1. Country and Sector Background

The improvement of the performance of the energy sector is crucial to improve and sustain economic development in South East Europe (SEE). Power supply situation is projected to tighten significantly during the next few years and threatens to constrain economic activity and quality of life if not addressed with determined regional action. Apart from Turkey, investment over the past 10-15 years has been limited, with the average age of capacity now in excess of thirty years. Significant capacity additions (of the order of 12,000-15,000 MW) and plant rehabilitations (of the order of 8,000-9,000 MW) will be required during the next ten years, along with matching transmission and distribution system investments if demand is to be met and severe power shortages and supply interruptions are to be avoided 1.

The SEE countries have acknowledged that solutions to these regional issues based on isolated national markets are neither capable nor desirable as a means to attempt to close investment gaps and emerging demand and supply imbalances. Building upon their experience to cooperate in the power sector, in recognition of potential gains from increased trade, and as part of a wider movement to strengthen regional cooperation, the governments of SEE countries and the European Commission (EC) signed the “the Athens Memorandum” – the Memorandum of Understanding on the Regional Energy Market in South East Europe and its Integration into the European Union Internal Energy Market - on December 8, 2003 in Athens, Greece, whereby they formally expressed their commitment to what is currently called the Energy Community of South East Europe (ECSEE) 2. The Stability Pact signed as a “sponsor” and for Kosovo UNMIK is the signatory pursuant to UN Resolution 1244.

ECSEE’s current membership is as follows:

---

2. Until June 2004 this initiative was known as the South East Europe Regional Energy Market.
- **ECSEE’s Regional Members** (also called Non-EC Parties) are Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Romania, Serbia and Montenegro, and Turkey, as well Kosovo;

- **All EU Member States** can request to be accepted to participate in ECSEE as political participants. Currently, Austria, Greece, Hungary, Italy, and Slovenia, are such political participants; and

- **Neighboring non-EU Member States** can request to be accepted to participate as observers. Currently, Moldova is participating as an observer.

Negotiations are underway to convert the Athens Memorandum into a legal binding international ECSEE Treaty.

2. **Objectives**

The objective of ECSEE APL is the development of a functioning regional electricity market in South East Europe and its integration into the internal electricity market of the European Union, through the implementation of priority investments supporting electricity market and power system operations in electricity generation, transmission and distribution and technical assistance for institutional/systems development and project preparation and implementation.

The ECSEE APL program would be considered successful if the countries in the region achieve their commitments under the Athens process and are able to: (a) develop a functioning electricity market including the agreed market liberalization targets; and (b) integrate it into the internal electricity market of the European Union in accordance with the ECSEE Treaty. To accomplish this, the countries will have to continue ongoing restructuring and reform measures, build up their institutions and improve their power systems including interconnections so that regional trade can increase. The ECSEE APL1 would establish the ECSEE APL facility and provide investment support for two of the countries, Romania and Turkey. Related technical assistance support is already being provided by the Bank.

ECSEE is an integral element of the Regional Members’ and the European Commission’s efforts for all states in South East Europe to have access to stable and continuous energy supply which they regard as essential for economic development and social stability. The creation of an area without internal frontiers for energy contributes to economic and social progress and a high level of employment as well as balanced and sustainable development. These higher level objectives are expressed in the draft ECSEE Treaty.

All SEE countries have the prospect of EU membership. Accordingly, the Member Countries and the Commission are resolved to establish tightly integrated energy markets in electricity and gas based on a common solidarity and consistent principles, closely linked to the internal market of the European Union, and fully complying with the rules applicable within the Union.

The Stability Pact has made regional energy cooperation one of its core objectives in its efforts to strengthen regional cooperation and to foster the conditions for peace, stability and economic growth in the South East Europe. The Stability Pact has characterized ECSEE as a unique...
political chance for the SEE region, to consolidate reconciliation and provide a power driver towards a more comprehensive economic and political integration into the European Union.

The Bank supports regional efforts to promote cooperation and integration in South East Europe. ECSEE is one of the most prominent of current regional programs. The proposed APL facility is a key component of the Bank’s support for the Stability Pact and the working partnership with the European Commission.

3. Rationale for Bank Involvement

The Bank is participating in regional efforts to promote cooperation and integration in South East Europe and inter alia supports the Stability Pact. A major strategy paper 3 was prepared by the Bank in 2000, which looked at the first decade of transition from a regional perspective and mapped a way forward for a more strategic regional approach. The Bank is an active participant and promoter of the Athens process, at the invitation of the European Commission. The Bank has supported individual countries of South East Europe in their efforts to rehabilitate and restructure their power sectors through policy dialogue, technical assistance and financing since the early 1990s (in some cases even earlier). This deep country knowledge and participation in the development of ECSEE in the Athens process including regional trade strategy work puts the Bank in a strong position to provide regional lending, policy advice and technical assistance to further support the Athens process for ECSEE - the proposed APL program is a key component of the Bank’s support for the Stability Pact and the working partnership with the European Commission.

In March 2004, the Bank published a strategy paper for energy trade in South East Europe 4. The framework paper outlines the Bank’s vision for regional energy market development and defines its role in supporting the evolution of regional energy trade. The framework elaborates the Bank’s role supporting policy reform and institutional development, and on lending for power generation, transmission, distribution:

- Promote a phased approach to market opening, starting with trading based on bilateral contracts and third party network access, and moving to a more sophisticated model after the institutional framework is sufficiently developed;
- Apply regional benchmarking in policy support work with individual countries and as a trigger for investment financing;
- Develop a special regional instrument – the proposed ECSEE APL – and finance priority investments to support development of the regional market;
- Analytical work to assess the economics of increasing the use of gas in the SEE countries and costs of compliance with EU environmental standards; and
- Complete a regional power Generation Investment Study, financed by the EC.

4. Description

**Eligible ECSEE APL project components.** The Bank’s March 2004 framework paper concluded that significant investments in power generation, transmission and distribution and technical assistance are required for a well-functioning power market. Priority investments and technical assistance would be financed under the ECSEE APL program so that the ECSEE Regional Members can effectively participate in the regional electricity market:

- Investments to ensure that ECSEE Regional Member meet the integration requirements of UCTE - the Union for the Coordination of Transmission of Electricity in Europe;
- Investments to upgrade the capabilities of transmission system operators (TSOs) of ECSEE Regional Members so that they can implement policy decisions to assure regional security of supply. Examples of such investments include: (a) upgrading load dispatch and real-time system stability and control capabilities (e.g. the proposed APL 1 investments by TEIAS in SCADA/EMS systems); (b) upgrading infrastructure/systems for electricity market administration (e.g. the proposed APL 1 investments by TEIAS in a market management system for balancing and/or ancillary service transactions, settlements, etc.); and (c) removing critical bottlenecks in transmission networks and substations (e.g. the proposed APL 1 investments by TEIAS in transmission networks and sub-stations);
- Investment to restore operational capacity/flexibility of critical generation facilities that provide ancillary services to TSOs (e.g. the proposed APL 1 investments to rehabilitate Hidroelectrica’s Lotru hydropower Station in Romania);
- Investment in retrofits of critical generation and/or transmission facilities to assure environmental compliance;
- Metering and/or telecommunications programs designed to enhance revenue realization and/or coordination and communications capabilities of distribution utilities so that they can more effectively participate in the regional power market; and
- A wide range of technical assistance, for institutional/systems development and project preparation and implementation, to support ECSEE Regional Members in energy market design and implementation assistance, inter alia to ensure full compliance with the ECSEE framework/EU directives and compatibility of market designs for the supply of balancing services and/or ancillary services across SEE country frontiers; and engineering/environmental services for the preparation and implementation of investment projects (including but not limited to projects financed by the Bank under the ECSEE APL) for a functioning electricity market.

**APL1 investment projects** consist of two country projects, Romania and Turkey. The Romania project has one component: the rehabilitation of Hidroelectrica’s Lotru hydropower station. The 510 MW hydro power station will be rehabilitated into a reliable source of ancillary services. The Turkey project supports the implementation of several elements of the investment programs of the National Transmission Company TEIAS. First, a Market Management System (MMS) would be created for TEIAS, for the management of the electricity market in Turkey. Second, its SCADA/EMS (supervisory control and data acquisition/energy management system) would be strengthened so that TEIAS would be in a position to operate its system more
efficiently and to coordinate with other SEE systems operators in order to meet overall stability and control requirements. Third, the project would provide transmission grid strengthening and expansion for overall stability. This includes funding some of TEIAS network and sub-stations investments.

5. Financing
Source: ($m.)
BORROWER 75
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT 175
Total 250

6. Implementation

First and foremost, ECSEE is a partnership among the SEE countries. They have acknowledged that solutions to pressing regional issues based on isolated national markets are neither capable nor desirable as a means to attempt to close investment gaps and emerging demand and supply imbalances. Second, ECSEE is a partnership between the SEE countries and the European Union. The European Commission signed the Athens Memorandum as a participant and will also be a signatory to the ECSEE Treaty. Neighboring Austria, Italy and Greece signed the Memorandum as “political participants to the Athens process” and Hungary and Slovenia (which signed as “observers”) have since joined the EU and become political participants. Finally, ECSEE is a partnership between the SEE countries and the donors including the Bank. Financial institutions and bilateral donors include the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the German Development Bank (KfW), the United States Agency for International Development (USAID), the Canadian Agency for International Development (CIDA), and France, Greece, Italy, and Switzerland.

A comprehensive coordination and implementation mechanism has been established for the development of ECSEE. The mechanism covers and brings together political and administrative leadership, regulators, transmission system operators and other utilities, the European Commission, international financial institutions and bilateral donors:

- **ECSEE’s Ministerial Council** takes place annually with the participation of the Ministers of Energy of the countries and the Commissioner for Energy and Transport of the European Commission. The Council takes strategic decisions and gives guidance to ECSEE and, where necessary, formally reviews the conclusions of other ECSEE bodies/meetings including the Forum. Once the ECSEE Treaty is in effect, the Council will report annually on ECSEE’s activities to the European Parliament and to the Parliaments of ECSEE’s Regional Members;

- **ECSEE’s Permanent High Level Group** is composed of representatives of the Ministers of Energy of the countries and the European Commission. The group meets, when necessary, on the initiative of the Commission and the Presidency in Office, in order to
prepare the Ministerial Council and to ensure the follow-up of its decisions;

- Two **Task Forces** have been established for ECSEE preparatory work and day-to-day coordination and cooperation: (1) the SEE Energy Regulators Task Force, which works closely with the Council of European Energy Regulators (CEER); and (b) the SEE Transmission System Operators Task Force, which interacts with the European Transmission System Operators (ETSO) and the Union for the Coordination of Transmission of Electricity in Europe (UCTE);

- **ECSEE Forum** meets at least twice yearly. It comprises of representatives of the governments, regulators and transmission system operators of the countries, CEER, ETSO, UCTE, producing companies, consumers, the European Commission, the Stability Pact, and donors including the Bank;

- Several donors support ECSEE. Donors are members of the ECSEE Forum and usually the donor agencies also meet separately in connection with the Forum meetings. The Stability Pact assigned the role of coordinating the donors to the European Commission in 2001. The Commission retains the overall co-ordination, setting political/technical goals and organizing donors. The Commission is funding an Athens Process secretariat, based in Athens, to support the process, *inter alia*, benchmarking and monitoring; and

- The Ministerial Council, the Permanent High Level Group and the Forum would be recognized in the Treaty. In addition, a **Regulatory Board** is also expected be set up under the Treaty, composed of one representative of the energy regulators of the Regional Members. The Regulatory Board will monitor the implementation of all statutory, technical and regulatory rules and will report directly to the Council.

**Romania/Hidroelectrica.** The Lotru project will be implemented by Hidroelectrica. It is one of the successor companies of Romania’s national power company Renel, which was restructured and unbundled in 1998-2000 into Hidroelectrica (hydro power generator), Termoelectrica (thermal generation), Nuclearelectrica (nuclear power), Transelectrica (transmission and system operations) and Electrica (electricity distribution and supply). Hidroelectrica owns and operates 347 hydro power plants with a total capacity of 6,016 MW, accounting for about ¼ of Romania’s power supply and most of the ancillary services to Transelectrica, the system operator.

**Turkey/TEIAS.** The project will be implemented by TEIAS, the Turkish National Transmission Company, a government-owned company responsible for the planning, design, development, operation and maintenance of the transmission network in the country. TEIAS is also responsible for system operation, for the balancing market and for settlement administration. The Turkish power sector has been restructured twice in the past decade. In 1994 the integrated government-owned utility TEK was split into a distribution company (TEDAS) and a generation and transmission company (TEAS). In February 2001, Turkey passed the Electricity Market Law (EML) which established the basis for creating an electricity market in Turkey and included the unbundling of TEAS. It was restructured into a generation company (EUAS), a transmission company (TEIAS) and a trading company (TETTAS). The law also provided for
the creation of an Energy Market Regulatory Authority (EMRA) to license market participants and to set retail tariffs. Turkey is also beginning the implementation of an electricity market based on voluntary bilateral contracting and a mandated balancing system.

7. Sustainability

The current situation and the key dimensions of the short- and long-term vision for a sustainable electricity market can be briefly outlined as follows:

- **ECSEE Participants**: The main utilities in the region are already engaged in power trading, which provides the basis for further development. The next steps will be bilateral contracts involving unbundled utilities and large customers; followed by expanding trade as electricity markets in each country are further opened and additional customers become eligible and start exercising the freedom to choose their electricity supplier;

- **Market Sophistication**: Some of the countries are already developing day-ahead markets (operated by market operators) and real-time balancing mechanisms (operated by system operators). Over time such markets and mechanisms will become increasingly standard; and further sophistication will be developed, including intra-day and real-time balancing markets and financial instruments (possibly starting with a contract exchange);

- **Competition**: Current utility-to-utility contracts and other exchanges are typically cooperative and competition is not a their key objective. As industry unbundling deepens and in line with market opening across the region, contracting and trading will become increasingly competitive. However, transmission system operators will continue to coordinate on a cooperative basis, as members of ETSO and in the framework of the UCTE;

- **Integration of ECSEE into the European Union Internal Energy Market**: Croatia and a part of Bosnia and Herzegovina are already interconnected and their power systems operate synchronously and as a part of the main European power system administered by UCTE. Other countries of the region (apart from Albania and Turkey) are also already members of UCTE. Transmission links exist between Romania and Hungary and between Serbia and Hungary. These links are scheduled to be synchronously interconnected in October, following the completion of rehabilitation in Croatia and Bosnia of facilities required for the synchronous interconnection of the whole region. The APL1 project helps Turkey to meet the requirements for its entry into the UCTE and ECSEE APL will also be available for Albania for the same purpose. Additional transmission links to the EU countries will be developed. They include a second connection between Romania and Hungary (under preparation, with EBRD financing anticipated for implementation), and second connections between Serbia and Hungary and Croatia and Hungary, and a connection between Croatia and Italy (all three are candidates for the ECSEE APL). Through ECSEE’s integration the region will secure access to an major trading partner and an important import source to meet possible electricity shortfalls and emergency support. This highlights the electricity/economy dimension in ECSEE’s integration into the European Union internal energy market.
8. Lessons Learned from Past Operations in the Country/Sector

In terms of actual examples, the best known regional power market is the Nordic power market, known by the name of its operator NordPool. It operates in Finland, Norway and Sweden and part of Denmark. Portugal and Spain have recently launched a joint market, and regional power markets are also under development in Southern Africa, South-East Asia and Central America, and they are under discussion in Eastern and Western Africa. A key lesson learned from other markets elsewhere, including NordPool, and from the association of European Transmission System Operators (ETSO) is that the progressive integration of energy markets in SEE and the adoption/implementation of common security of supply policies require close attention to be paid to the design and operation of subsidiary electricity markets (e.g. balancing and ancillary services) which are best administered by Transmission System Operators (TSOs). ECSEE’s implementation organization includes the SEE Transmission System Operators Task Force, which interacts with ETSO and UCTE to ensure smooth integration and coordination. The role of the ECSEE Task Force of TSOs is critical in all phases of ECSEE’s development and operation.

Political commitment and adequate financial support are key ingredients of successful reform programs. ECSEE’s development is premised on the political commitment of the SEE countries as expressed in the Athens Memorandum and is backed by an exceptionally strong donor involvement. The APL program has been directly linked to ECSEE, with no additional conditionality. Investment components included in APL1 are - and components to be supported under subsequent APL installments will be – of proven design and streamlined approaches emphasizing turnkey contracting will be employed in their implementation.

9. Safeguard Policies (including public consultation)

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental Assessment</strong> (OP/BP/GP 4.01)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Natural Habitats (OP/BP 4.04)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Pest Management (OP 4.09)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Cultural Property (OPN 11.03, being revised as OP 4.11)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Involuntary Resettlement (OP/BP 4.12)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Indigenous Peoples (OD 4.20, being revised as OP 4.10)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Forests (OP/BP 4.36)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Safety of Dams (OP/BP 4.37)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Projects in Disputed Areas (OP/BP/GP 7.60)</td>
<td>[ ]</td>
<td>[X]</td>
</tr>
<tr>
<td>Projects on International Waterways (OP/BP/GP 7.50)</td>
<td>[X]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

The classification of the APL program and APL1 is FI. Most of the country-level investment projects are expected to be B-category projects. Romania/Lotru and the currently identified Turkey project elements are all B-category projects. However, individual country-level investment projects included in the later installments of the APL program may contain components that would be rated into the A-category or C-category. APL1 is rated FI because not
all of the project elements in the Turkey component have been identified. Though they are all expected to be B-category or C-category, in addition to preparing Environmental Management Plans for the components that have been identified, an Environmental Framework Document (EFD) and a Land Acquisition Management Framework outlining what principal actions will be taken by TEIAS in regard to different foreseen but not yet identified other elements (power lines, sub-stations) have been prepared. The EFD and LAMF also outline how the issues related to public participation and disclosure of information are handled.

10. List of Factual Technical Documents

ECSEE documentation is available at

http://www.seerecon.org/infrastructure/sectors/energy/index.html

11. Contact point
Contact: Kari J. Nyman
Title: Lead Spec.
Tel: (202) 458-1469
Fax:
Email: Knyman@worldbank.org

12. For more information contact:
The InfoShop
The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 458-5454
Fax: (202) 522-1500
Web: http://www.worldbank.org/infoshop