals

Gasification of former Yugoslav Republic of Macedonia

This is a potentially interesting project to monitor for its links to other gas developments in the region, including IAP and Greece possible interconnection with both Albania and former Yugoslav Republic of Macedonia.

- **The current project status:**
 - The Ministry of Transport announced in December 2009 that Klechovce - Bitola and Skopje - Tetovo - Gostivar as national priority directions for the construction of gas infrastructure;
 - The Ministry has already published an advertisement for selection of a company that will prepare the technical documentation at the level of basic and executive design for national line of the gas pipe-line system, presented in four packages.
- **Next step(s):**
 - ECS will look into the various plans of gas infrastructure development, having in mind several different versions presented so far (by the Energy Strategy prepared by the Ministry of Economy, at the Gas Forums, by the ongoing gasification study launched by the Ministry of Transport).

IV. CONCLUSIONS

Based on the meetings held on the above projects, the main barriers seem to be:

- Incumbent companies appear to be genuinely interested in investments but clearly lacking the financial means to engage in large scale investments; International Financing Institutions are in many cases interested in financing, but the companies' creditworthiness, or their borrowing capacity based on their current debt levels is fairly low;
- The governments' preferred model for investments appears to be through tendering procedures, for which in almost all legal frameworks exist provisions; nevertheless, the tendering for new

capacity should be used only if the authorization procedure is not enough to achieve the investments;

- The tenders are in many instances not going smoothly, and some causes for this include:
 - Lengthy preparation of project documentation (pre-feasibility study, feasibility study, the Environmental Impact Assessment, the Strategic Environmental Assessment, etc) ; by the time this is approved, the figures are no longer valid and an update is needed;
 - The model of communication and decision making, mainly in case of interconnections appears to be „stop and go“ with large time gaps between phases;
 - The tender documentation seems to be rather frequently not well enough prepared and this leads to very lengthy and sometimes unsuccessful tenders;
- The treatment of CO₂ emissions is not clear for the Energy Community and this raises many concerns with regard to coal fired power plants;
- The regulatory framework, although in evident progress, is not fully in line with the EU Acquis especially with regards to capacity allocation and third party access;
- In some Contracting Parties there are still import and export fees on energy, that together with the treatment of VAT are hampering trade and making energy more expensive;
- The treatment (incentives) of investments done by one TSO in another country is not clear and hence should be further discussed. An ECRB paper in this respect was prepared and will be presented at the next PHLG meeting in June 2010, at least as the starting point for future relevant discussions.

ECS will continue its assistance to the Contracting Parties to remove some of the barriers mentioned above through actions including:

- regular follow up meetings with all the projects;
- monitoring the progress and signal delays or bottlenecks;
- working with the Contracting Parties to better prepare applications for technical assistance, with an emphasis on the Western Balkan Investment Fund;
- working with the Donors' community to identify the best source of financing for each project;
- reviewing the tender documentation for compliance with the Acquis prior to its public announcement, based on the request by the Contracting Parties;
- regular monitoring of the implementation of the Treaty, with a focus on the non compliance that hinders the advancement of investments.