The West Balkan region consists of Albania and the former states of Yugoslavia (Bosnia-Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, Serbia, and Kosovo). Kosovo declared independence from Serbia in February 2008. To this date it has been recognized by 70 states, including the United States. Five EU member states, including Greece, have not recognized Kosovo’s independence.

The wars of Yugoslav succession that dominated the first post-Cold War decade of Southeast Europe’s political and economic development have had structurally negative repercussions for the energy industry and infrastructure in most West Balkan states. It was only after the establishment of the Energy Community Treaty in 2005 that a robust regulatory framework was established with the purpose of streamlining the region’s economies with EU transparency and liberalization norms so as to prepare the West Balkan region for a massive inflow of foreign direct investment (FDI) that could rejuvenate the energy infrastructure and more effectively utilize each country’s energy resources.

Despite the fact that the EU and the West Balkan states face the common challenges of increasing energy efficiency, reducing import dependency, and expanding renewable energy sources (RES), the current state of affairs in the region is inadequate or sub-standard, with the sole exception of Croatia, which has advanced significantly in aligning its legislation and policies with the EU acquis communautaire. The West Balkan countries are at differing positions along the path of European integration and they each hold varying energy and environmental standards and targets. The pace of alignment with EU practices and legislation within the region, especially at the level of electricity/gas market liberalization and interconnectivity and regulatory-market transformations, leaves much to be desired.

(continued on pg 2)
Challenges

There are striking differences between the seven states and state-entities comprising the West Balkan region with respect to their respective energy mix, consumption patterns, and level of resource potential. At the same time, the area as a whole faces several major common energy challenges. These include an over-dependence on the utilization of oil and coal in electricity generation, which also has a direct negative environmental impact; high dependency on oil and gas imports that are necessary to meet domestic demand; a severe lack of energy efficiency; under-development of the renewable energy sector; a lack of market integration; and a lack of interconnectors across the region.

Over-dependence on Petroleum Consumption:
Contrary to EU average energy consumption patterns that indicate a steady reduction in the use of petroleum and coal/lignite at the expense of natural gas, nuclear energy, and renewables, the Western Balkans are moving in the exact opposite direction. Since 2000 the consumption of petroleum and petroleum products has risen by a margin of 7 percent in merely 8 years, accounting for 35.5 percent of the Total Primary Energy Supply (TPES) in 2007 as compared to 28.4 percent in 2000. Similarly the utilization of low quality hard coal and lignite that dominates the region’s electricity generation mix, as well as other energy demand sectors (such as household and industrial consumption), continues to be more than double the EU average of 17 percent. Coal/Lignite resources, that are primarily indigenous, cover 38 percent of TPES in 2007 (down from 42 percent in 2000).

The Western Balkans, along with Poland, Bulgaria, Estonia, and the Czech Republic, is the only European region where coal still occupies a higher share of TPES than oil, a condition that has changed for almost everyone else in Europe since the late 1950s and early 1960s when massive imports of Middle Eastern oil ended the dependence of European economies on domestic coal. The region has still to make the transition to a non-lignite based economy by substituting its lignite sources with natural gas and renewables.

Natural Gas Import Dependency: The case is different when it comes to gas imports, where the region is almost totally dependent on Russian exports that are shipped to Croatia, Serbia, and Bosnia-Herzegovina via a Soviet-era pipeline through Hungary. Natural gas occupies a small yet very important portion of the region’s final energy consumption that would need to grow exponentially in order to limit the over-utilization of coal in electricity generation and
industrial uses. Unfortunately, save Croatia, which produces 60 percent of its gas needs, only Serbia has a limited amount of indigenous reserves that still account for less than 7 percent of consumption. Bosnia-Herzegovina and FYROM also consume only Russian gas that is transited via Serbia, whereas Kosovo and Montenegro do not use any natural gas. Albania consumes negligible quantities of natural gas (less than 0.6 percent of TPES) that it produces itself. From the entire region only Serbia and Croatia have a meaningful natural gas market and a relatively stable regulatory framework. Croatia is the region’s largest gas consumer, followed by Serbia and Bosnia-Herzegovina.

The dangers of over-dependence on a single supply source became evident in the region during the largest energy crisis Europe has faced since the Arab oil embargo and the Iranian Revolution of the 1970s: the January 2009 Russian-Ukrainian gas crisis. On January 6, 2009 only 10 percent of normal gas exports were flowing via the main pipeline entry point to Slovakia that would thereafter flow via western Hungary and Slovenia to Croatia. Eastern Hungary, the transit point to Serbia and Bosnia-Herzegovina, received only 20 percent of normal volumes. By January 7, 2009 all commercial gas exports were severed, leaving West Balkan consumers with no gas imports whatsoever. Of the affected states only Croatia was able to cope with the consequences of the crisis by immediately increasing its own production while also tapping into some exports from Germany’s strategic gas storage facilities that were transited to Croatia via Slovenia. Serbia also resorted to its own limited gas storage capacity, but that had a negligible effect on the country’s ability to cope with the crisis.

It was not until January 16, 2009 that some relief arrived from Hungary’s strategic reserves, which only reached Sarajevo and the eastern parts of Republika Srpska. Finally, Serbia resorted to massive utilization of lignite and fuel oil to compensate for most of the deficiency.

High Oil Import Dependency and Limited Diversification of Import Sources and Routes:
Another major negative constraint to the region’s energy development is its overwhelming net import hydrocarbon dependency. The region’s oil and gas resource potential is extremely limited. Only Croatia and Serbia produce significant quantities of petroleum—enough to cover around 20 percent of their respective petroleum consumption. Although Albania does not import any crude oil its production covers only 24 percent of its final fuel needs.

Serbia and Croatia also hold the region’s major refinery installations that export significant amounts of petroleum products to Bosnia-Herzegovina and Montenegro, whereas Albania supplies Kosovo, and Greece - via the HELPE (Hellenic Petroleum) owned Thessaloniki-Skopje oil products pipeline - covers most of FYROM’s needs, as well as an increasing share of the Southern Serbian market (including parts of Kosovo). Bosnia-Herzegovina receives 100 percent of its crude oil imports from Russia. Russia supplies almost two-thirds of total imports to Serbia, Croatia, and FYROM. Kosovo and Montenegro have no oil production whatsoever and are completely dependent on fuel oil products from Serbia, Albania, and Greece. Overall, the region enjoys a somewhat sufficient level
of import diversification since it is supplied with crude oil from Libya, Algeria, Egypt, and the Persian Gulf.

**Energy Efficiency:** The fourth major common challenge to the region’s prospective integration on matters of energy is the gross deficiency in energy consumption patterns. The region records Europe’s worst efficiency rates in terms of energy utilization and consumption that are as much as 2.5 times lower than the OECD (Organization for Economic Cooperation and Development) average. The efficiency of energy production/consumption systems ranges from as low as 50 percent in Kosovo to 80 percent in Croatia. Croatia is the least handicapped of the regional states but still could save up to 25 percent of its entire energy consumption. As the International Energy Agency notes in its 2008 *Energy in the Western Balkans: The Path to Reform and Reconstruction* report, “extrapolating such levels across the region would produce savings of around 5 Million Tons of Oil Equivalent (M.T.O.E.), which is equivalent to Serbia’s annual imports of oil and gas combined. Reducing the high network losses (around 22 percent of final electricity consumption) is another important source of energy savings. The region could save an additional 5 Trillion Watt Hours per year by bringing these losses to the levels of Croatia (the best regional performer), which has losses of 14 percent of total final consumption.”

**Renewable Energy Sources:** The fifth major challenge facing the region is the under-investment and under-utilization of the area’s Renewable Energy Potential. The latest European Commission accession progress reports for each West Balkan state do not leave much room for optimism. There has been no recordable progress in the field of promoting energy efficient applications in Bosnia-Herzegovina, Kosovo, or Serbia, while only limited steps were made in the case of Montenegro and FYROM. Only in Croatia, which has effectively concluded its accession process, has there been major change in a positive direction. FYROM and Albania have introduced legislation supporting energy efficient measures, but very little action has been taken in that direction. The Energy Community should take the initiative and call for voluntary targets to be set and pursued by each state coupled with the establishment of a financial framework for Renewable Energy Sources in the region (to be supported by EU financial institutions in the framework of pre-accession funds). Only in Albania and FYROM has a coordinated promotion of RES investments taken place. Overall, however, the region’s RES potential remains largely untapped.

**Market Integration:** Overall, there has been very little market integration within the region since the disintegration of Yugoslavia. In terms of exchanged volumes the level of trade has significantly receded, despite the partial privatization of INA (the Croatian national oil company) by Hungary’s oil and gas company MOL and the commercial control of FYROM’s oil infrastructure by Hellenic Petroleum. The Adria pipeline system, which is co-owned by the Croat (Janaf) and Serbian (Nafta) oil pipeline operators, is the region’s sole crude oil import artery that supplies crude oil to every major refinery installation operating in the region, excluding FYROM and Albania. Serbia’s oil market could not survive without the Janaf line, and that is exactly why Serbia is extremely hesitant to reverse the pipeline’s West-to-East direction of flow before the Romanian-Serbian components of the Constanta-Trieste Pan European Oil Pipeline (PEOP) pipeline system are in full operation.

The Adria system, which does extend into Slovenia, has a technical operational capacity of 680,000 barrels per day (bpd), but has never surpassed a utilization rate of 400,000 bpd. There are plans to extend the line into Slovenia as part of the Constanta-Trieste PEOP project, but there has been no progress, and it is unlikely that there would be any movement in that direction independently of the PEOP system. A significant branch of the pipeline connects Croatia to Hungary. In the 1990s the Hungarian part of Adria was proposed as yet another Bosporus bypass, but due to its limited
throughput capacity of 150,000 to 300,000 bpd and comparatively high construction/modernization cost (€400 million), the idea was unpopular (particularly on the Croatian side) and did not advance. The pipeline was damaged during the 1991-1995 wars and was decommissioned until 2000, when it began operating at one-third of its capacity. By 2005 it exported only 80,000 bpd to Croatia and 60,000 bpd to Serbia.

The only other major pipeline project is the Thessaloniki-Skopje petroleum products pipeline that was commissioned in 2001. The pipeline, which is owned by Hellenic Petroleum, links Thessaloniki with the Soviet-era OKTA refinery near Skopje. The pipeline has a technical export capacity of 50,000 bpd but currently exports only 16,000 bpd. For this reason in 2007 Hellenic Petroleum began construction of a 60km extension of the Skopje pipeline in order to increase its fuel oil and diesel exports to both Pristina and Nis.

Since the 1970s, the level of market integration, in relative and absolute terms, has significantly receded, especially after Adria’s re-commissioning in 2000. With the exception of Hellenic Petroleum’s oil products, which move through the pipeline that connects Thessaloniki with Skopje, there has been no major oil investment in the region since the dissolution of Yugoslavia. Both the Adriatic and Thessaloniki-Skopje pipelines function at approximately one-third of their operational capacities, while most refineries, after years of under-investment, run at 43.5 percent of their technical output.

**Gas Interconnections:** The lack of gas interconnections is detrimental to the goals of market integration and import diversification. In case of a future crisis, Serbia could not benefit from the increase in Croatian gas production or increased natural gas imports from Austria or the prospective L.N.G. terminal in Krk (under construction), unless there is a Croat-Serbian gas interconnector that could extend into Bsnia-Herzegovina. There has been no investment in the region’s natural gas infrastructure for over 30 years. The only new pipeline (in the process of completion) is an interconnector from Croatia to Hungary that could link into the future Krk L.N.G. facility, whose primary if not exclusive purpose would be to increase Hungarian import diversification vis-à-vis Russia. Moreover, there is limited gas storage capacity in both Serbian and Croatia.

Because there is no interconnection between the region’s two principal gas consumers and because there are no plans to connect both the Nabucco and the Interconnector Turkey-Greece–Italy (ITGI) projects with any West Balkan state, Serbia has decided to join the Russian-Italian South Stream project. Belgrade plans to secure its future gas imports while rebuilding and expanding its strategic gas storage facility in Banatski Dvor. This Serbian-Russian alliance is illustrated by the majority (51 percent of shares) acquisition in 2008 of Serbia’s oil and gas state company N.I.S. by Gazprom, which was heavily influenced by the diplomatic isolation of Serbia from the West over the Kosovo issue.

As there are no current plans to directly connect the Nabucco pipeline to the West Balkan countries, some experts believe that the South Stream project is a viable undertaking that could positively affect the region’s energy security equation as compared to other regional
pipeline projects, such as the Trans-Adriatic Pipeline/Ionian-Adriatic Pipeline (TAP/IAP) and the so-called West Balkans Natural Gas pipeline. The West Balkans Natural Gas Ring, an idea originally promoted by Turkey’s Botas and Greece’s DEPA in 2003, has been abandoned in view of Greek and Turkish participation in the Nabucco and/or ITGI projects. TAP is a project that primarily seeks to export gas to Italy, not to the Western Balkans. The consortium’s projects for an L.N.G. station in Vlore have been shelved after Croatia put forward its Krk project and after Edison commissioned its 8 BCM/y capacity L.N.G. unit in Rovigo, which is located south of Venice.

TAP’s additional vision to expand through the West Balkan markets as the IAP project also lost steam following Croatia’s plans for the Krk L.N.G. In any case IAP would not have been implemented prior to 2015 at the earliest or before the 10 BCM/y capacity TAP line would transit Iranian and Azeri gas to Italy after crossing Turkey, Greece, and Albania. TAP’s realization is also more doubtful compared to Nabucco and the ITGI since: 1) its only secured gas supply contract comes from Iran’s National Iranian Gas Export Company (NIGEC) through a supply contract signed by EGL back in 2008; 2) it has no regulatory transit arrangements in place with either Turkey or Greece; 3) it is directly antagonistic to both the Nabucco and ITGI projects for access to Azerbaijan’s reserves, the only available mid-term source of non-Russian gas for the EU markets; and 4) the EU imposed sanctions on Iran in July 2010, which will make it more difficult to transit Iranian gas.

All of these common challenges aggravate the problem of energy poverty, which affects nearly 16 percent of the region’s population. The International Energy Agency’s 2008 Energy in the Western Balkans: The Path to Reform and Reconstruction report defines energy poverty as “the condition where large swaths of a country’s population has inadequate access to energy supplies, suffering in particular by insufficient and unreliable access to electricity that would deprive them of the ability to service basic household needs.” This condition also results in grossly inefficient use of energy. Yet, despite a decade of war that seriously damaged most of the region’s critical energy infrastructure, only 16 percent of the population faces conditions of serious supply deprivation that could be categorized under the heading of energy poverty. It is noteworthy that the energy poverty is lower than the percentage of the population living below the poverty line (18.21 percent). The threshold of the poverty line varies by country, with Kosovo having the largest share (37 percent of population earning less than €40/month) and Serbia and Croatia with the lowest (11 percent).

**Opportunity: European Integration**

The prospect of European integration has offered a measure of political stability, which was further enhanced by the presence of European police and security forces in Bosnia and Kosovo. The energy sector - the backbone of economic development and political integration in the whole region - is emblematic of the transition from a zero-sum game to a win-win mentality. The institutional footprint of the EU has transformed energy geopolitics into a contributing factor of political stabilization and economic integration.

The ultimate goal of the Energy Community Treaty is to achieve for all European energy markets a certain level of regulatory, investment, and liberalization maturity so as to “constitute EU energy policy, the Energy Policy of Europe.” This could be achieved, according to the European Commission, by promoting, through the implementation of the Energy Acquis, three parallel priority objectives: 1) the establishment of a single and stable regulatory space and market framework; 2) the development of energy market competition on a broader geographic scale; and 3) the enhancement of security of supply within this single regulatory space. Moreover, the implementation of these projects is consistent with the goals of the EU’s Southern Gas Corridor Strategy for the security of its gas supplies.
Energy and energy market integration have already played a significant role in moving the region closer to Europe. It is not accidental that the idea of an Energy Community pre-dated the Thessaloniki Council decision on the Western Balkans in June 2003. In 2005 the Athens Process was upgraded to the Energy Community Treaty Organization (ECTO) with its Secretariat based in Vienna. The ECTO is comprised of all six West Balkan states, all EU member-states, as well as Kosovo. The organization played a major role in facilitating Bulgaria’s and Romania’s EU accession, as well as Croatia’s rate of accession negotiations. In this regard ECTO has acted as a precursor to and facilitator of EU integration, although its primary function, according to the EU 2008 Energy Security and Solidarity Action Plan, is to build “an integrated market in Southeast Europe anchored to the EU” by encompassing “the internal market and security of supply legislation for electricity and gas.”

In March 2007 the European Union adopted a new energy strategy—the 20-20-20 Initiative—to reduce CO₂ emissions via energy efficiency programs and to increase the introduction of renewable energy sources in the European energy mix. The initiative is focused on “reducing greenhouse gas emissions by 20 percent, increasing the share of renewables in the energy consumption to 20 percent compared to 8.5 percent today and improving energy efficiency by 20 percent, all by 2020.”

Yet, even if this long-term plan is executed to the letter, European net import dependence is set to increase rapidly. According to the World Energy Outlook on current trends, EU dependence on imported energy will increase from about 54 percent in 2008 to almost 70 percent in 2030. Oil import dependency is expected to rise from 76 percent in 2007 to 94 percent by 2030. In the case of natural gas the projected dynamics are even more ominous. Imports are estimated to account for more than 80 percent of the projected 2030 demand compared to approximately 60 percent in 2007.

The EU’s second major policy/legislative initiative was taken in November 2008 through the publication of the Second Strategic Energy Review: An EU Energy Security and Solidarity Action Plan. This major policy document, which was adopted by the European Council on December 10, 2008, focuses on the measures that must be adopted in order to confront the EU’s expanding long-term energy import dependency. The plan lays out six major priorities: 1) increase the EU’s oil, gas, and electricity interconnectivity; 2) expand the diversification of its supply sources and routes; 3) better coordinate and enhance the effectiveness of strategic oil and gas stocks; 4) implement a strategic plan for increased energy efficiency; 5) place greater focus on energy issues in Europe’s emerging Common Foreign Policy, particularly within the framework of exporting (Russia, OPEC) and transit (Ukraine) states; and 6) maximize the utilization of Europe’s indigenous coal, oil, gas, and renewable energy resources.

In order to expedite the implementation of these goals, in March 2009 the European Council adopted a decision to finance a series of projects that primarily focused on achieving the first two goals of the EU Energy Security and Solidarity Action Plan. The so-called European Energy Programme for Recovery (EERP) has earmarked €4 billion that would cover up to one-third of total investment costs for the construction of energy innovation and infrastructure projects in three major energy areas: 1) gas and electricity inter-connectors, including gas storage; 2) offshore-wind energy development; and 3) the commercial establishment of Carbon Capture and Storage (CCS) technologies. The Russian-Ukrainian gas crisis of January 2009 accounts for the fact that almost one-third of the entire budget was earmarked for natural gas related projects. Overall interconnection projects amounted to 52.5 percent of the funds.

Energy security for the West Balkan states, and Southeast Europe as a whole, is affected by two principal considerations: 1) that the security of energy supply is primarily achieved via oil and gas import diversification
strategies as reinforced by the heretofore lukewarm development of indigenous hydrocarbon resources; and 2) the geopolitical utilization of each country’s participation in major oil and gas infrastructure projects connecting several regional players. Mega-infrastructure energy projects can operate as catalysts for political reconciliation and rapprochement between the Eastern and Western parts of the Balkans by forging powerful bonds of mutual interest. These projects create relationships of economic and political co-dependencies that accelerate the regional integration and liberalization of energy markets—a principal EU objective—not only among the regional states themselves, but also between the regional states and the European Union.

**Policy Recommendations**

- Fully implement the EU’s Second Gas & Electricity Market Directive that calls for the complete separation of producers from system operators and the robust role of a Regulatory Energy Authority in supervising the market opening.

- The West Balkan countries should enforce transparent rules for investment and trade within the energy sector.

**Petroleum**

- Promote support for the attempts of Hellenic Petroleum to extend the Thessaloniki-Skopje oil products pipeline to Pristina and Nis by the appropriate EU institutions and the Energy Community by recognizing it as a priority project for the region’s oil market integration.

- Support the funding of a feasibility study calling for the construction of a Serbian-Croatian oil pipeline that would run independently from the Adria system regardless of the Constanta-Trieste project.

- Grant financial assistance for the construction of an Albanian-Kosovo fuel products line that could expand to Montenegro, thereby offering the region’s weakest economies additional import diversification. Focus on the gradual rehabilitation of oil refineries.

**Natural Gas**

- Construct a reverse flow Croatian-Serbian gas interconnector.

- Support the timely completion of the Bulgarian-Serbian reverse flow interconnector that the two countries decided to promote in March 2010.

- Facilitate the financing of feasibility studies on the potential interconnection of the Serbian and Croatian pipeline systems with the Nabucco project so as to increase import diversification for these countries.

- Facilitate the completion of a feasibility study for the construction of a Serbian-Romanian gas interconnector that would assist Serbia (and, by extension, Bosnia-Herzegovina) in case of another major supply crisis irrespective of the prospective implementation of the Nabucco pipeline project.

- Establish a regional Gas Emergency Response Plan within the framework of the ongoing negotiations over the European Commission’s proposals regarding the revision of the 2004 Security of Gas Supply Directive.

**Electricity**

- Facilitate and prioritize the upgrading of electricity transmission lines that must expand their capacity in order to sustain future expansion in electricity produced from Renewable Energy Sources.

- Facilitate the financing for the construction of high-voltage electricity lines between Albania, Greece, and FYROM, as well as between Albania and Italy (or, alternatively, Montenegro and Italy, given the recent acquisition of the Montenegrin national electricity company by Italy’s A2A.
**Energy Efficiency & Renewable Energy Sources**

- Promote the establishment of voluntary target levels for CO₂ Emission Reduction for all West Balkan states by the Energy Community Secretariat and the EU and in conjunction with the decision taken at the Copenhagen Climate Change Conference.

- Set up an extensive finance mechanism that would focus exclusively on the promotion of RES projects and the implementation of best practices and technologies in cooperation with the IEA and the newly established International Renewable Energy Agency (IRENA).

- Expand energy efficiency projects in all energy sectors, beginning with buildings and construction materials and encourage support of such project by international financial institutions and donors.

- Promote a significant increase in the proposed €25 million total investment endowment for the European Investment Bank’s West Balkan Energy Efficiency Fund.

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**ABOUT CSIS AND EKEM**

This policy report of the Center for Strategic and International Studies (CSIS) and the Hellenic Centre for European Studies (EKEM) is designed to provide concrete and focused policy recommendations for a consequential U.S.-Greek policy approach toward the Western Balkan countries. With this goal in view, CSIS and EKEM established a joint Task Force in November 2009, consisting of two Working Groups, one based in Washington, D.C., and the other in Athens. The Task Force assembles policy experts in both countries who will help formulate policy recommendations based on important issues facing the West Balkan region.

The CSIS-EKEM West Balkan initiative is based on two central assumptions. First, that greater cooperation, harmonization, and integration in Southeast Europe in all its dimensions, from transportation and trade to energy and security, is important for the entire region, including current EU members states Greece, Slovenia, Bulgaria, and Romania. Such a process can make a significant contribution to gradually integrating all the Western Balkan countries into the European Union and NATO. Inaction, neglect, and insufficient attention by international institutions and key political players could contribute to new problems or even conflicts in the most unstable parts of the region in the years ahead.

Second, both CSIS and EKEM are convinced that a closer partnership between Greece and the United States can move forward the regional integration process. Both Athens and Washington have a stake and an impetus in securing the entire region for the Euro-Atlantic community. For Greece, stabilizing the Western Balkan neighborhood will enhance its own national security and increase opportunities for business investment and economic development. For the United States, consolidating the region’s young democracies and enhancing interstate cooperation would provide a strategic dividend after two decades of substantial U.S. political, economic, and military investment in stabilizing the Southeast European region.

A bilateral effort toward the Western Balkans by the United States and Greece over the coming years can provide added value for regional development. While Washington benefits from its global stature and respect throughout Southeast Europe, Athens possesses regional expertise, extensive multilateral contacts, and a long-term commitment to regional integration. Together, the two states can make a durable contribution while developing their own bilateral connections.