

# BALKAN GREEN ENERGY NEWS

DECEMBER 2015

*Balkan*  
Green Energy  
NEWS

The most comprehensive coverage of green energy news from the Balkans





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# INTERVIEW



Christine Moro

Ambassador of France to Serbia

## Climate change action is efficient only if taken by all

The Embassy of France in Serbia has been active in raising awareness about climate change, ahead of the United Nations Climate Change Conference – COP21 in Paris. It organized more than 15 activities, mobilizing more than 4,500 participants. „We had a very good feedback, and with time I feel that the debate has become less theoretical and more practical, and that people understand better what is at stake, what they can do, the benefits of action and the cost of inaction,“ says Christine Moro, Ambassador of France to Serbia, said in an interview for Balkan Green Energy News. Conferences, exhibitions, debates and workshops were held in cooperation with Serbian authorities, local authorities, civil society, and international partners such as the Delegation of the European Union and the United Nations Development Programme, she added.

The Ambassador explained the ambition is to reach a global, legally binding agreement at the summit, as individual commitments made by many countries are insufficient, even if they are a step in the right direction.

### What was the timeline of the activities and which event was the most successful?

We started to organize all these activities already last spring. I shall just give you a few examples. On June 9, at the French embassy, we held a public debate on climate, as part of a worldwide event held in more than 80 countries; 350 persons took part in the debate in Serbia. In September and October, we set up a series of cultural and educational events at the French Institute, under the motto 'Environmental issues: what if we acclimate to it'. We had a big event in Kragujevac with around 80 mayors or civil servants from local authorities, to exchange views about what a local authority can do to reduce gas emissions and energy consumption – and it can do a lot. In November we had an event on green economy for businesspeople and again local authorities, in the French embassy, and some big French companies gave concrete examples of efficient and relatively cheap equipment that can contribute to greener public utilities.

“ It is important to have a global vision and convince and gather all forces: government, local authorities, civil society, businesses. ”

### How well is the topic positioned in domestic mainstream media's coverage, now that there are also newsrooms with specialized reporting on climate change?

We have noticed an increasing interest in reporting on climate change, mainly thanks to online media specialized in ecology, sustainable development or economy, and to some printed weekly magazines. For example, in-depth analyses were available through a series of articles in Vreme. I was particularly happy to see the latest edition

of Politikin zabavnik in which several pages explain the climate change issues to a wider and younger audience through excellent infographics created especially by the Paris climate conference team. Not only in Serbia, efforts in communicating about the conference and climate change issues paid off and these very important subjects got better media coverage both in France and elsewhere.

### **The European Parliament has called, in its resolution on October 14, for legally binding policy measures to try and stop carbon emissions by 2050 worldwide. What are the expectations in France for the upcoming UN Climate Change Conference in Paris and for a potential global agreement?**

The European Union has for years been one of the most active and ambitious actors in the debate, taking action and setting for itself (which means also the member states) ambitious targets, and it has already globally reduced its emissions in the framework of the Kyoto Protocol. But we know that action against climate change can be efficient only if taken by all, therefore France, as well as the EU and the UN, expect to achieve a universal agreement. It is also necessary that it be legally binding, and that it is reviewed regularly, every five years, to take stock of improvements – and problems – and to make, step by step, more ambitious commitments towards low-carbon economy, in view of reaching neutral emissions by the end of century.

*“ We are confident, if the review process is adopted, that with good will and the technological progress and innovation in the future, we will succeed to limit the average temperature rise to 2°C. ”*

The target so far is to limit the planet's average temperature rise to less than 1.5–2°C. Although to date 161 countries have submitted their contributions, covering 90% of global greenhouse gas emissions, we know that the commitments taken so far are not sufficient to reach that aim. But the number of contributions, the awareness of countries with high emissions, are very positive signs. We are confident, if the review process is adopted, that with good will and the technological progress and innovation in the future, we will succeed to limit the rise to 2°C.

### **France has also promoted the significance of COP21 across our region. Will we see further scientific exchange or study visits by businesspeople and professionals?**

Definitely! This 2015 climate year has brought lots of new perspectives for our bilateral cooperation, which is already important in the field of environment in the framework of preparation for Serbia's EU accession. All the activities we organized and the awareness-raising in Serbia, create new opportunities. We took the opportunity of this world climate mobilization to identify new partnerships in this issue.

### **In your opinion, which field is the most important for Serbia to focus on, in the struggle for climate change mitigation?**

On one hand there is adaptation: what Serbia must do to prevent natural catastrophes such as floods, droughts, and to adapt, for instance, agriculture in a changing climate. On the other hand, there is the reduction of GHG emissions and action must be taken on energy consumption and diversification of energy sources. It is definitely necessary for Serbia to develop renewable energy.

### **Are lawmakers and local authorities in France making standards stricter for human behaviour and for companies? Which initiatives can you single out?**

In spring we adopted a new law on energy transition which encompasses a wide range of legal measures to encourage the change, both in economy and attitude. This shows that the solution is not simple; it comes from a variety of changes which, step by step and in all fields, will converge towards the target. This is why it is important to have a global vision and convince and gather all forces: government, local authorities, civil society, businesses.

A few examples of what can be done: in Poitou-Charentes region, a 'solar plan' was adopted in 2008 and a photovoltaic fund created in 2011. This public-private partnership for the production of photovoltaic electricity is the result of a unique alliance between the Poitou-Charentes Region, Solairedirect (photovoltaic independent operator) and Sorégies SÉolis (local energy distribution companies). This helped an innovative model for local energy production and added competitiveness to the solar industry in France.

Engie, a French company, announced this summer 12 new commitments to continue the group's efforts in the fight against climate change. Engie commits on voluntary basis to reduce by 30% its own greenhouse gas emissions by 2030, in order to prevent 60 million tonnes of greenhouse gasses from 2020 to its customers. It intends to achieve that target by recycling waste, multiplying by three its production of alternative water up to 2030, and finally by deciding an internal carbon price in 2016.

“ With time I feel that the debate has become less theoretical and more practical, and that people understand better what is at stake, what they can do, the benefits of action and the cost of inaction. ”

### **Have French companies in Serbia and the region been active in introducing measures for sustainable development, particularly in the field of renewable energy and energy efficiency?**

French companies are active on this topic in Serbia and in the region: this dynamism has been promoted in a conference on green economy held at the French embassy, on November 5. This event presented French and Serbian projects in favor of energy diversification: Veolia presented achievements from the use of biomass in Hungary and from biogas in Romania. Electricité de Strasbourg, partner with IEL, detailed a study of geothermal potential of Serbia which will start in the first half 2016 at the expense of the Government of the French Republic (as part of our encouragement to energy transition in Serbia). Lafarge Holcim has shown the techniques to reduce energy consumption, emissions of carbon dioxide in Beočin. When it comes to advanced technology to service buildings and smart cities, Schneider Electric presented its computer program management of electricity networks (smart grid), in partnership with EPS. For all this very encouraging examples, I think that French companies are definitely involved to help Serbian companies in the field of renewable energy and energy efficiency.

### **Are there any successful examples that Serbia may follow in its policy? What is the role of activists and their organizations?**

Serbia has been bracing itself for the Paris conference for months now and the country has emerged as a leader in the Balkans in the fight against climate change, through its numerous initiatives to implement policies to reduce greenhouse gas emissions. The awareness and involvement of all citizens will also be very important for the implementation of the commitments taken and for the continuation of progress in the future. So yes, the constructive role of civil society is important.

# FEATURES



Gabriela Cretu

Electricity Expert

Energy Community Secretariat  
Vienna

## Is the Energy Community really walking the green path?

**In convergence with the European policy on climate and energy, the Energy Community Contracting Parties agreed in 2012 to implement the Renewable Energy Directive and committed to binding national targets to be achieved through the use of renewable energy in the electricity, heating and cooling, and transport sectors by 2020. The rationale was to develop the contracting parties' significant renewable energy potential, whilst bringing environmental benefits, reducing dependence on energy imports and creating the premises for growth and sustainable development of their economies.**

In general, the contracting parties will have to increase their share of energy from renewable sources in gross final energy consumption by approximately 6% by 2020 compared with their share of renewable energy in 2009. In this context, the evolution of final energy consumption to 2020 plays a significant role. And here, the greatest ally, energy efficiency, is instrumental for reaching the 2020 targets with decreased effort.

So the countries embarked on a journey to create the legal and regulatory frameworks for renewable energy to support the attainment of these objectives, following the principles of European Union's Renewable Energy Directive.

“*The evolution of final energy consumption to 2020 plays a significant role. And here, the greatest ally, energy efficiency, is instrumental for reaching the 2020 targets with decreased effort.*”

The Secretariat of the Energy Community submitted the first progress report on the promotion of energy from renewable sources to the Ministerial Council in October of this year. The report drew its conclusions based on the assessment of individual contracting parties' biennial reports submitted at the end of 2014 and data from official energy statistics. The assessment revealed that Moldova, Serbia and Kosovo\* were not on track to achieve the first interim targets in 2011-12. Moreover, all contracting parties except Montenegro are, in general, not on track to meet the 2020 targets when considering existing and planned policy measures as announced in their national plans. Montenegro has reached the interim trajectory and it will probably be the only contracting party to reach the 2020 target, due to revised biomass data rather than investments in new capacities. The outcome of **the progress report** should serve as an alarm bell for those contracting parties at risk of missing their renewables targets.

\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

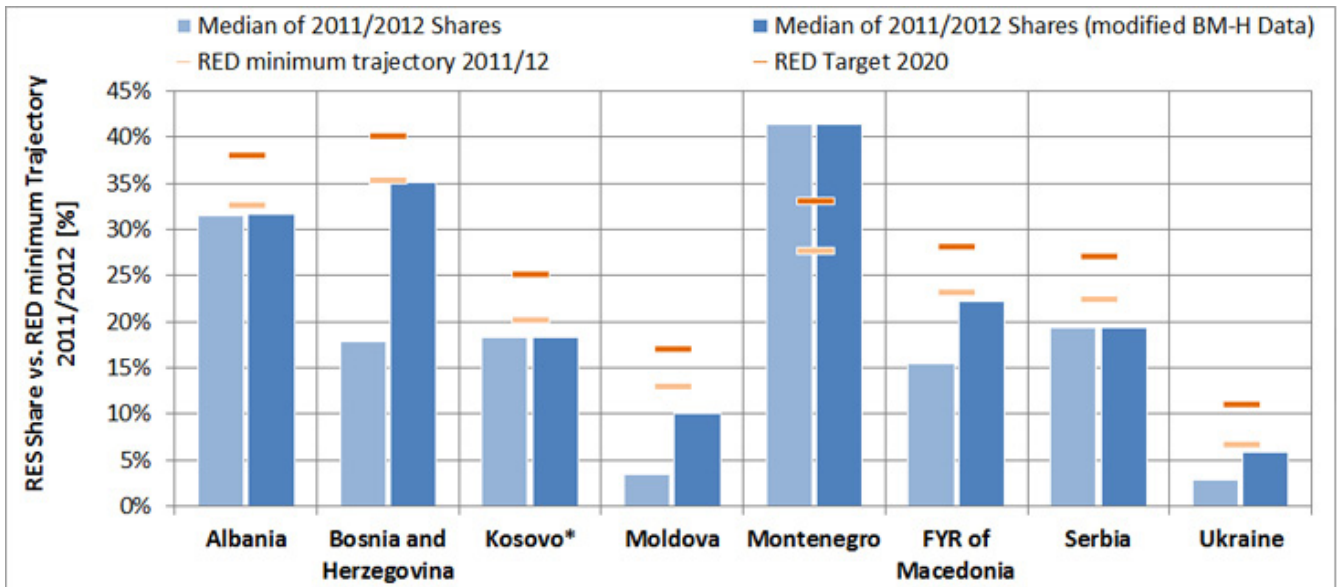


Figure1: The median shares of renewable energy sources in 2011/12 with and without the modified biomass data of the gross final energy consumption for all contracting parties compared to the 2011/12 indicative trajectory in the Renewable Energy Directive and the 2020 renewables target. (Eurostat 2015, IEA 2015, Renewable Energy Directive 2009/28/EC, as adapted)

### And What Can Be Done?

One might argue that renewable energy is for rich countries and that it is not the proper time now due to the high cost of technologies and the persistence of the economic crisis in the contracting parties. On the contrary! Investments in renewable energy and energy efficiency contribute to growth and job creation. But we need to create a level playing field in which the most mature technologies and best projects come online first. This is important for minimising the impact on the electricity price for the final customers. The contracting parties have a very good renewable energy potential for hydropower, wind or solar and biomass used for heating that could be deployed cost-effectively. Moreover, to impose control of the annual funding for support granted to renewable energy projects while being on track to achieve the policy objectives makes complete sense.

Furthermore, the cost of renewable energy technologies has dropped significantly in the last years. The contracting parties can benefit from the cost reductions due to the learning curve effect and from experiences – positive or less positive – gained by the EU member states on the pathway towards reaching their 2020 targets.

“Electricity markets are declared open in legislation. De facto, transparent and competitive platforms for day-ahead or intra-day trading do not exist yet to facilitate a support scheme based on a feed-in premium.”

Despite sufficient support for renewable energy in place which are still needed to remedy market failures, it is the uncoordinated, lengthy and sometimes not so transparent administrative procedures for authorisation, permitting and access to the grids which are the main barriers to a higher uptake of renewable energy. These barriers increase the market risks and thus the capital cost, making projects difficult to finance.

It is equally critical to lower the risks for prospective investors to invest in the contracting parties by improving transparency, predictability and coherence of the administrative procedures and regulatory frameworks while exposing renewable energy producers to market signals.

The need to integrate renewables into the market is the new rule of the game. The preference for the feed-in premium over any other form of operational aid will prevail. Furthermore, granting the support for promotion of renewable energy will only be possible through a competitive procedure helping to drive down the cost of reaching the 2020 renewable energy targets. Only in this context, the policy objectives could be achieved and, in the same time, obtain public acceptance for the additionality needed to be paid by the end-customers to support the promotion of renewable energy.

On the other side, we also need the market to integrate renewables. Electricity markets are declared open in legislation. De facto, transparent and competitive platforms for day-ahead or intra-day trading do not exist yet to facilitate a support scheme based on a feed-in premium, where the producers sell the electricity into the market and get the premium on top of the electricity price. The renewable energy producers will be required to take balance responsibility gradually, but for this, a non-discriminatory balance settlement mechanism has to be introduced in all contracting parties and exemption from balance responsibility abolished for all market participants.

Therefore the complete, real liberalisation of the electricity market where the market price is competitively formed and transferred to end-customers – implying removal of price regulation on generation and supply – is vital to create a level playing field where renewables can further integrate and be exposed to undistorted price signals.

The principle of non-discrimination which is key in any market needs to be embedded in the tenders for granting the support, the market rules and the access to networks for all participants. In a broader sense liberalisation is also about democratisation, isn't it?

All these are the key principles that would need to be respected and implemented by the energy policy makers, regulators and incumbent companies in order to ensure that the energy system can cope with higher uptake of renewable energy in the future. This way the contracting parties could properly embark on the path towards sustainable development of their energy sectors while meeting the climate and energy objectives in the most cost-effective way for the benefit of all citizens.



# FEATURES



## Vojislav Milijić

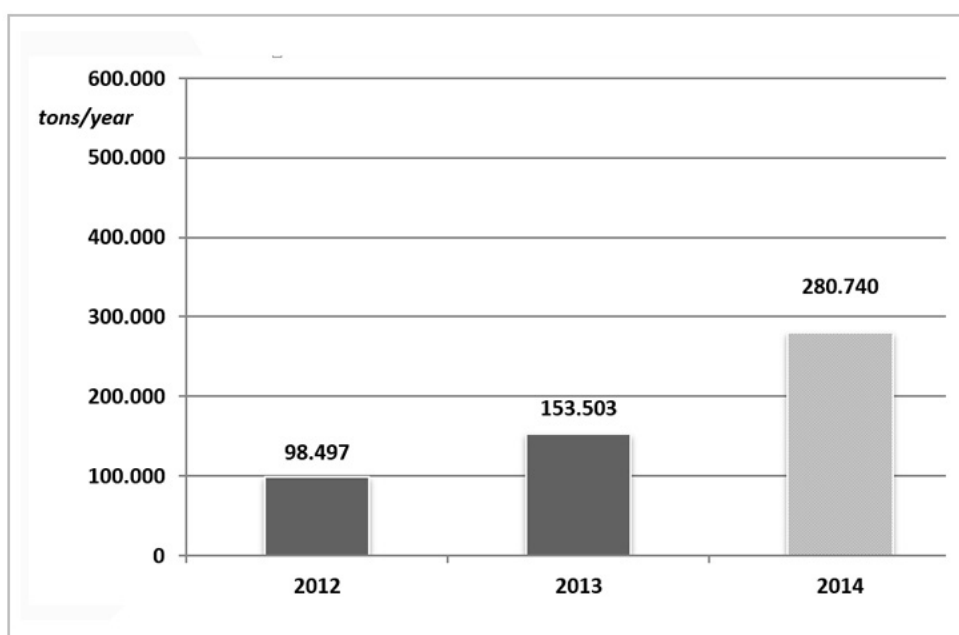
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### What's happening to wood pellets in Western Balkans?

Wood pellet is a fuel produced by pelletizing milled wood. Even though the product started to develop in the seventies and the eighties the real wood pellet boom started in 2000. First major plants were developed in Northern, Western and Central Europe. However, with the demand growth in the European market, huge capacities developed from 2005 in Eastern Europe as well and in America from 2010.

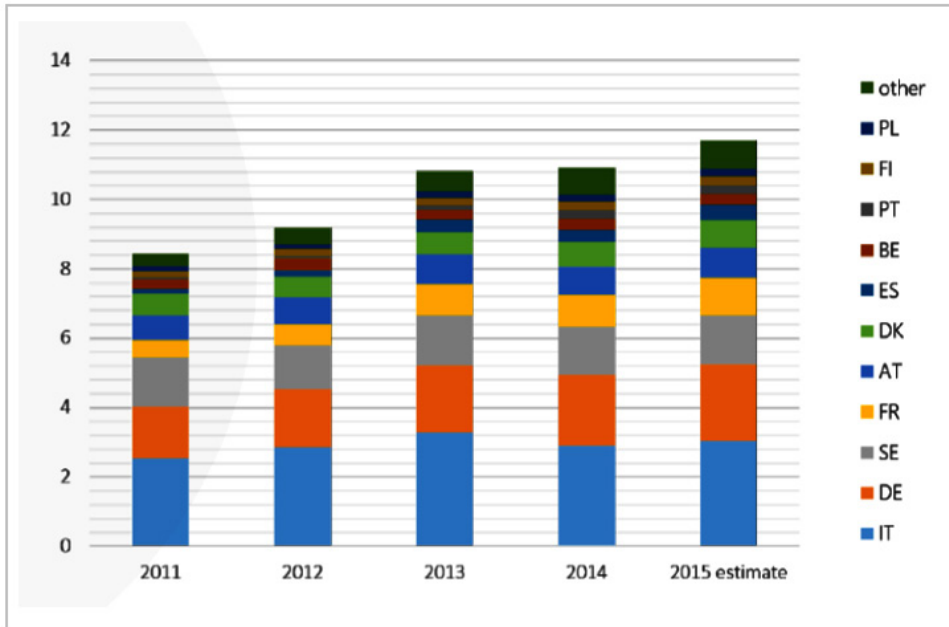
Wood pellet production in Western Balkans started in 2006/07 with development of capacities in Croatia, Bosnia and Herzegovina and Serbia. Development was gradual with few developed factories per year until 2010, when a real boom started in BiH and Serbia, and by 2014 there were over 40 and over 60 producers, respectively. First factories in Montenegro started in 2014. It seemed like anybody with some capital was pursuing locations and wood supply contracts in order to invest in pellet production. In the meantime several plants with production capacities of over four tonnes per hour have either gone bankrupt or switched owners. In case of Serbia in 2014, total capacity exceeded half a million tons per year. But production could barely reach 50% of the capacity. According to the [Report on Wood Pellet Production and Market Structure in Serbia](#) from 2014, it was estimated at over 250,000 tonnes, after 150,000 from 2013 and less than 100,000 tonnes in 2012.



Graph 1: Wood pellet production in Serbia

This is an increase of more than 150% in two years. However, the growth has stopped in autumn of 2014, and it seems there is a decline from this year and troubles have started for most of wood pellet producers in Serbia and other Western Balkan countries.

Why is this the case? It is true that demand for wood pellet is rising and total consumption in 2014 in the European Union reached 18.8 million tonnes, but if one looks more closely to the results of EPC survey presented in [Aebiom's statistical report](#) (page 14) it is clear that in fact in most of the countries except Germany (which also has the largest output of wood pellets in the bloc, consuming less than it produces) consumption has decreased in 2014.



Graph 2: Wood pellet consumption in EU28

### Retreat in Italy

This is especially the case with Italy, where consumption dropped from around 3.3 million tonnes in 2013 to 2.9 million in 2014, and it is questionable if the projection of three million tonnes for 2015 will be reached. On the other side, from 2012 to 2014 over 70% of wood pellet from Serbia (and similar or higher share from BiH and Croatia) was exported. Over 50% of exported wood pellet produced in Serbia was delivered to Italy and additional 15% to Slovenia, while another 15% was exported to Greece, where demand for pellet also dropped due to economic and financial crisis.

But reduced demand is only part of the problem. Bigger issue for Western Balkan producers is the competition from the United States, Canada, the Baltic countries, Belorussia and Ukraine. Last autumn and this winter and spring we had the case that price of wood pellet from America delivered to Italian ports was similar to that in most of Serbian, Bosnian and Croatian factories. And problem with the price is that wood pellet from aforementioned destinations usually comes with better quality.

*“Most pellet producers in Serbia and Bosnia and Herzegovina are domestic companies with limited capital and they have installed used pelletizing equipment or lower quality one, so they are faced with increased maintenance costs or additional costs for replacement of equipment.”*

### Beech instead of waste

Can Western Balkan pellet producers be competitive on the global market? Most wood pellet producers in Serbia have the capacity below one tonne per hour, while only 10% have over four tonnes, compared to large-scale factories producing over 200,000 tonnes per year in America, Russia, Romania and some other EU countries. Most of the larger operators in Serbia produce beech wood pellet from long firewood and not from sawmill residues or sawdust. In fact, demand for sawmill residues derived from wood pellet and chipboard factories in Serbia increased the price

of residues to the level of firewood. And there isn't a significant number of small-scale wood pellet factories which utilize their own sawmill residues, while there are only few wood processing companies with serious production which make wood pellet from predominantly sawmill residues.



*Picture 1: Example of a modern Amandus Kahl wood pellet line in Vektra Jakić pellet factory in Pljevlja, Montenegro*

Producers in other mentioned countries in most cases rely on large-scale wood processing industry and utilize sawmill residues. So their raw material is cheaper, dryer and with less bark or possible ash content. Also, most pellet producers in Serbia and BiH are domestic companies with limited capital and they have installed used pelletizing equipment or lower quality one, so they are faced with increased maintenance costs or additional costs for replacement of equipment. Most of the wood pellet factories in America, Russia and the Baltic countries are owned by large companies with capability to invest in cutting-edge technology.

### Economy of scale and ships

Both the quality of wood and the equipment eventually reflect on the quality of the product. There are only seven wood pellet producers in Serbia with En plus A2 certificate and none with En plus A1 or DIN plus. It is really questionable if anybody in Serbia would be able to reach A1 if pellet is made of beech wood with existing equipment. The competition from America and Europe in fact has better investment potential, better equipment, cheaper raw material. The only advantage that Western Balkan producers do have is the lower price of electricity and workforce. But modern pellet factories do not require a significant work force. Next issue is the transportability of wood pellet. While producers from America, Russia and Baltic countries rely on shipping via sea or railway, our producers still rely on trucks in most cases. Therefore, the competition has cheaper transport as well.

Some factories in Serbia now are trying to rely on the domestic market. Domestic consumption has grown to 90,000 or maybe even up to 100,000 tonnes, but it is really questionable if the domestic market can grow more without any subsidies to population for energy efficiency and installation of wood pellet boilers. Wood pellet is comfortable and it may be competitive compared to natural gas, but for markets with limited willingness and purchase power in most of the population, such as in Serbia and other countries in the region, firewood, coal or even electricity remain a more affordable solution.

The perspective of wood pellet production in the current situation for most of Western Balkan producers does not look so bright. It is not hard to foresee that the number of factories will be significantly reduced and that only those who can adapt, enlarge their capacities, reduce their raw material costs, improve product quality and become more efficient will have a chance. And this only if they can find stable and secure market channels.



Djordje Popović

Senior Attorney

Petrikić & Partneri AOD in cooperation with  
CMS Reich-Rohrwig Hainz

## Energy efficiency projects finally start in Serbia

### Regulatory setting

Being one of the countries in the CEE region with the lowest energy efficiency rate, Serbia has recently undergone significant legislative activity to finally make energy efficiency projects feasible. The Law on Efficient Use of Energy as the first systematic piece of legislation regulating the energy efficiency was adopted in 2013 but in respect to energy performance contracting became practically applicable in May 2015, because that was when the foremost by-law setting the model agreements between the public and private partners in energy efficiency projects was adopted. Savings in energy should eventually bring a significant reduction in public expenditures, stabilization of the energy supply and further development of the energy sector, therefore contributing to the development of the entire economy.

The Law on Efficient Use of Energy, for the first time in Serbia, explicitly defines the energy services company (the "ESCO") and sets rules for energy performance contracting in line with the EU acquis, with the aim to provide an overall legal framework for energy efficiency arrangements.

To enable implementation of these general possibilities introduced by the said law, the Rulebook on Model Energy Service Contracts for the Implementation of Energy Efficiency when Users are from Public Sector (the "ESCO By-Law") was finally adopted in May 2015, following the completion of the year-long work of the National Working Group under the guidance of the Ministry of Mining and Energy (with the support of the European Bank for Reconstruction and Development, in a project funded by the European Union, involving GFA Consulting Group and CMS law firm as their external consultants).

The ESCO By-Law prescribes two models of ESCO agreements, one for public buildings and one for public lighting. It necessitates the public-private partnerships to be established between the relevant public partner (e.g. a municipality, a public company, State) and the relevant private partner (i.e. ESCO company) on a long-term basis. The concept of this approach is that a private partner installs, manages and finances the energy efficiency measures, at the same time guaranteeing to public partner that a pre-agreed amount of financial savings will be achieved, based on which the project can be fully financed - without creating a public debt.

Significantly, the receivables attributable to private partner from the savings thereunder are to be further transferable to third parties, which is expected to foster the bankability of ESCO projects in Serbia.

The two model agreements stipulated in the ESCO By-Law envisage the three main periods of the ESCO agreement:

1. Preparatory Period, mainly consisting of planning and design activities related to the relevant project;
2. Implementation Period, in which activities related to the implementation of the energy savings measures by a private partner in cooperation with a public partner are to be undertaken;
3. Guarantee Period, being the period of utilizing the energy savings potentials of the contracted facility, in the course of which energy savings, i.e. financial savings are achieved as a result of the measures so implemented.

The ESCO By-Law further sets detailed provisions relating to collateral packages, the warranties for the performance of obligations, the insurance of the project, the force majeure clauses and the comprehensive set of rules to govern the above-mentioned main contractual periods.

The ESCO By-Law also includes a specific set of appendices where the necessary details relevant for a particular project are to be stipulated, such as the details of the contracted facility, the instructions and parameters for achieving the energy savings as well as the guidelines for the verification of the quality of maintenance and the performance levels.

### **Obligatory nature of the model agreements**

It should be underlined that the ESCO By-Law, once it finally came into force, became a part of the Serbian legal system and, consequently, both public and private stakeholders are principally obliged to comply with the two prescribed models when implementing the ESCO projects, be it in the area of public buildings or in the area of public lighting. This is particularly important to note having in mind the very nascent nature of the energy efficiency market in Serbia and the obvious need for this market to start developing in a consistent, transparent and lawful manner.

Having this said, it is still the case that the two model agreements provide for a necessary flexibility to parties allowing them to include additional stipulations, as long as such additional stipulations do not contravene, breach or otherwise departure from the main rules and principles prescribed in the models.

### **Energy supply contracting**

It is of equal importance to acknowledge that although the ESCO By-Law essentially deals with the energy performance contracting and not with the energy supply contracting as such, the very fact that it was adopted, together with the existing set of energy regulations, actually fosters the feasibility of the energy supply contracting too.

Despite the fact that the principles of the two energy arrangements are not the same (the most notable difference being that energy performance contracting implies backing of the project by the guaranteed savings, unlike the energy supply contracting focused on rearranging the energy supply where the private partner guarantees the continuous provision of a certain minimum amount of energy), it is equally the case that both arrangements do have almost the same contractual periods (preparatory, implementation and guarantee, i.e. utilization period), the same manner of choosing the private partner through the public procurement procedure and the same requirement to have the project implemented by means of the public-private partnership.

Now that the main legal concerns and much needed transparency has been finally brought into the sector, the above legal basis practically allows public stakeholders in Serbia (most notably, the municipalities) to strive towards the renewal and improvement of their existing energy infrastructure by means of private sector engagement in both the energy performance contracting (ESCO) and the energy supply contracting.

## Market developments

The most recent market trends show considerable interest of public and private sector in the development of energy efficiency projects. This holds true both for ESCO projects and for energy supply contracting.

More specifically, several municipalities and other public stakeholders in Serbia are currently on their way implementing such projects. The examples particularly include the Serbian municipalities of Vrbas, Vranje and Varvarin, where the competent PPP Commission has already issued its positive opinion on the intended public-private partnerships in implementing the ESCO projects in the public lighting area. The relevant public tenders are thus in preparation where the relevant private partners are expected to compete in the near future, in full compliance with the ESCO By-Law and other applicable regulations.

Other examples include municipalities such as Pirot, where both ESCO projects in public lighting and energy supply contracting (mostly, the supply of heat to schools and other educational facilities) are being prepared and thus the public tenders are expected in the near future.

Equally, there appears to be a number of domestic, regional and international companies that are quite attentive to get directly involved in development of the energy efficiency market, and they already showed sizeable interest by means of their intense participation in stakeholders' workshops and attendance at public pre-tender events.

With this in mind, it may be expected that Serbia finally witnesses the long-awaited development of the energy efficiency sectors in the forthcoming period.

## Remaining challenges

Apart from the above stated need to have the consistent practices in formal preparation of projects being fully in line with the ESCO By-Law and the relevant legislation, the challenges ahead also include the need to reduce subsidies, which keep energy prices on an artificially low level, and rather introduce further sector-specific incentives for the energy efficiency projects in the relevant legislation (notably, in the real estate legislation and in the tax-related one) and the gradual raising of financiers' awareness of the practical feasibility of ESCO and related projects and increasing the energy tariff to a cost reflective level.

While some of the banks and other financial players have most recently become acquainted with the overall concept, the remaining challenge is that the said players often assess the creditworthiness of the client instead of the project itself.

Nonetheless, similarly to other countries where such concepts were introduced for the very first time, it may still be expected that gradually – and with the first projects becoming successfully implemented – financiers will eventually become significantly more willing to engage extensively in the financing of the energy efficiency projects.

# PROJECTS



Open Regional Fund for South-East Europe - Energy Efficiency (ORF-EE)

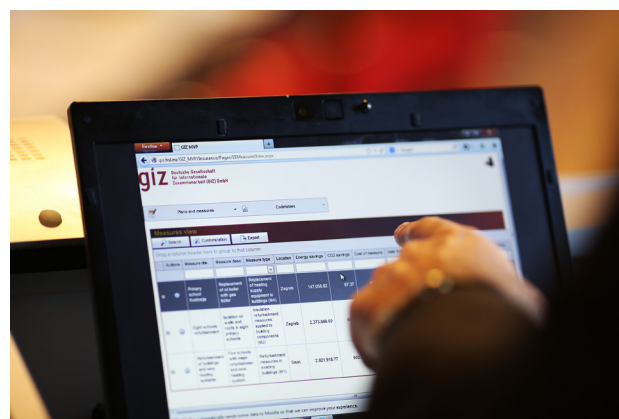
<b>Project:</b>	Open Regional Fund for South-East Europe – Energy Efficiency (ORF-EE)
<b>Commissioned by:</b>	German Federal Ministry for Economic Cooperation and Development (BMZ)
<b>Countries:</b>	Albania, Bosnia and Herzegovina, Montenegro, Kosovo, Macedonia (FYR), Serbia
<b>Duration:</b>	2008 - 2017

## WHO WE ARE

The Open Regional Fund for South-East Europe – Energy Efficiency (ORF-EE) has been established on behalf of the German Ministry for Economic Cooperation and Development (BMZ). It is implemented through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). **The core objective of the ORF-EE is the establishment of regional networks of energy related institutions in SEE as drivers of innovation.** It is active in the countries of Albania, Bosnia and Herzegovina, Serbia, Montenegro, Macedonia (FYR) and Kosovo. Croatia has been part of the project as a partner country until its accession to the European Union (EU). Since then, it is part of it in form of a model country through different networks and transfer of valuable experiences, and know-how to other South-East Europe (SEE) countries.



Picture 1: Third Energy Efficiency Coordination Group Meeting, Vienna, Austria, 2013



Picture 2: Monitoring and Verification System, 2013

One of the ORF-EE project components is co-financed by the German Federal Ministry for Economic Cooperation and Development (BMZ), and the EU (Horizon 2020), and implemented through the GIZ ORF-EE by a consortium of ten specialist partners, including the GIZ, from eight EU and non-EU countries.

Another component under this GIZ project deals with municipal associations in South-East Europe in the field of energy efficiency, with the aim of capacity building of the associations to adequately represent the interests of their clients, the municipalities, and eventually those of the broader public. This component is co-financed by BMZ and the Government of Switzerland, and implemented jointly by the GIZ ORF-EE and GIZ ORF – Modernization of Municipal Services (ORF-MMS) projects.

The German Government has been supporting the EU approximation process of the SEE countries in the energy sector through the ORF-EE since 2008. The SEE national governments, by way of national ministries responsible for energy, are also represented through the Energy Community (EnC) who is also an important partner in this project. The EC brings together the EU and the South-East European countries in their joint efforts to make positive changes in the energy sector of the SEE region.

## OUR APPROACH

The nations of South-East Europe have much in common, both culturally and structurally, which offers huge potential for building and sharing expertise in regional networks. Therefore, the GIZ ORF-EE promotes sustainable regional cooperation among stakeholders, with the capacity to drive the processes of reform in the energy sector, thereby contributing to the achievement of sustainable national energy efficiency targets in SEE.



*Picture 3: Energy Efficiency Days Sarajevo, Bosnia and Herzegovina, 2015*



*Picture 4: Energy.Development.Democracy Conferences 2015, Podgorica, Montenegro*

## WHAT WE DO

GIZ ORF-EE is a regional project on energy efficiency, which provides advice to its partners in project development and management. It provides technical advice, capacity building, funding, and relevant instruments and supports various stakeholders in forming networks, development of training programs and organization of events. It also supports its partners in policy development processes.

The project works with four main partner networks:

1. Civil society
2. Local level - capital cities
3. Local level - municipal associations
4. National ministries

The ORF-EE coordinates its activities with other GIZ projects and with bilateral, and multilateral donors to prevent duplications and to enable synergistic efforts. The project's crucial aim are sustainable results.





Picture 5: Parliamentary Hearing, Sarajevo, Bosnia and Herzegovina, 2015



Picture 6: Network of Energy Efficient Capital Cities Signing Ceremony, Skopje, Macedonia, 2014

## WHO WE WORK WITH

The efforts invested into the SEE region's energy sector are shared with various partners.

Country	Main Partners/Partner Networks
Montenegro	<ul style="list-style-type: none"> <li>National ministries and various national institutions responsible for energy efficiency. The implementation in Bosnia and Herzegovina is also done in collaboration with entity level institutions.</li> <li>Network of Schools for Political Studies in SEE (active under the auspices of the Council of Europe); Public Dialogue Initiative on Sustainable Use of Energy.</li> <li>The capital cities of SEE under the EU Initiative "Covenant of Mayors" and The Network of Energy Efficient Capital Cities.</li> <li>Associations of Municipalities.</li> </ul>
Bosnia and Herzegovina	
Albania	
Kosovo	
Macedonia (FYR)	
Serbia	
Croatia as <i>model country</i>	<ul style="list-style-type: none"> <li>Center for Monitoring Business Activities in the Energy Sector and Investments (CEI), City of Zagreb, the Society for Sustainable Development Design (DOOR).                             <ul style="list-style-type: none"> <li>Freiburg in Breisgau as <i>model city</i></li> </ul> </li> </ul>
Other important partners:	
<ul style="list-style-type: none"> <li>Energy Community and Regional Cooperation Council.</li> </ul>	

## MAIN PROJECT ACCOMPLISHMENTS AND IMPACTS

- The **Network of Energy-Efficient Capital Cities in South-East Europe** has been established through support of ORF-EE. It is comprised of the cities of Zagreb, Sarajevo, Podgorica, Skopje and Tirana. Support to this network is also given by the German model city of Freiburg im Breisgau, in close coordination with GIZ ORF-EE.
- Also as a result of the support provided by ORF-EE, all partner cities have **joined the European Covenant of Mayors Initiative** and undertaken to reduce their CO2 emissions by at least 20%, by 2020. They have established energy management structures, including info centers for energy efficiency and **developed Sustainable Energy Action Plans**, which are currently in implementation SEE wide.
- The Council of Europe's Network of Schools of Political Studies in SEE, through the Public Dialogue Initiative on Sustainable Use of Energy, is contributing to **strengthening the political will** in the region to pursue reform processes through inclusion of various stakeholders such as members of parliament, civil society, business/private sector, media and different levels of government. In 2012 as an example of the fruitful efforts, for the first time in Serbia and Montenegro, **public hearings of parliamentary committees responsible for energy efficiency**, were held. Since then, another five parliamentary hearing in different SEE countries have taken place. Through these hearings, the processes of development and implementation of legal frameworks in the energy efficiency sector have been accelerated.
- GIZ ORF-EE advises national ministries of SEE countries on **developing and monitoring National Energy Efficiency Action Plans** which are mandatory across the EU. For this purpose and to enable the designing of governmental energy efficiency instruments, which allow for a more precise assessment of national direct energy-saving impacts

and effectiveness, a **monitoring system** has been developed. This is complemented by a **software program – the Monitoring and Verification Platform (MVP)** for calculating the energy savings and CO2 reductions achieved through energy efficiency measures, which has been made available to relevant national institutions.

- Support is also provided in transfer of successful work experiences, based on a **cross-border peer-to-peer approach**, from individual municipal associations to other associations in the region. The ability of municipal associations to provide efficient services in the field of energy efficiency to their members – the municipalities, is thus improved and they are able to offer timely energy services to their citizens. **18 pilot projects** have been developed and implemented in **18 municipalities across SEE**.

- As a result of joint efforts of the ORF-EE and the Public Dialogue Initiative, first contact and collaboration between the SEE members of parliament and the Energy Community has been established. This led to the creation of the **Parliamentary Panel within the Energy Community**, represented by members of parliaments of contracting parties, which include the SEE countries.

- Through implementation of various activities and events, including the international Energy Development Democracy Conferences and Energy Days, a **platform for exchange of know-how and experiences**, and further collaboration, between SEE countries and relevant regional, and international actors in the energy sector, is secured.



We continue to seek additional support and expert contribution for our Balkan Green Energy News project. If you want to partner with us please

**GET IN TOUCH**

# SERBIA

## LED lighting, solar-powered irrigation funds granted

October 26



Provincial Secretariat for Energy and Mineral Resources of Vojvodina said it decided on applications for grants to co-finance projects for utilizing solar energy in irrigation systems and for energy efficient lighting in municipalities and cities.

The funds for irrigation are intended for registered farms in Serbia's northern province and can be used for purchasing new solar-powered pumps and other necessary equipment. Users will have the possibility to use the grant to finance energy efficient gear for utilizing solar energy for irrigation while reducing costs, decreasing dependence on import fossil fuels and enhancing the level of energy independence, the documents said. Fourteen individual farms are entitled to between RSD 564,000 (EUR 4,690) and EUR 5,810 each.

The lighting project had a budget of EUR 182,800, with a maximum of EUR 41,600 per user. The City of Subotica and five municipalities were granted between EUR 19,940 and EUR 39,000, the secretariat said. Municipal authorities were able to apply for replacement of existing systems or introduction of efficient lamps and control equipment.

## Power sector reform financed with EUR 200 million

October 30

The European Bank for Reconstruction and Development said it is supporting a comprehensive reform programme for the power sector in Serbia by extending a EUR 200 million restructuring line to

Elektroprivreda Srbije (EPS), a state-owned utility that generates, distributes and supplies electricity.

The sovereign-guaranteed loan will help EPS restructure its balance sheet and support its recovery after last year's devastating floods, the bank said on its website. It will also help the company reach long-term development objectives such as commercialisation, raising standards of corporate governance and improving energy efficiency, the article adds.

EBRD's financing will support further reforms in Serbia's energy sector and will help achieve energy market liberalisation and to deepen regional integration in the Western Balkans by stimulating cross-border energy distribution and trade, according to the statement.

*“Berg: By refinancing liabilities from the time of the floods, the management will be in a position to press forward with a vision for a more efficient company.”*

The programme will be implemented in cooperation with the Government of Serbia, alongside the World Bank and the International Monetary Fund, as part of a wider national fiscal consolidation drive. „We believe our financing will make EPS more efficient. We are pleased to be working on the modernisation of the company, increasing environmental and social standards and corporate governance. We see a lot of potential to further develop EPS as a commercial company and it is important EPS continues to implement the reforms started over the past year or two,” said Nandita Parshad, EBRD's director for power and energy.

„EPS needed to respond urgently last year to the unprecedented and catastrophic floods which hit Serbia. This put huge strains on EPS and we commend the resilience demonstrated by the company and management at that time. This loan is hopefully the final step to help EPS recover from the damage, and by refinancing liabilities taken at the time, management will be in a position to press forward with a vision for a more efficient company”, added Daniel Berg, the bank's director for Serbia.

„We're delighted to be working with our long-standing partner EBRD. A lot of hard work lies in front of us, but we are committed to making EPS a modern, efficient and competitive regional leader in the energy sector,” said Aleksandar Obradović, general manager of EPS.

Since the start of its operations in Serbia, the EBRD has invested over EUR 4 billion in over 190 projects across the country. The bank invests in the financial sector, industry, commerce, agribusiness, energy and infrastructure, the article added.

## Vojvodina's parliament to host green energy event

November 2



Photo: Assembly of Vojvodina

The Assembly of the Autonomous Province of Vojvodina said it will organize an international conference on renewable energy sources in March next year. The event will gather officials from the region and energy experts from whole Europe, the Serbian institution said on its website and added partners from the **Assembly of European Regions will participate.**

The agreement on hosting was reached in Winchester, England, after a proposition by Milivoj Vrebalov, deputy speaker of the provincial parliament. At the international organization's gathering he told the energy committee the conference **Geothermal Energy Days 2015**, organized in Vojvodina's capital of Novi Sad in May, aims to become a regular event. Only 1.7% of geothermal capacity is being used in the province, and its officials want to reveal more on other renewable energy sources as well, Vrebalov said. „I remind you that this year, after the conference was held, French ESG group from Strasbourg decided to invest in geothermal energy exploitation in the vicinity of Kikinda,” he underscored.

## Italy invited again to HPP projects on Drina

November 4

A bilateral committee was recently formed by Serbia and Bosnia and Herzegovina with the aim to develop three hydropower plants (HPPs) with and overall

capacity of **320 MW in a project worth EUR 870 million**, Večernje novosti newspaper's portal said. The two countries also cooperate with Montenegro to be connected by power line Bajina Bašta – Višegrad – Pljevlja. Serbian energy minister Aleksandar Antić said that Italy, which is seen as an investor in the construction of HPPs on the middle section of the river Drina, was invited in September once again to join.

The facilities in question are Dubrava, Tegare and Rogačica, which should generate 1,200 GWh per year, where Italy would participate with 51%, Serbia's share would be 12.25%, and BiH would own the rest. There is also a plan for the HPP Buk Bijela upstream, with the capacity of 150 MW, for 400 GWh per year. Czech partners are interested in investing in HPPs Kozluk and Drina 1, 2 and 3, which will be located downstream, Antić said.

**“Rajaković: Power generating facilities of Serbia and BiH were designed to work as one system.”**

Nikola Rajaković, professor at the Electrical Engineering Faculty in Belgrade, told the Serbian newspaper that the power generating facilities of the two countries were designed to work as one system. They are complementary, as most of them were made while it was still one country, so experts recommend organizing a unique dispatch centre, to achieve savings and bigger production, he said.

The interconnection project has a new feasibility study. Serbia will participate with EUR 48 million and it expects to get half the sum from European Union's funds. Rajaković says the construction of the power line should start in 2018.

## Two mini hydro projects need no impact assessment

November 4

The Ministry of Agriculture and Environmental Protection said there is no need for environmental impact assessment for small hydropower plants Topli Dol 1 and Selište.

The first system should be installed **on Rakitska river within Stara planina nature park** in the municipality of Pirot in Serbia's southeast. The expected capacity is 350 kW, and the developer is Gornjak d. o. o. from Belgrade. **The same company also filed for Selište facility of 500 kW on Kaluđerska river in Pirot.**

Both developers are obligated to apply all procedures and measures prescribed by law and observe environmental standards for their activity, respecting deadlines, the documents said. The measures include protection from erosion, minimum water flow, and enabling migration of fish. The nature park is a significant habitat of butterflies, plants and the brown trout.

## Serbian, French companies promote low-carbon economy

November 5



To develop green economy means to adjust our energy production, adjust our settlements, our vehicles, our public facilities, our habits, in order to achieve **more savings in energy and natural resources**, said Christine Moro, ambassador of France to Serbia.

At an event in the country's embassy in Belgrade about the possibilities of green economy for the decrease in greenhouse gas emissions, she said more than 1,122 French companies, including 75% of constituents of the benchmark stock market index CAC 40, declared their pledges in relation to climate change mitigation. Some of them had representatives at the gathering and they showed examples of technology advancement and of the reduction in emissions of greenhouse gasses.

**“More than 1,100 French companies, including 75% of constituents of the benchmark stock market index CAC 40, declared their pledges in relation to climate change mitigation.”**

The companies, which are active in Southeastern Europe, presented their expertise and products related to sustained development and climate change mitigation. Veolia prepared its solutions for energy diversification and its advantages for the industry and the environment. Electricité de Strasbourg Géothermie and IEL shared their views of the position

of geothermal energy in Serbia's transition in the field. Representatives of Lafarge spoke about challenges in concrete industry and about switching from fossil and mineral fuel. Schneider Electric prepared a presentation on intelligent cities and the use of technology for the fight against climate change.

EDF-Dalkia showed its experience on district heating and renewable energy sources, while Saint-Gobain presented a programme on sustainable construction.

Stana Božović, state secretary in Serbian Ministry of Agriculture and Environment, said the concept of green economy supports development and equality and that it creates jobs. “We have to move towards renewable energy sources to protect the non-renewable ones, because green economy is the way towards the eradication of poverty,” she said.

Belgrade city manager Goran Vesić said there are several French companies participating in tenders, including the one for the **Vinča landfill and waste management**. He stressed he expects a public call for procurement and installation of public lighting in Serbia's capital to be placed next year.

The conference was organized in cooperation with the French-Serbian Chamber of Commerce, the Serbian Chamber of Commerce and Industry and the Chamber of Commerce of Green Serbia. The Embassy of France and the French Institute in Serbia were **active in preparations for COP21**, and it organized **a series of events throughout Serbia** this year, promoting the issue of climate change.

## Kragujevac gets funding for recycling centre

November 5

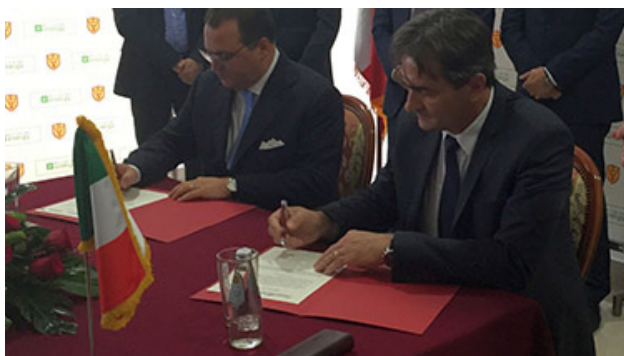
Stana Božović, state secretary in the Ministry of Agriculture and Environmental Protection, Radomir Nikolić, mayor of Kragujevac, and Radoslav Matić, head of local waste utility JKP Čistoća, signed the annex of the contract on the construction and equipment of the city's recycling centre. **The project is worth RSD 45 million (EUR 373,300)**, Kanal 9 TV said.

The construction of the facility is the first step of the introduction of a waste management system, Nikolić said and added the plan is to build two to three such centres on the city's territory to resolve the issue of gathering, selection and dumping. This is a pilot project, funded by the responsible ministry – from the project design to commissioning, so the City of Kragujevac has no investment, except that the recycling centre will be built on land owned by JKP Čistoća, he underscored.

Božović said EUR 24,500 from the project's budget will be used for the production of documentation. Matić said the project is already prepared and that some segments of construction already commenced, while it is expected that the construction permit will be issued soon. The equipment will be worth EUR 125,000.

## Building Energy to start biomass power project

November 6



The construction of a biomass power plant in Kruševac was announced by Building Energy from Italy and the City of Kruševac in central Serbia. First such project combining electric and thermal energy in the country will have an installed capacity of respectively 4.8 MW and 20 MW and will generate 38.4 GWh of electric power and 86 GWh of thermal power per year.

The development of the **project, worth EUR 27 million**, starts from a memorandum of understanding. The plant will be fuelled by woodchips from waste material from Serbian woods, according to Building Energy's statement. Thermal energy operation is facilitated by a ten-year agreement with the local thermal power plant. The city has about 110,000 inhabitants. The sale of electric power will be regulated by a contract with the national utility EPS, according to the Serbian feed-in-tariff rules.

The project will create 70 jobs during the plant construction and 40 more positions for plant management and maintenance activities. In addition to these, other jobs will be created from satellite activities, such as the woods cleaning and the biomass transportation to the plant, the press release said.

Savings from emissions of carbon dioxide amount to 38,400 tons per year, achieved through both higher cycle efficiency and the reduction in the use of carbon as the energy source of the current teleheating, the company stated. The end of construction works and the beginning of electrical and thermal power production is expected for the winter of 2017/18.

Building Energy has been present in the Balkans market since 2014 with its offices in Belgrade, from which it manages and coordinates the development of its projects in Serbia, Croatia, The Republic of Srpska, Romania, Montenegro, Poland, Ukraine, Belarus, Azerbaijan and Armenia. „We are happy to develop, with the support of the City of Kruševac, the country's biggest plant combining electrical and thermal power in the renewables sector,” said Paolo Rossi, managing director for Eastern Europe. „**The high availability of woodchip biomass** in Serbia, together with our know-how and experience in the use of diversified technology will allow to begin a modernization process, by substituting the current thermal power plants, fuelled by fossil fuel, contributing to align the country to the European standard of carbon dioxide emissions.”

“*Thermal energy operation is facilitated by a ten-year agreement with the local thermal power plant.*”

Building Energy is a multinational company operating as global integrated IPP in the renewable energy industry on four continents, the statement adds. The company is vertically integrated on the value chain, from the development of projects to the sale of energy. The company said it has over 2.9 GW and generative assets being built over the next two years for more than 500 MW (the near notice to proceed and backlog projects) in the pipeline.

## Reservoir adds capital for HPP Brodarevo

November 6

A non-brokered private placement financing of CAD 1 million (EUR 700,000) was completed by Reservoir Capital Corp. The company said EUR 0.35 units are comprised of one common share and one half of one share purchase warrant. Each entitles the holder to purchase one common share for EUR 0.53 for a period of five years, the release adds. If, after four months from closing, the closing price on the TSX Venture Exchange in Canada exceeds EUR 0.63 for a period of 30 consecutive trading days, the company may, by notice and news release within two trading days, accelerate the expiry of the warrants to the 20<sup>th</sup> trading day after such 30-day period, the statement said.

The company said it paid finders' fees of 5% in respect of subscriptions from introduced investors, the press release on Reservoir's website said. **Pro Group members purchased 150,000 units**, the company stated. The shares, and any shares issued on the

exercise of the warrants, are subject to a restricted resale period under Canadian securities law and exchange policy until March 7, 2016. **The proceeds will be used to support permitting work** on Brodarevo hydroelectric project in Serbia and for general corporate purposes, the company said.

## Procurement of electric buses initiated in Belgrade

November 12

Serbian capital's mayor Siniša Mali announced a public call for procurement of five electric city buses and stated Belgrade will be **the first in the region with such vehicles**. In his words, the contract may be signed within a month, and the buses should be in operation by the middle of next year, RTS said.

The deadline for delivery is 150 to 250 days from when the contract is signed, the mayor said. The line in central part of the city has already been determined, and the vehicles will have the capacity of „at least 80 passengers“, Mali said. The system includes fast charging within ten minutes and the range of 20 kilometres, while storage of energy will be conducted with batteries or supercapacitors, the report said.

The solo low-floor vehicles will be purchased in cooperation with the city's public transportation operator and the secretariats for environmental protection and transport, local authorities said.

## Serbia's first wind park launched at Kula

November 12

MK-Fintel Wind a.d. officially opened its 9.9 MW wind power plant in the country's northwest, after **an investment of EUR 15 million**. Energy minister Aleksandar Antić said on that occasion that three directives will be adopted soon to define the new model for the power purchase agreement (PPA) in the field of renewable energy sources, with the aim to increase security of investment, portal EurActiv reported. According to Energy Community's assessment, Serbia is late in reaching its target increase in the share of green energy.

Antić stressed Serbia will manage to lift the participation of renewable energy sources in final consumption from 21% to 27% by 2020. By April, another MK-Fintel's wind power plant of 6.6 MW will start to operate near Vršac, in Serbia's northeast, he added at the ceremony in the municipality of Kula. There are permits for 780 MW of new capacity, out of

which 500 MW are for wind turbines, the minister said and underscored that the price of electricity from this type of power plants is 9.2 euro cents per kilowatt, but that households pay six euro cents, and that the rest is subsidized by the state.

The venture company of Italy's FintelEnergia Group SpA and MK Group from Serbia started the construction of the Kula facility in February. **Its three Vestas turbines** with blades reaching a height of 178 metres will be able to generate 27 GWh per year, equivalent to the needs of 8,000 households, the company said.

## Biomass, biogas CHP projects get grants from GEF

November 13

Mining and energy minister Aleksandar Antić signed grant contracts with representatives of six companies for construction of biomass- or biogas-fired combined heat and power (CHP) facilities in **the total value of USD 1.6 million** (EUR 1.49 million), following a public call by the ministry. It said three facilities will be installed in Bač, and one each in Aleksinac and near Alibunar and Zrenjanin. Antić said **overall power capacity is 6.32 MW**, and that yearly generation is expected to be 47 GWh a year of heat and about the same amount of electricity. Total investment is EUR 21.15 million, according to a statement on the ministry's website.

Evaluation commission of representatives of the aforementioned and the Ministry of Agriculture and Environmental Protection of Serbia worked with the technical support and the participation of the observers from United Nations Development Programme (UNDP), the organization said.

Projects were evaluated according to the criteria of environmental viability of the fuel, level of development of the region where the investment is made, how modern the applied technology is, efficiency and cost-effectiveness of the plant and full utilization of technical potentials, the statement said.

**“Individual projects get up to 15% of investment value, or the maximum of EUR 256,000, as long as total project investment value exceeds EUR 1.18 million.”**

Grants are provided **through the EUR 28.42 million project** 'Reducing Barriers to Accelerate the Development of Biomass Markets in Serbia' financed by the Global Environment Fund (GEF) and implemented and co-funded by UNDP, in cooperation with the ministries. Individual projects get up to 15%

of investment value, or the maximum of EUR 256,000, as long as total project investment value exceeds EUR 1.18 million. Thirty percent of the allocated funds will be awarded as the contracts are signed, and the remainder will be paid after the investment is complete.

UNDP's energy portfolio manager Maja Matejić said the organization recently prepared an energy efficiency project with the Ministry of Mining and Energy. The endeavour is worth EUR 2.33 million and is also funded by GEF, for a total investment of EUR 18.63 million. It is based on efficiency legislation's implementation at the local level, she added.

## Action plan for Belgrade won't remain on paper

November 19

Citizens will be informed every year on the implementation of measures from the Assessment of Vulnerability to Climate Change and the Action Plan for Adaptation, Belgrade city manager Goran Vesić said **at the presentation of the document**. He underscored the authorities will not let the plan become a dead letter. Vesić reminded that Belgrade's assembly **adopted the plan in October** as the first city from the region having action plan for climate change adaptation in place.

Jakob Doetsch, representative of German Development Cooperation – GIZ, said it was good to complete the plan before the United Nations Climate Change Summit in Paris – COP21, which starts in the end of November. He added the German government set climate change as the biggest priority and that it ranks second in the world by donations for action in the area of climate change.

Virginie Manfroni from the Embassy of France in Serbia said the plan is an important step both locally and globally as it proves that the country's municipal authorities are very dynamic and proactive in the field of climate change. She added Belgrade took the lead.

Belgrade's environmental protection secretary Goran Trivan stated Serbia's capital is the only one in the region with a strategy for reforestation, and that the World Bank declared its waste management plan as one of the best.

## Belgrade's power distribution replacing 20,000 meters

November 25

The procedure of receiving offers is being completed on November 26 for the installation of 20,000 power meters in Belgrade through a public call. EPS distribucija, the public operator, **changed the terms since publishing the need for 25,000** single- and three-phase devices, while Feman d. o. o. from Jagodina, one of the potential bidders, filed for rights protection.

The open procedure has the lowest price as the main criterium, and a longer warrant as the secondary rule. The documents show the decision is to be made within 25 days from the opening of offers. The procurement, filed as 253/2014, includes a participation fee of RSD 80,000 (EUR 663) for an offer of up to EUR 663,000, or 0.1% of the price if it is bigger than that sum.

State-owned utility EPS is using **an EUR 80 million loan** from the European Bank for Reconstruction and Development and the European Investment Bank for procurement within the EPS Metering project.

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## EBRD moves towards tender for Kostt upgrade

November 3



Kostt, the electricity transmission system operator (TSO) in Kosovo, intends using the proceeds of a loan from the European Bank for Reconstruction and development to enable achieving full compliance with the N-1 electricity transmission grid security criteria, the bank said on its website. This is a key technical requirement for Kostt to join the European Network of Transmission System Operators for Electricity (Entso-E), which seeks to promote market integration and transparency in electricity transmission. Specifically, the loan will improve the stability and reliability of Kosovo's power system; reduce technical losses; and improve the TSO's ability to **manage a liberalised market system**, according to the report.

The proposed project has a total estimated cost of about EUR 36 million to be financed by EBRD and Kostt, and will require the procurement of goods, works and services. These are supply and installation of GIS substations of power transformers, and transmission lines and cables.

The contracts will be tendered through EBRD's Client E-Procurement Platform (ECEPP). The bank invited suppliers and contractors wishing to participate in goods, works and services contracts.

## Workshop held about one stop shops for green energy

November 5

With support from the Repower-Kosovo project, funded by United States Agency for International Development (USAID), a workshop was organized on

the establishment of a one stop shop to support the development of renewable energy sources projects, Ministry of Economic Development reported on its website.

The event was held with the aim to present main challenges faced by project developers in Kosovo, and to review best international practices for elimination of barriers for endeavours in the field of renewables. **The working group, comprising main stakeholders** of the energy sector, including, other than the ministry and the Energy Regulatory office, other institutions responsible for the energy sector, such as the ministries of environment and spatial planning, trade and industry, and agriculture, forestry and rural development, electricity transmission operator Kostt, the Kosovo Electricity Distribution and Supply (KEDS) and the Kosovo Electricity Supply Company (Kesco), discussed thoroughly on steps that an investor needs to undertake in order to develop a green energy project. For the most part, participants agreed that despite the successful work of all individual institutions, the sector could benefit from better coordination of all involved stakeholders, according to the ministry's statement.

*“Despite the successful work of all individual institutions, the sector could benefit from better coordination of all involved stakeholders.”*

Deputy minister of economic development Besa Zogaj-Gashi emphasized that the support to economic development through the promotion of clean energy represents one of the government's main objectives. It will support the working group in improving coordination of relevant institutions and accelerating projects, in order to ensure that Kosovo fulfills objectives related to the share of energy from renewable sources in the final gross energy consumption, as defined in the Energy Community Treaty, she said.

# MONTENEGRO

## EPCG's quarterly profit falls by almost one third

October 31



State-owned utility Electric Power Company of Montenegro (EPCG), based in Nikšić, concluded the third quarter with a profit of EUR 12.69 million, 30.4% less than from the corresponding period of last year. The financial report published on Montenegroberza's website revealed expenditures in Elektroprivreda Crne Gore a. d. rose 5.4% to EUR 170.65 million. Material accounted for EUR 38.7 million, while salaries, imbursement and other outlays were valued at EUR 33.82 million, and amortization and reservations cost EUR 32.35 million. Total assets at the end of September were EUR 1.2 billion, 1.6% more than a year before, portal CdM reported.

“Dan daily paper said the company's data shows total debt for consumed power amounted to EUR 187 million.”

Short-term reservations and liabilities were EUR 112.5 million, while the long-term category was valued at EUR 93.25 million. Delayed tax obligations were EUR 44.3 million, according to the financial results.

Dan daily paper said the company's data shows total debt for consumed power amounted to EUR 187 million. Households participated with EUR 137 million, while other categories and companies accounted for the rest, CdM reported.

September accounts have been discounted for regular payers – as much as 45% of households pay 5% and 10% less due to regular settlement of their bills, EPCG explained. The company stated it has understanding for the socio-economic environment, and that campaigns are aimed at facilitating the repayment of debts for all categories of consumers.

## Government gives no guarantees for large HPP projects

November 2



All arrangements are possible for the construction of hydropower plants (HPPs) on the rivers of Morača (238 MW) and Komarnica (168 MW), under the condition that there are no state guarantees, according to Montenegro's economy minister Vladimir Kavarić.

In an interview to Pobjeda newspaper, he said interest was shown by investors from China, Turkey and Slovenia. „Recently we signed a memorandum of understanding with China's Norinco International Corporation Ltd., in relation to these two projects. On my last visit to Slovenia, I signed a memorandum of understanding with Turkey and Slovenia, also about the cooperation on the projects of HPPs Morača and Komarnica,” Kavarić said.

The minister stated there are currently 21 concession contracts for 41 small hydro facilities worth EUR 109 million, with a total capacity of 72 MW and a yearly generation of 244 GWh. Seven plants are already built, adding 10.2 MW and a potential of 40 GWh a year, he said and added public consultations are ongoing for three more water streams, to be auctioned next year.

Earlier, non-governmental organization Green Home said the planning for small hydropower systems is unsustainable. Local population should be included and informed on technical solutions, the amount of water to be used, and the locations, especially because there is no cadastre for the three rivers and because transparency and the environment are important, it said. Green Home demands a team of experts to make sure that only the streams with all necessary aspects covered are included, not only the energy issue.

## Consultant needed for municipal energy efficiency

November 6

The Ministry of Economy announced a public invitation for consulting services for the establishment of a framework for improving energy efficiency in the units of local self-government. The project filed under 01-2404/6 is worth an estimated EUR 35,000, value-added tax included, and the deadline for applications is November 30. The invitation is published on the website of the Public Procurement Administration.

Bearing in mind the lack of technical capacity and financial resources in some Montenegrin municipalities, the ministry has decided to offer them support in the fulfillment of the obligations stipulated by the Law on Efficient Use of Energy, the announcement said. The project will be implemented in nine smaller and four larger municipalities: Berane, Bijelo Polje, Nikšić and Pljevlja.

Assignments include database and reporting system, analysis, training and determination of measures for 122 buildings with 89,867 square metres, 17,942 public lighting and 555 measuring units, and waste water systems and water supply for 67,129 users.

*“The project will be implemented in nine smaller and four larger municipalities: Berane, Bijelo Polje, Nikšić and Pljevlja.”*

The offer is valid for 90 days after applications are publicly opened, but the budget funds need to be spent by the end of the calendar year, so it is necessary to complete the procedure by December 31, the documentation states. Participating companies must prepare a guarantee for immediate payment of 2% of the public procurement's estimated value. The deadline for implementation is 213 days from the signing of the contract. The lowest price is the main criterion, followed by quality.

## Analysts: A2A profits from staying in EPCG

November 9

Continued cooperation with the Government of Montenegro and remaining of Italian company A2A in power utility EPCG has been assessed positively by Italian economic analysts, who believe the company will be profitable, writes daily newspaper Dnevne novine.

The article, republished by portal CdM, said it took almost a year to conclude a deal, so speculations and doubts arose. A2A will receive dividends and have a put option of EUR 250 million, EUR 330 million less than previously estimated, economy analysts from investment banking firm Equita stated. The same opinion is shared by analysts from Banca IMI, the article said. The investment bank's analysis added that the new agreement gives A2A a stronger decision-making power and increased profits.

*“Banca IMI says the new agreement gives A2A a stronger decision-making power and increased profits.”*

Bank Akros saluted the continued cooperation, but also stressed that the put option should be activated only after exhausting all other possible options for agreement. The share in EPCG was paid EUR 460 million in 2009 and the put option should be the last salvation, the analysis said. The government and A2A should, by the end of the year, enter into a new shareholders' agreement regarding further management. A2A owns 41.7% while the government has 57% stake.

## Malta's state-owned company to build Možura wind park

November 11



„We are pleased that a reputable company from an EU country is interested in investing in the energy sector and wind power plant projects in Montenegro,” Minister of Economy Vladimir Kavarić said following his meeting with Minister for Energy and Health of Malta Konrad Mizzi, the Government of Montenegro said on its website. The transfer of the agreement on the lease of land and construction of the Možura wind power plant was conducted in Podgorica between Montenegro and Enemalta Plc, a company majority-owned by the Government of Malta. „Today, we have been given assurances that the construction will start in March 2016 and is expected to be completed 24 months after the commencement of the works,” Kavarić explained.

Mizzi said he believes this is an important step in boosting ties between Malta, a member state of the European Union, and Montenegro, a country aspiring

to join the bloc. „Malta supports Montenegro’s membership in EU and we are impressed by the country’s potential and the economic progress it has made. We are excited to start the development of the wind power plant, which will have the latest technology in the field of wind turbines,” he underscored. He stressed this is an important step for his company in terms of expanding it abroad, and he welcomed the cooperation with the country that has similar economic indicators as Malta. „We look forward to making this project a joint success for both countries,” Mizzi concluded.

The contract provides for the construction of a wind power plant of installed capacity of up to 46 MW at the Možura location. Enemalta has submitted a bank guarantee in the amount of EUR 1.5 million. It is a public company with principal activity in manufacturing, importing, distribution and supply of electricity, as well as import and distribution of petroleum products. Enemalta employs 1,500 people. A third of the capital is owned by Shanghai Electric Power (SEP), and its subsidiary – China Power Investments, which is marked with AAA credit rating, according to the statement by the Government of Montenegro.

On July 5, 2010, Montenegro signed an agreement on the lease of land and construction with the consortium Fersa & Čelebić, consisted of Fersa Energias Renovables SA of Spain and Čelebić d. o. o. based in Podgorica. The agreement envisages the lease of the land for 20 year. After necessary documentation had been provided, the Ministry of Sustainable Development and Tourism issued a building permit on December 15, 2014. However, **the investors decided to transfer rights and obligations**. The government approved the transaction on September 3 this year.

## Italian town gives permission for power cable

November 12



Italian company Terna, linking the country with Montenegro via an underwater power cable, has

previously published scientific studies that showed the project was designed so as to not endanger the environment, which was also recognized by officials of the Italian town of **San Giovanni Teatino**, who gave the green light to continue with works, Dnevne novine daily said.

The local council approved a draft agreement with Terna which provides for setting up transmission lines and associated power equipment through several settlements of their town, portal CdM reports.

“**Settlement of terrain for the construction of transmission lines and installation of energy equipment is worth EUR 3.4 million.**”

The deal was reached after months of negotiations launched by the company, Italian media said. Terna pledged to finance the settlement of terrain for the construction of transmission lines and installation of energy equipment. The value of works amounts to EUR 3.4 million. After getting **approval from Croatia** for the country’s waters, there are no more obstacles, the article said.

According to Dnevne novine, it is expected that installing of 250 kilometers of power cable towards Montenegro will be continued soon, after which it will finally be connected to the substation whose construction began **in Lastva Grbaljska near Budva**.

In late March, **Norwegian company Nexans** installed 140 kilometres of one of the two power cables.

## HeSaLight wins public lighting deal in Herceg Novi

November 17



A company from Roskilde in Denmark was selected for the EUR 2.7 million project of public lighting overhaul for the Municipality of Herceg Novi in Montenegro’s southwest. HeSaLight A/S was the only bidder for the works with a deadline for implementation of 90 days and a warranty of ten years. The accepted price

includes value-added tax. **Payment is divided into 12 tranches every six months.**

The public procurement contract is for the replacement and installment of six thousand lights with LED lamps from 70W to 400W, including casings and wireless control, as well as maintenance and operation. The selected company guarantees electricity consumption will decrease by 70%.

The public call filed as 02-2-443-3/15 was published in June, and the procedure has been delayed due to various reasons including complaints.

HeSaLight was selected for public lightning overhaul in the municipality of Plav at the beginning of the year, in a project worth EUR 214,800.

## Co-funding for solar systems in summer pasture lands

November 23

After the deadline has been postponed by three days, invitation was closed for offers in a public procurement **for purchase and installation of photovoltaic panels and equipment** in summer pasture lands, according to the Directorate for Energy Efficiency. Montenegro's Ministry of Economy and the Ministry of Agriculture and Rural Development have continued with the implementation of the project in order to provide better living and working conditions for large number of households and in order to create conditions for increasing the number of farmers there, the announcement said. **The first procedure** was aborted in October.

The invitation number 01-2328/6 is published on the website of the Public Procurement Administration.

**“The budget funds need to be assigned by the end of the year, so it is necessary to select the company in that time.”**

Project Solarni katuni, worth an estimated EUR 55,000, including the value-added tax, was launched to finance 70% of the overall expenses, while the users will participate with the remainder. The offer is valid for 120 days after offers were publicly opened on November 23, and the applicants needed to file guarantees for immediate payment of 2% of the estimated value of the procurement. Still, the budget funds need to be assigned by the end of the year, so it is necessary to select the company in that time, the procedural documents say. The deadline for

implementation is 365 days from when the contract is signed. The lowest price is the main criterium, followed by quality.

All four offers for the first Solarni katuni project, **filed as 01-1837/6 and launched in April**, were inadequate, so the procedure was annulled.

## GIZ implements four energy efficiency pilot projects

November 25



Within the regional project 'Energy Efficiency in Municipal Associations', German Development Cooperation – GIZ has implemented four pilot projects in cooperation with the Union of Municipalities of Montenegro.

In Berane, a heating boiler fuelled by wood pellets has been procured and installed, and the heating system was repaired in the daily care centre for children with special needs. GIZ said that in Nikšić it has procured 36 LED lamps for public lighting in the main city street, while the municipality has procured 10 additional LED lamps. In Danilovgrad, GIZ has supported electrical and installing works of the geothermal heating pump in the Cultural centre. This is the first public building which uses this renewable energy source.

In the capital city of Podgorica, windows have been replaced on the building of the Secretariat for Urban Planning and Sustainable Development, GIZ said. For all pilot projects, municipalities provided their own funds, and the works will result in savings in local budgets, the press release said.

The projects have been implemented by GIZ and its Open Regional Fund for South-East Europe (GIZ ORF-EE) and financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Swiss Agency for Development and Cooperation (SDC).

# CROATIA

## Slavonija DI commissions biomass CHP plant in Osijek

October 23



After two months of operation, a combined heat and power system of 8 MW and 4.6 MW, respectively, was opened in eastern Croatia, portal Vecernji.hr reported. The facility worth EUR 17 million was installed in Osijek by Slavonija DI d. o. o., flooring and veneer industry headquartered in Slavonski Brod. The plant has twenty employees and is partly utilized for the production of steam, the company's chief Martina Ravlić Janković said. The power plant, which will use waste from production, is operated by subsidiary Slavonija OIE.

Agriculture minister Tihomir Jakovina, who laid the foundation stone two years before, said wood industry has had knowledge and adaptation skills even in the time of crisis, and that 90% of the knowledge in the development of the project was domestic.

The new CHP plant, after the implementation of a system of 3.3 MW of electricity and 6 MW of heat in the nearby village of Strizivojna, will bring savings and profit, and cover the whole production process, from logs to power, Ravlić Janković said. The company generates 90% of its earnings from export.

## BDI-designed biodiesel plant may get funding from EIB

October 26

The European Investment Bank said it is considering financing a multifeedstock biodiesel plant developed by Biom d. o. o. from Zagreb. The planned facility of 100,000 tonnes (30 million gallons per year) could receive EUR 38 million. The plant will be built by

Austria-based BDI – BioEnergy International AG. The bank said the overall cost of the project is EUR 50 million.

In 2013, Biom and BDI agreed on a deal of EUR 20 million for Croatia's first biodiesel plant of the kind. Animal fats and used cooking oil are planned as the basic commodity. In its 2014 year-end financial statements, BDI-BioEnergy International noted the project was delayed due to difficulties in gaining project financing and regulatory approval, Biodiesel magazine reported on its website.

The promoter prepared an environmental impact assessment (EIA) in 2013 and received the main environmental permits for the implementation of the project, EIB said. The project will be carried out inside an existing industrial port in Croatia's south, close to a site of nature conservation. Full environmental details will be verified during the project's due diligence, the document said. A concession contract was signed last December by Biom and the Ploče Port Authority.

*“The project had been delayed due to difficulties in gaining project financing and regulatory approval”*

The promoter has been assessed by the EIB as a private company which does not operate in the utilities sector and does not have the status of a contracting entity, thus not subject to European Union's rules on public procurement. The details will be verified during the project's due diligence. Before financing approval, and before loan signature, projects are under appraisal and negotiation.

## Solar tobacco dryers cofinanced by state fund

November 2

The Environmental Protection and Energy Efficiency Fund (FZOEU) approved the Sol Siccus Tobacum project for direct cofinancing of the installation of tobacco drying systems which use renewable energy sources. The endeavour was developed by Virovitica–Podravina County's Regional Development Agency (Vidra).

According to a report on the county's website, the investment is worth HRK 6 million (EUR 790,000), the fund participates with up to 80%. This area accounts

for 90% of Croatia's tobacco production, and the biggest expenses are for energy. The project to install 200 solar tobacco dryers aims to increase the producers' competitiveness, and to encourage them to switch to renewables from gas or heating oil.

Two hundred dryers will get solar panels on roofs, resulting in savings of 30% on energy, which means the investment will pay off in the first year of use, said Tomislav Tolušić, the county head.

## Turkish investor wins geothermal power plant deal

November 3



MB Holding has been awarded a contract to build a geothermal power plant with a capacity of 16.5 MW in Croatia, according to [SeeNews](#). Turboden, Italian-based manufacturer of turbogenerators, said that in September it signed a deal with the company from Turkey which [holds a permit from January](#) to build Croatia's first power generating facility of the kind. The facility will feature a single-axial multi-stage organic rankine cycle (ORC) turbine designed by Turboden, the group company of Mitsubishi Heavy Industries (MHI), the statement said.

„We have selected Turboden among the possible suppliers because they will provide 10% higher revenues by means of optimized solution for our project, together with the reliability of the brand,” MB Holding chairman Muharrem Balat said.

The Velika Ciglana plant will be completed and fully functional by the end of 2016, the press release said. In May, the Municipality of Bjelovar in north Croatia where the geothermal field is located said that the first phase of the power station project is worth HRK 30 million (EUR 3.94 million). Turboden has more than 300 plants in 33 countries.

[Starwood Orman Ürünleri Sanayi AŞ](#) ordered a cogeneration plant in September from turbogenerator developer and producer Turboden, based in Brescia, Italy.

## Wind park ZD2P gets construction permit

November 3



Croatian company Kunovac has received a permit from the Ministry of Construction and Spatial Planning for its wind project with planned installed capacity of up to 48 MW, [SeeNews](#) reported.

The construction of the power plant near the Adriatic town of Zadar, should be [carried out in three phases](#) – the first should see the deployment of three turbines, planned to be installed in the next two phases, official documents posted on the ministry's website indicated.

Total installed capacity for renewable energy generation in Croatia amounted to 365.5 MW as of September 1, 2014, the latest data available on the website of energy market operator Hrote showed. There was 297.3 MW of wind power generation capacity, followed by solar with 30.1 MW and high-efficiency cogeneration plants with 13.3 MW.

Croatia targets a minimum share of renewable energy sources in total final energy consumption of 20% by 2020.

## HEP to start construction of woodchip-fired CHP unit at Osijek

November 6

A building permit for a woodchip-fired combined heat and power plant (CHP) in Osijek was secured by HEP Group, a state-owned energy utility, [SeeNews](#) reported. The company plans to launch construction works in December, the Croatian Ministry of Economy said.

Trial should start in early 2017 with [the EUR 16.25 million](#) power plant seen fully operational by the spring of the same year, the statement said, after economy minister Ivan Vrdoljak visited the site of the future plant. The CHP unit, which will have annual electricity generation of 16.5 GWh a year, industrial

steam production of 32,400 tonnes and thermal energy production of 53.2 GWh a year, will be built at the site of the existing thermal power plant TPP.

HEP group owns and operates over 4 GW of installed generation capacity and 974 MW of heat production, including 25 hydroelectric plants and eight thermal power plants fired by oil, natural gas or coal, the report said.

## PIK-Vinkovci plans 2 MW biogas-fired power plant

November 10



Croatian meat processing company PIK-Vinkovci is planning to build a biogas-fired power plant near the eastern town of Vinkovci, the country's energy regulator HERA said, [SeeNews](#) reports.

The Vinka power plant will have **2 MW of installed electricity generating capacity** and also 2 MW of thermal energy generating capacity, a document posted on HERA's website indicated. The agency has granted the project promoter the status of eligible power producer for a period of 25 years.

## Croatia Residential Energy Financing Facility

November 25

A board decision is expected from the European Bank for Reconstruction and Development for senior loans for a total amount of up to EUR 60 million to financial institutions operating in Croatia, which will lend the funds to individuals or vendors for energy efficiency projects in the residential sector.

Significant challenges remain with respect to energy efficiency in Croatia, EBRD said. There is a significant potential for energy efficiency improvement in the residential sector which is among the largest energy end-users, according to a statement posted on

the bank's website. In accordance with the NEEAP (National Energy Efficiency Action Plan), 34% of the overall energy saving target for Croatia should come from the residential sector.

The facility will generate transition impact by demonstrating the benefits of energy conservation and promoting the expansion of energy efficiency lending to households. It will further demonstrate to commercial banks operating in Croatia the market potential of the sector and foster the mobilization of private sector financing, the release said.

**“ Out of EUR 1.8 million for technical cooperation, 600,000 were allocated from Shareholder Special Fund's budget. ”**

The project will also **promote the development of a market** for energy efficiency technologies, appliances and equipment by stimulating demand through market awareness campaigns and the introduction of an innovative and efficient financing model for high-performance residential energy efficiency technologies.

In addition, the project is expected to transfer and build expertise and skills on several levels. Participating banks will build expertise in assessing the risks and benefits associated with small-scale investments in energy efficiency. Transfer of knowledge and technical skills will further build local expertise in appraising sustainable energy projects and applying best available technologies, EBRD said.

It is envisaged that three banks will participate in the facility. The project is supported by a technical cooperation segment of up to EUR 1.8 million. Out of EUR 1.8 million, 600,000 were allocated from Shareholder Special Fund's budget. Three consultants will support the implementation of the facility. Two consultants have already been engaged for the project preparation phase. Another consultant will execute the implementation support including marketing and general awareness raising activities; support with pipeline development; capacity building for participating banks; support the administration, monitoring and reporting on the facility.



# SLOVENIA

## Share of renewables in buildings to reach two thirds

October 29



To reach the target of reduction in energy consumption of 15% by 2020 and 30% by 2030, compared to 2005 levels, overall investments in buildings should be **EUR 350–450 million a year** or EUR 6.7 billion in total, according to the strategy adopted by the Government of Slovenia, STA said. The document foresees that homeowners will cover three quarters of the outlays, while the private services and public sector will contribute 15% and 10% of the funds, respectively, The Slovenia Times reported.

At least two-thirds of energy used by buildings should come from renewable sources. Emissions of carbon dioxide attributed to buildings would be reduced by 60% by 2020 and 70% by 2030, the article said. This will require insulating and retrofitting between 1.3 and 1.7 million square metres of buildings each year. These are just intermediate targets on the way to the ultimate objective of achieving zero carbon emissions from buildings by 2050, the article said.

## Support payments rise 9% on 4% increase of output

November 11

At the end of September the feed-in system included 3,915 power plants with a combined installed capacity of 428 MW, Slovenian power market operator Borzen said. **The trend of rising support payments continues** in the first nine months of this year, according to the company's report. Total electricity production within the support system increased by 4%.

Payments excluding value-added tax increased 9%, from EUR 101.47 million to EUR 111.75 million from the corresponding period of last year. Power generation in the category rose from 685.26 GWh to 712.14 GWh, and the average support climbed from 14.8 to 15.6 euro cents, respectively, the document said.

Photovoltaic systems held a share of 52.51% of support payments on 32.24% of electricity production, and fossil fuel high-efficiency cogeneration (CHP) facilities got 19.57% of funds on a share of 29.92% in power generation. The ratio for biogas and wood biomass was just under one on support payments share of 11.43% and 10.71%, respectively, but hydropower plants got only 4.89% of the proceeds on 12.68% of total electricity.

**“There were 141 new entrants, out of which 100 are fossil fuel CHP systems, and 16 are solar power facilities.”**

The support system had 210 power generating facilities more year on year. This includes both new plants and those with a change in ownership or support type versus operational support. There were 141 new entrants, out of which 100 are fossil fuel CHP systems, and 16 are solar power facilities with an overall capacity of 741 kW.

The bulk of the EUR 130.88 million of subsidies **for the whole of 2014** went to photovoltaic plants – EUR 62.6 million, followed by fossil fuel plants – EUR 27.7 million. Biogas and wood biomass segments received subsidies of EUR 15.8 million and EUR 14 million, respectively. Subsidies have risen 10% year on year, on a 13% increase in power generation.

Borzen implements public service obligation in the electricity market including basic organization and the activities of the Centre for Renewable Energy Sources and High-Efficiency Cogeneration (RES/CHP).

# BOSNIA AND HERZEGOVINA

## Regulator renews power trading permit for HEP-Trade

October 29

A draft license was granted to company HEP-Trade d. o. o. from Mostar for the activity of international trade in electricity, according to a release by the State Electricity Regulatory Commission (SERC), Brčko District's administrative body. The local self-governing authority officially belongs to both entities that make up Bosnia and Herzegovina. Brčko is located in the country's north. The permit is **valid for five years from December 1**. The decision was made after HEP-Trade filed an application for the continuance of its activity in the market.

The licensee shall have the right to attend meetings of technical committees which give comments during the preparation and changes of the Grid Code and market rules, the document said. It also has the right to be appointed to the technical committee.

Earlier, Danske Commodities BH d. o. o. and Company for Electricity Trading and Sales GEN-I Ltd., both registered in Sarajevo, expressed interest in further power trading. The founder of the first company is Danske Commodities AS from Aarhus, Denmark, and the latter was established by GEN-I d. o. o. from Krško in Slovenia.

## Renexpo brings 70 exhibitors from 17 countries

November 5

At the two-day Second International Trade Fair and Conferences on Renewables and Energy Efficiency, 70 exhibitors from 17 countries presented their business programmes, products and services. Renexpo event in Sarajevo gathered experts, investors, representatives of international institutions, engineers, government and local officials, news portal Novo vrijeme said. „Renexpo fairs and conferences are business-to-business (B2B) and **business gatherings**, which means we enable all exhibitors and project engineers to **come and talk to investors**,” said Julijana Milutinović, public relations manager of the office of company **Reeco for Serbia**, the entity which organized the event.

Conferences 'Energy Efficiency in Bosnia and Herzegovina' within Renexpo were organized by institutions from various levels of government. One of the goals of the event was to present achievements and plans for the implementation of energy efficiency, in the fields of data gathering, laws and regulations, IT instruments, training and long-term learning, as well as to establish synergy between economy, policy and science, **the organizers** said.

## Srpska regulating waste management with new law

November 13



A by-law was outlined, determining the documents needed for applications to import, export and transport waste through the Republic of Srpska. Suggestions will be received by November 28. The deadline for suggestions for the **draft bill on waste management** has finished, according to data on the website of the entity's government, so the document is **going through further procedure**.

In late October, Srebrenka Golić, minister for spatial planning, construction and ecology, met a delegation of the United States Embassy in Bosnia and Herzegovina (pictured), led by Edward Gallagher, head of the office in Banja Luka, Srpska's capital. American officials expressed interest in the ministry's activities in the field of waste management and improvement of the management of national parks. The possibility of **investment in waste management** was announced, the entity's government said. Gallagher stated the American Chamber of Commerce in B&H consists of 70 companies, interested in direct investment, but also in public-private partnerships.

## Works underway to install 3,200 solar panels

November 15



Photo: Solarni Biznis Portal

The government's provisional directive on renewables led to increased interest in this segment recently, and a few years ago entrepreneur Azem Bujak and his Bahen gradnja d. o. o. from Sarajevo built the first solar power facility in eastern Bosnia near Goražde, Al Jazeera reports. The investment of BAM 500,000 (EUR 255,650) was implemented in his home village of Bujaci, where the generated electricity supplies up to 80 households since May of 2013.

Bujak bought land at a selected position in the nearby village of Rešetnica and started an even **larger project on 11,500 square metres**. The power plant worth EUR 1.53 million will have **the capacity of 1 GWh a year** in its 3,200 panels, he said and added the investment could pay out within eight years.

Prime minister of Bosna-Podrinje Canton Goražde Emir Oković and the region's minister of economy Esed Radeljaš visited the site in early November.

## EBRD funds operations of CEZ Distribuție

October 27

The European Bank for Reconstruction and Development said it is supporting the projects of CEZ Distribuție, electricity distribution company in Romania, with a syndicated loan of up to RON 675 million (EUR 153.7 million).

The projects refer to the 2015-16 investment programmes in the distribution network aiming at reducing losses; improving efficiency and installing smart meters; the restructuring of the company's balance sheet in order to optimise its capital structure; and the provision of working capital.

CEZ Distribuție has 1.4 million customers in the region of Oltenia in southern Romania. The company is fully-owned by ČEZ Group, an integrated electricity utility headquartered in the Czech Republic with operations in Central and Southeastern Europe and Turkey. The funding is structured in a EUR 64 million **A loan for the EBRD's own account and a B loan** portion of up to EUR 89.7 million for the account of syndication participants, according to the press release on the bank's website. It is its first long tenor local currency syndicated loan to a corporate in Romania.

**“Patrone: A state-of-the-art electricity network is another step towards unleashing the potential of Romania's economy.”**

The introduction of smart meters and the creation of the basis for smart grids will be another major step forward and lead to higher efficiency for the benefit of the provider, the clients and, of course, the environment, said Nandita Parshad, director for power and energy at the EBRD.

Matteo Patrone, EBRD's director for Romania, added: „A state-of-the-art electricity network is another step towards unleashing the potential of Romania's economy. It is an excellent example of an infrastructure investment which will have a lasting impact and benefit commercial customers as well as private households by rewarding responsible and sensible consumption.”

Martin Zmelik, country manager and president of the Board of ČEZ Romania, said: „We will continue to invest in the modernisation of the distribution grid in

our operation area, as we committed to 10 years ago when we first entered Romania, and to optimise our internal processes in order to provide a high quality distribution service to our clients.”

Romania was the sixth country by volume of EBRD’s investments in 2014, with almost EUR 600 million. To date, the bank has invested over EUR 7 billion in the country and has also mobilized more than EUR 14 billion for these ventures from other sources of financing.

## Timișoara’s renewables research lab second in Europe

October 28



Digi24 television reported that after an EUR 8 million investment, the second renewable energy research laboratory in Europe was recently completed in Timișoara in western Romania.

The researchers are looking for the best way to use solar energy, which they say will ensure the world’s future, according to an article by Romania-Insider. The lab has **more than 20 next-generation devices**, brought in from the Netherlands, the United States, Israel, Germany, Italy and the United Kingdom. The facility also has a microscope, unique in Eastern Europe, which allows image capture at an atomic level. Only Poland has a laboratory with the same performance.

“*The lab has more than 20 next-generation devices, brought in from the Netherlands, the United States, Israel, Germany, Italy and the United Kingdom.*”

The system belongs to the National Research Institute for Electrochemistry and Condensed Matter. The building that hosts the laboratory is energy efficient, as it produces its own electricity through solar panels on the roof, the article said.

## Electricity prices for end-consumers should go down

November 11



Nicolae Havrileț, president of Romania’s energy regulator ANRE, stated the situation allows for lower power prices, Profit.ro said.

„This year we have had a few **positive elements in the electricity supply and distribution sector**, as the electricity consumption went up and the inflation rate evolution was favorable. These two factors combined will definitely bring a positive input in establishing the electricity price for the end consumers,” he explained, Romania-Insider reports.

A price cut by 3% to 5% doesn’t also target green certificates or the cogeneration bonus, so the impact on the electricity bills will be somewhat lower. ANRE has the authority to set the electricity transport and distribution prices, but the price for the end consumers is set by the suppliers, the article said. Any cut in the transport and distribution tariffs, which ANRE has the right to decide, doesn’t necessarily mean that the bill for the end consumer will be lower, said Silvia Vlasceănu, general manager of the Energy Utilities Companies Association (ACUE).

“*ANRE has the authority to set the electricity transport and distribution prices, but the price for the end consumers is set by the suppliers.*”

However, Filip Cârlea, director of the Centre for the Promotion of Renewable Energies and Energy Efficiency (CPEREE), says **the price of electricity could go up by a yearly 3% until near 2025**, adding that production costs by energy sources will converge, regardless of the employed technology. In a recent interview to Agerpress, he stated the renewable energy sector is becoming increasingly competitive compared to conventional technologies and should no longer need financial support by various types of subsidies after 2020. „Meanwhile, the cost of other technologies, like those based on coal, will gradually

go up, mainly as a result of providing the protection of the environment. The price will also increase because the technologies used to produce power will be more expensive," Cârlea said.

## Too much power generation – counterproductive

November 11



Photo: Youtube

Energy storage must become a priority for Romania, which should rather increase the number of its large users among industrial users than export energy, deputy chairman of Romania's Energy Regulatory Authority (ANRE) Emil Calotă said. „It is unacceptable for a country to overgenerate electricity and export it. It is **similar to exporting any other raw material**, timber for instance. Electricity should be used close to the point of use and it would be better for Romania to increase the number of large consumers among industrial users than to export energy,” he explained, according to Romanian news agency Act Media.

“Hydropower plants generated 9% less in the first three quarters, or 13 TWh (27% of the total), due to drought.”

Calotă added that storage and power dispensing stations could be included in a legislative package the transmission operators may submit to ANRE's consideration.

Electricity output in the first nine months of the year rose 4.3% from the corresponding period of 2014, while final electricity consumption advanced 6.3% to 39.2 TWh, Romania-Insider reported.

**Renewable energy output went up by more than 50%**, reaching almost 7 TWh, or 14.3% of total production. Electricity produced in thermal power plants went up by 4.6%, reaching 19.9 TWh (41% of the total) while hydropower plants generated 9% less or 13 TWh (27% of the total), due to drought. Nuclear electricity production was flat at 8.5 TWh (17.6%).

In terms of consumption, local companies used 6.6% more energy in the first nine months compared to the same period of 2014, or almost 30 TWh, and the household consumption went up by 4.3% to 8.9 TWh. Electricity consumption for public lighting increased by a third, to 431 GWh.

Electricity exports went up by 40% compared to the first three quarters of last year, reaching 7.54 TWh. However, despite the production surplus, Romania also imported 10 times more electricity than last year, or 2.76 TWh.

## Society must know climate change intensifies

November 13



The global average temperature has increased over the past 100 years by 0.85 degrees Celsius, and ocean levels rose by 20 centimeters, which seems to be a little, but it is not, says Roxana Bojariu, a specialist with the National Meteorology Administration (ANM) and expert in the Intergovernmental Climate Change Panel, agency Act Media reported.

“As to the climate change in Romania, the country is part of the overall picture.”

„We have reached the conclusion that in order to be useful as specialists we must somehow come out of the guild and explain things so as the society may understand them. The enhanced greenhouse effect is the cause of the current climate change. Without these gases in terrestrial atmosphere, the planet's temperature would have been 33 degrees higher. The problem is what happens when the concentration of these gases increases, which causes the greenhouse effect. The increase in global temperature is the easiest to exemplify (...) Things will accelerate in the future, unfortunately. **In 95% of cases, human actions** have led to the global warming phenomenon. The remainder to 100% may be natural causes, such as ocean acidity. As to the climate change in Romania, we can say that our country is part of the overall picture,” she stated on November 12 at a debate about the United Nations Climate Change Summit to be held

in December in Paris. The event was organized by the Bankwatch Romania network.

She also said that in the period immediately ahead, Romania will face intensified precipitation that will lead to heightened risks of rapid flooding particularly in alpine areas, with tree felling being one of the main reasons behind that.

On the other hand, she said the number of tropical nights is expected to increase in the southern, southeastern and western parts of Romania.

## Market moves more towards solar power

November 16



Photo: Pixabay

Despite having made significant steps towards an accelerated development of its energy market, Romania still has a long road ahead, especially when it comes to establishing a more predictable legal framework, according to an analysis on the Business Review's portal.

Legislation has been harmonised with the European Union's framework in the field. Some of the most significant privatisation processes in this sector have been carried out, including electricity. According to the SEE Energy Handbook 2014 issued by NNDKP, the energy market has been, and continues to be, one of the most attractive sectors for investors, the article said.

**“Ioan: Few companies or households have decided to install solar panels, compared to other European countries.”**

While in the sector of renewables the investors have earlier focused mainly on wind, there has been a move towards solar projects, the analysis adds. For example, the solar portfolio added 350 MW last year, reaching 1,22 GW in total, while solar energy accounted for

about 1.5% of the total power delivered. „The projects that have been developed so far in Romania consist mainly of generating units for retail and trading purposes. By contrast with other European countries, few companies or households in Romania have decided to install solar panels in order to cover their own consumption,” says Andra Ioan, senior project manager at Roland Berger Bucharest office, quoted by Business-review.eu.

The green certificate market is collapsing due to a major reduction in the annual mandatory quota of electricity produced from renewable energy versus the values set out in law: 11.1% compared to 15% in 2014 and 11.9% compared to 16% in 2015, the article said.

## Panels cover up to 3,000 hectares of arable land

November 18

There hasn't been a very large impact and a high rate of occupancy of agricultural land by photovoltaics, according to Zoltán Nagy-Bege from the Regulatory Authority for Energy (ANRE), who insisted this was his personal opinion, Nine o'Clock.ro reported.

„For the time being, we have a little over 1,200 MW installed in photovoltaics, which means 2,500 to 3,000 hectares at most. But strictly from a technical point of view, it is not normal to build photovoltaic farms somewhere away from cities, on agricultural land, away from consumption areas, because through transmission we register losses in the grid, losses for which certificates are offered,” he stated on November 17 at the eighth edition of the energy and efficiency fair Renexpo South-East Europe. Solar farms that were built on agricultural land or unused arable land by the end of 2013 can still benefit from aid schemes, according to law, Nagy-Bege said. However, those that were built on arable land in use on December 31, 2013 can no longer benefit from green certificates.

As a delayed effect, several solar farms still received licensing for production and certification for the aid scheme in 2014, but since the start of this year, the number of these ANRE-authorized solar farms has dropped drastically, he underscored.

Nagy-Bege added that solar farms are still being built on agricultural land only because there still have been licensing requests for solar farms built on unused arable land in 2015, in which cases licensing for production was offered, but certification for the aid scheme was not.

# BULGARIA

## High power prices may result in 100,000 job cuts

November 8



Deputy chairman of the Bulgarian Industrial Association Kamen Kolev told Bloombergtv.bg that with the current power prices, 100,000 jobs may be lost next year, citing an analysis by Ernst and Young, Standart News reported. **The impact on exports will be also very serious**, since the goods consume a lot of energy, said Kolev.

The surge in electricity prices for businesses from August 1 already contracted exports, Cyril Domuschiev, chairman of the Confederation of Employers and Industrialists in Bulgaria, said in an earlier interview for Standart. Electricity prices fell by 2.6% to 2.8% on November 1, but this has not changed much, according to Kamen Kolev. The justification for the symbolic decrease was dictated only by the decrease in the price of natural gas, he added. The supplement continues to be the most expensive for the Bulgarian business – BGN 37 (EUR 18.92) per MWh, and constitutes about 50% of the price of electricity, which is up to EUR 40.91 for the same amount.

From November 1 the price of electricity for businesses fell slightly, while for the domestic users it remained unchanged, according the Commission for Energy and Water Regulation. The change in the electricity price for households was smaller than 0.5%. On the other hand, electricity for small businesses that buy from the regulated market dropped by 2%.

The reason for the reduction is a more than 14% decrease in the price of natural gas in the last three months. The price reduction for the businesses, however, is much less than in the demands of employers. Gas is the main feedstock for heating and power cogeneration facilities, but the 14% price cut in October caused a less than 0.1% drop in electricity

generation costs, Sofia Globe reported. EWRC said that it decided to leave household prices unchanged as a possible safeguard against future gas price increases, although the cost savings could also factor in future price cuts down the line.

## Ministry foresees EUR 62.37 million more in revenue

November 13

Draft budget of the Ministry of Energy for next year provides a good opportunity for undertaking main activities and performing functions, said Bulgarian minister Temenuzhka Petkova at a joint sitting of the parliamentary committee on energy and the committee on overseeing the activity of the Energy and Water Regulatory Commission (EWRC), Focus news agency reported. Both committees discussed the 2016 draft budget of the Republic. Minister Petkova introduced main envisaged parameters. According to her, it is planned the revenues of the ministry in 2016 will amount to BGN 244.26 million (EUR 124.9 million), compared to EUR 62.5 million from this year. There is a trend of recovery and **stabilisation of the National Electricity Company (NEK)**, she said.

“That is one of the basic, maybe the biggest and most serious problem, which is undoubtedly linked with the energy security. Financial collapse of the system would inevitably resulted in insecurity in the energy system. That is why we have fully focused our efforts on seeking possibilities and means for financial stabilisation of the sector,” Petkova said. In her words, recently adopted amendments to the Energy Act were in the same direction. All passed amendments were for stabilising the sector including the decision of the Energy and Water Regulatory Committee to change prices as of August 1, which results are yet to be seen, the minister added.

**“The compensatory mechanism will have to cover the obligations of the National Electricity Company under the long-term agreements, the Renewable Energy Sources Act, and the power plants and heating utilities”**

“The intercompany indebtedness in the sector is indeed very serious. NEK’s obligations to Kozloduy nuclear power plant already run to EUR 70.55 million.

The only possible option to unblock the system and to overcome the intercompany indebtedness is to pour in fresh resources," the minister said.

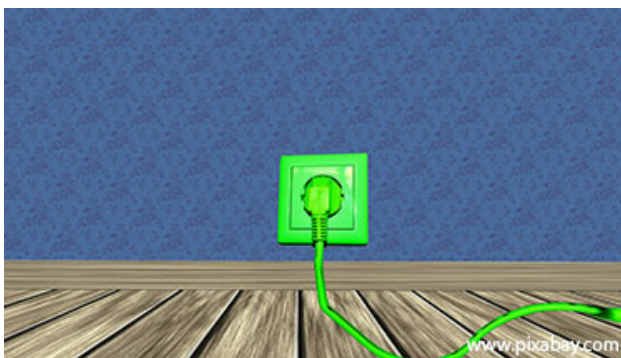
The strongest recommendation of the World Bank is for gradual process for liberalisation of the Bulgarian energy market, she stressed „Functioning of an independent energy exchange will place the Bulgarian energy in a completely new situation. We realise that this is the only way. The only option for unbiased price of electricity is demand and supply.“ The Bulgarian independent energy exchange (IBEX) is planned to start operation on December 8 and this will be a significant breakthrough, Petkova stated.

In terms of the liberalization model of the Bulgarian energy market and its implementation, the minister said that the country relies on the expertise of the World Bank, with which the Bulgarian Energy Holding has concluded an agreement. “The recommendation of the World Bank is the liberalization process to be implemented gradually, as the objective is for identification of unprotected consumer groups first, to think of them first and then to seek the best and most adequate model for full liberalisation of the energy market,” she specified.

In her words, the other very important point is the compensatory mechanism, which will have to cover the obligations of NEK under the long-term agreements, the Renewable Energy Sources Act, and the power plants and heating utilities. “I expect the pricing decision of the Energy and Water Regulatory Commission of August 1, 2015 to have positive effect on NEK,” she told journalists.

## Energy Union report outlines national challenges

November 18



Bulgaria's complex issues in the energy sector and lack of reforms had "compromised the financial stability of public and private stakeholders", the European Union said in its first State of the Energy Union report, Sofia Globe revealed.

The document, first of its kind, comes nine months after the EU adopted an Energy Union framework strategy and is meant to serve as the measuring stick for progress made in implementing the strategy. In Bulgaria's case, EU noted that domestic coal production – accounting for 34% of gross energy consumption, double the EU average rate – made the country less dependent on imports than the bloc's average, but the fact that Bulgaria imported all gas and nuclear fuel from Russia made it vulnerable to disruptions.

“The construction of the critical infrastructure projects, which would modernize Bulgaria's gas network and reinforce the gas links with its neighbours (Greece, Romania, Serbia and Turkey), incurs delays mainly due to regulatory and financial difficulties.”

The construction of the critical infrastructure projects, which would modernize Bulgaria's gas network and reinforce the gas links with its neighbours (Greece, Romania, Serbia and Turkey), incurs delays mainly due to regulatory and financial difficulties," the country assessment said, but it also noted that in terms of electricity interconnection, Bulgaria was already above its 2020 target and on track to meet the 2030 target.

The main issues faced by Bulgaria's energy sector were the expansion of **renewable energy power generation capacity based on generous subsidies** for solar power and cogeneration, long-term purchase power agreements, delays in phasing out power plants being non-compliant with the EU Large Combustion Plant Directive, as well as a "weak and politically dependent" energy regulator, according to the article.

"While market concentration in power generation is below EU average, the potential positive effects are hampered by a single buyer model with a quota system granting priority access to uncompetitive power plants. Market concentration is above EU average in gas supply markets. The consumer satisfaction in electricity market is the lowest among the EU 28, while in gas is just below the EU average," the report said.

But for all those faults, Bulgaria did show improvement – the country was on track to meet its 2020 energy efficiency target, while the energy intensity was still the highest in the EU, but rapidly declining. The country had already exceeded its 2020 renewable energy target and was on track to meet its 2020 decarbonisation target. But the document also noted that Sofia had no longer-term climate policy strategy beyond 2020, Sofia Globe reported.



# MACEDONIA

## Kolektor commissions five small hydropower plants

October 29

The irrigation system on the Bošava river was reconstructed and the supply channel capacity from the water reservoir was increased to fit five small hydroelectric systems and supply the municipalities of Kavadarci, Rosoman and Negotino with water. The power generation facilities of 11 MW were developed and constructed by Kolektor Turboinštitut from Slovenia. The operator, Hidrobošava, holds the concession for the next 27 years.

„The project of constructing five small hydroelectric power plants on the Bošava river represents a new milestone for Kolektor Turboinštitut. This is the first project where we obtained concession through a public-private partnership, obtained all required permissions and finished all construction and other works in cooperation with local contractors in less than two years,” Franc Florjančič, the company’s managing director, said at the launch. „Recently, we finished the project by concluding a **contract for the purchase of electrical energy**, which is why today we can officially open these facilities.”

“*Kolektor Turboinštitut entered into a public-private partnership for combined use of water with Vodostopanstvo Tikveš, the operator of the irrigation system and the holder of water rights.*”

Kolektor, which originally started out in the automotive industry, has been lately strengthening its role in the field of construction industry and engineering, while also becoming one of the key players in the field of electric power engineering, said Radovan Bolko, Kolektor’s board head. In the last 20 years, the Slovenian engineering company supplied electro-mechanical equipment for more than 15 small hydroelectric power plants and participated in the reconstruction of six large hydroelectric power plants in Macedonia, according to a report on its website.

In the Bošava project, Kolektor Turboinštitut entered into a public-private partnership for combined use of water with Vodostopanstvo Tikveš, the operator of the irrigation system and the holder of water rights. For the purpose of implementing the project, Kolektor Turboinštitut founded the company of Hidrobošava

in Macedonia, which holds the concession for use of water and is the owner of the hydro plants with the status of a producer from renewable resources. All line objects were constructed underground where possible and fish passage systems were constructed where required, Turboinštitut said. Expected yearly generation is 33 GWh.

## Špilje generates over 267 million KWh in 10 months

November 8



The largest hydro accumulation power plant in the river basin of Crn Drim generated more electricity than was envisaged in the annual plan, Macedonian agency Independent.mk reported.

More than 267 million KWh of electricity was produced in the first ten months of this year, which means the annual plan has been met with about 90%, the article said. It is clear that the annual plan of production will not only be met, but exceeded.

“*It is clear that ELEM’s annual plan of production will not only be met, but exceeded.*”

Favorable hydrology of the Debar river basin also influenced production. This includes rivers Radika and Drim, Macedonian Power Plants company (ELEM) said in a press release. At the time of the report, the **average water flow was around 40 cubic metres per second**, and the accumulation of the Debar Lake had a reserve of water to produce 18 million KWh. This means there was enough space to accept the upcoming autumn time inflows, the article said.

# GREECE

## Smart battery can bring Tilos to 80% green energy

October 28

A study by energy storage developer Younicos has found that the Greek island of Tilos could push the share of renewables in its energy mix beyond 80% by installing an intelligent battery. The island would thus dramatically reduce its costs for expensive fossil fuel-based power, which is currently transported to the island through an interconnection from the neighboring island of Kos via the island of Nisiros, the company said. The study even showed that **the island could become an exporter** of its excess wind and solar power. Additionally, the energy storage system will reduce load on the strained undersea cable, thus minimizing the risk of blackouts, according to the press release.

"Our results clearly show how an intelligent grid-forming battery system would allow the island to form a renewables-based microgrid," said Robert S. Manasse, chief consulting officer of the Younicos Group. "Implementing storage with our intelligent software will enable Tilos to power itself solely from wind and solar energy, with the existing diesel plant used for backup only."

“*In conjunction with the island's 500 inhabitants, project Tilos (Technology Innovation for the Local Scale, Optimum Integration of Battery Energy Storage) aims to create the first global blueprint for smart microgrids.*”

In conjunction with the island's 500 inhabitants, **project Tilos** (Technology Innovation for the Local Scale, Optimum Integration of Battery Energy Storage) aims to create the first global blueprint for smart microgrids. The goal is to facilitate increased participation of renewable energy sources by optimizing the use of energy storage and demand-side management assets. Tilos is part of the European Union's Horizon 2020 programme.

As a member of the consortium, Younicos is responsible for the development of the energy management system and for evaluating the technical and commercial feasibility of the project.

## PPC Renewables granted permit for biomass facility

October 29

A wholly-owned green energy subsidiary of Public Power Corporation, the main power utility, has been granted **a permit to develop a 25 MW** biomass power plant in the Kozani area, northern Greece, by the Regulatory Authority for Energy (RAE), Energy Press reported.

PPC Renewables' facility is planned to run on fuel provided by agricultural crops in the area such as humble artichoke thistle, or wild artichoke, miscanthus, and fiber sorghum, as well as other sources, including corn, grain, and pruning residues. Preparations have taken several years, the report said. A permit request was submitted in 2012 and had also included a plan to develop a 75 MW capacity thermal facility, not included in the license just granted.

Experiments on wild artichoke cultivation, an excellent source of energy, have been conducted in the Kozani area since 2009, according to the article on Energypress.eu. The biomass, to be purchased by PPC Renewables, a listed firm, from producers at predetermined prices, will be mixed with lignite to improve production efficiency, reduce environmental pollution and boost local agriculture.

## Greece taken to court over energy performance

November 19

The European Commission said it has decided to refer Greece to the Court of Justice of the European Union over the government's failure to comply with the Energy Performance of Buildings Directive, **as the only member state** that did not perform the cost-optimal calculations and did not send a report.

According to the directive, minimum energy performance requirements need to be set for buildings, with a view to achieving the best combination between investments and savings, also known as cost-optimal levels. Calculating it is key for member states to fully exploit the energy efficiency and renewable energy potential of the national buildings stock, the statement said and added this prevents citizens from spending more money than necessary on efficiency

improvements to their housing and offices. The lack of such calculations would also affect the ability of individual owners and tenants to take the right decisions for new constructions or renovations, the European Commission said.

Following a number of informal exchanges, Greece was officially reminded of its obligation to perform the necessary calculations and to submit a report to the commission on July 11, 2014, the press release adds. Furthermore, the country received a reasoned opinion on November 27 of the same year.

“Lack of cost-optimal calculations affects the ability of individual owners and tenants to take the right decisions for new constructions or renovations.”

The buildings directive and its delegated regulation and guidance document establish a benchmarking mechanism to calculate the cost-optimal level of energy performance requirements for new and existing buildings, both residential and non-residential, according to the statement. This benchmarking mechanism is established by a framework methodology that allows the comparison of energy efficiency measures, measures incorporating renewable energy sources and different combination of these measures (in packages and variants), based on primary energy performance (in kilowatt hours per square meter) and costs (sum of investment costs in energy measures, maintenance and operating costs, energy costs, earnings from energy produced), taking into account an estimated building lifetime (30 years for residential buildings).

The use of the comparative cost-optimal framework methodology aims to ensure that member states have similar levels of ambition for establishing minimum performance requirements for new and existing buildings, and building elements and keeping performance under review by taking into account market and technical developments. Furthermore, it allows defining building and building element efficiency levels which are cost-efficient for investors, promoters and home owners.

## Green light for EU-financed solar power parks

October 30



The cabinet approved funding on October 29 for CY EOS Green Energy project by Alfa Mediterranean Enterprises Ltd. for a 50 MW solar thermal power park in the Alassa area in Limassol, portal In-Cyprus reported.

The project was selected for funding within the framework of the second phase of the NER300 programme of the European Commission for projects demonstrating innovative energy technologies from renewable energy sources. **Capital expenditure is EUR 176.2 million**, with funding from Brussels covering EUR 60.2 million, the article said.

Previously, on October 7, the cabinet had approved financial support for one more such project, the CY CSPe Helios Power, by PFXT Thermosolar Renewables Ltd. The capex for the 50 MW solar thermal power park in Achera, Nicosia, amounts to EUR 194.7 million, with European funds amounting to EUR 46.6 million, according to In-Cyprus.

These decisions pave the way for finalising the permits so that a legal agreement can be signed between the government and the individual companies that have undertaken the projects. Once the agreements are signed, the European Commission will be notified to release the funds for financing the projects. The funding agreements provide for the sale of electricity to EAC at a price determined by Cyprus Energy Regulatory Authority (CERA) until competitive market regulations set in whereby the companies will make private arrangements for the sale of the produced energy.

This is to ensure that no extra costs befall the state and, by extension, Cypriot consumers. On the contrary, experts say the country stands to gain both financially and environmentally from these projects.

# ALBANIA

## Environment commissioner seeks green Christmas

November 22



All local authorities received a letter, urging them to go green this Christmas, from the national environment commissioner Ioanna Panayiotou, Cyprus Mail reported. She said local self-government in Cyprus needs to **keep energy-wasting decorations to a minimum**.

"Due to the economic crisis, thousands of our fellow citizens are deprived of the essentials and are experiencing the nightmare of unemployment," Panayiotou said in a statement. "At the same time, local authorities are preparing to illuminate us with thousands of bulbs in public places to brighten the holiday and create a Christmas atmosphere... But Christmas is a feast of love and not of waste. Illuminating public areas in times of austerity presents us with a challenge."

Panayiotou said electricity was extremely expensive, polluting and harmful to the environment, and the challenge for Cyprus was to stop wasting energy and turn to energy-saving policies, the use of renewable energy and green development. In the letter to local authorities she suggests they implement an ecological policy this Christmas and to reduce to a minimum the decorative lights or use special energy-saving LED lamps.

She also proposes that the decor on trees be made from recyclable materials as much as possible contributing to raising awareness about reducing, reusing and recycling waste. "In our view, such actions by local authorities will send the right social and environmental messages," she said.

## World Bank praises government for energy reforms

November 4



The World Bank has considered the reform in the energy sector in Albania as positive. This declaration was made by Ellen Goldstein, the head of the World Bank's Southeast European office, in a meeting in Tirana with the Albanian energy minister Damian Gjijknuri, Independent Balkan News Agency reported.

According to the ministry's press release, Goldstein said the quick **settlement of the conflict with ČEZ was „the right decision** to give way to investments and reforms in the sector." Goldstein said the progress of the reform is very good one. She added that its effects will be tangible with the improvement of the service offered to customers.

**“Gjijknuri said the government is working for the new market model, liberalization of the energy sector and the project to set up a power exchange in Albania.”**

For minister Gjijknuri, reform in energy is giving its positive effects, but he has also praised the support given by the citizens, who have embraced legality in the consumption of electricity. According to his words, **the energy sector has started to contribute** to the economy of the country. Gjijknuri said the government is working for the new market model, liberalization of the energy sector and the project to set up a power exchange in Albania.

In October, prime minister Edi Rama pledged to request international expertise on the events that led to the termination of the contract with ČEZ. He stated the government asked the United States Federal Bureau of Investigation for help.

# TURKEY

## Slovenia to invest in Elbasan city in the environment field

November 5



Qazim Sejđini, mayor of Elbasan, held a meeting with the Slovenian ambassador to Albania Lea Stančič. They discussed about the support the Slovenian government will provide for several projects in the city in the environment field, portal Invest in Albania said.

After the meeting, Sejđini stated that these projects will be focused in the rehabilitation of Bradashesh landfill and investments in the sewage treatment by establishing a new plant, and other projects in the water supply plants and **renewable energy**. This is a real project and Elbasan deserves such investment, he said.

In turn, Stančič underscored that the Slovenian government is showing interest for a successful collaboration with Albania and that soon it will invest in the environmental field in Elbasan city.

Asked about the support to Albania regarding the European Union membership bid, the ambassador declared that as an EU member Slovenia has showed its support since in the beginning of the process. "Slovenia was active during the visa liberalization process by supporting Albania and now we fully support the country in continuing the negotiations. Many reforms have been undertaken lately but there is more to be done," Stančič stated.

## Yingli of China developing 20 MW solar portfolio

November 2



Companies from Turkey and China which developed solar plant projects of 10 MW across four sites on 18 hectares now move on to **additional facilities of a total of 10 MW**, which they expect to complete by the end of 2016. The initial investments in western Turkey are underway and construction is expected to begin in the second quarter of next year, said Yingli Green Energy Holding Company Limited. The solar panel manufacturer stated it joined forces with Motif Proje İnşaat Ltd. Şti., a consulting partner.

*“The solar panel manufacturer stated it joined forces with Motif Proje İnşaat Ltd. Şti., a consulting partner.”*

„Turkey is an extremely promising market for solar project development due to its growing demand for electricity, large population of over 75 million people, and high levels of solar irradiation. There are currently 200 MW of photovoltaic projects under construction and additional 5 GW under application in Turkey,” said Anian Schreiber, country project manager from Yingli Green Energy Europe GmbH. „With the support of Motif Proje, we can rapidly scale our development activities in this high-potential market.”

The company also known as Yingli Solar covers the chain from ingot casting and wafering through solar cell production and solar panel assembly. Headquartered in Baoding, China, Yingli Green Energy has more than 30 regional subsidiaries and branch offices and has distributed more than 14 GW solar panels to customers worldwide, the press release said.

Motif Proje was founded in 1995 in Turkey as one of the first consulting partners for renewable energy and has established a specialized engineering company. Motif Proje has already successfully developed over 20 MW of projects across Turkey and continues to explore the promising license-free sector for projects of less than 1 MW, according to the statement.

## China, Turkey to cooperate in solar power projects

November 5



A goodwill agreement to build a 60 MW solar power plant in Şanlıurfa was signed with China. The investment in the city in Turkey's southeast is worth USD 60 million (EUR 55.95 million), Anadolu Agency's Energy Terminal reported. State-owned nuclear company CGN and Turkish renewable company Else signed the agreement in Ankara to establish 60 plants with unlicensed capacity.

Turkey's total installed power capacity surpassed 71 GW, while the share of solar facilities under **1 MW in the country, without the need for a license**, is 0.2%.

„Although we are one of the leading nuclear companies, we also focus on renewable energy investments,” Xing Liu, director of new business department at China Nuclear Power Engineering Co. (CGN) said. Turkey is important within China's economic cooperation strategy, he said. „The partnership between CGN and Else started with solar energy but we hope to collaborate in other energy areas as well.”

“*Mustafa Herdem, general manager of Else, said talks are taking place to establish new projects in third countries.*”

The project will be operational in the first half of 2016, once all the approvals have been given, said Mustafa Herdem, general manager of Else. He also underlined that once the project is successfully completed in Şanlıurfa, he expects that projects in three other cities in the country, which will be determined later, will

follow suit. Herdem explained that talks are taking place to establish new projects in third countries. If the political and financial states of the countries are agreeable, the projects will go ahead, he said and added that the next step in the partnership will be to invest in solar projects in Iran, Kazakhstan and Jordan.

## Sustainable energy tops priorities in EBRD's strategy

November 9

The Board of Directors of the European Bank for Reconstruction and Development has approved a four-year strategy for Turkey in October, aiming to guide investments through 2018.

Among the five themes, first one on the list is energy efficiency, renewables and support for reforms in the energy sector. Other areas are the inclusion of private sector in infrastructure projects, competitiveness and corporate governance, gender equality and regional and youth inclusion, and the deepening of capital and local currency markets, the bank said on its website.

„We will continue **working mainly with the private sector** as it is key to ensuring continued growth. Building on a strong six-year history of engagement, the Bank will focus on areas with most reform appetite and market demand and will combine investments with policy advice and support for reforms,” said Jean-Patrick Marquer, EBRD's country director.

“*The strategy includes support for privatization of assets of state-owned utility Elektrik Üretim AŞ (EÜAŞ), particularly hydropower resources.*”

Attracting strategic investors to the renewable energy sector remains challenging, and improvements in institutional capacity and public awareness are also needed to further promote energy and resource efficiency, the document says. „Although Turkey's primary energy intensity and carbon intensity are only slightly above the EU-28 average, these indicators are still far from global best performance and are likely to worsen in the absence of appropriate policies and sustainable energy investments, and in the context of the government's plans to develop Turkey's indigenous lignite power production capacity. In terms of greenhouse gas emissions, Turkey's emissions rose by 123% since 1990 to about 440 megatonnes of carbon dioxide equivalent in 2012, by far the highest growth among OECD countries,” the strategy states, with a stress on strong potential of renewable sources.

Limited credit availability for small and medium-sized enterprises, lack of technical expertise and regulatory complexities in financing municipalities present serious barriers to the implementation of resource efficiency measures in residential and corporate sectors, despite significant potential, EBRD said. The bank underscored it will seek to finance renewable energy projects in wind, solar, biogas and geothermal and, on a selected basis, hydro projects, with a particular focus on less developed regions. The strategy includes support for privatization of assets of state-owned utility Elektrik Üretim AŞ (EÜAŞ), particularly hydropower resources.

Sustainable Energy Action Plan had many of its components completed in areas of climate change, power and renewables, and resource efficiency. A **National Energy Efficiency Action Plan (NEEAP)** was launched, with the aim to develop it along the lines of the European Union's national plans. Carbon Emission Factor Modelling project was also launched to calculate, model and disseminate the grid emission factor of Turkey, the bank said. Still under consideration in October was the document for National Appropriate Mitigation Actions, the plans and portfolio of potential projects in the sector of climate change.

## Government privatizes Karacaören hydropower plants

November 9



GAMA Enerji Holding won a tender to privatize hydro facilities Karacaören 1 and Karacaören 2, located between the city lines of Isparta and Burdur in the west of the country, at a cost of 515 million Turkish liras (EUR 168.9 million), Anadolu Agency's Energy Terminal reported.

The installed power capacity of Karacaören 1 is 32 MW, generating 142 GWh of electricity a year. The other power plant generates 206 GWh a year with an installed electricity capacity of 47 MW. In total, 10 companies applied for the tender. After five elimination rounds, the qualifying companies then proceeded to open bidding.

The auction's minimum limit was set at EUR 32,800 and the opening bid started with an offer of EUR 166.9 million. After one hour, GAMA won. The company develops and invests in power and water infrastructure projects in Turkey and the surrounding region.

## German company completes two solar power plants

November 9

ET Solutions AG, a wholly-owned subsidiary of ET Solar, said it concluded the construction of its first two solar parks in Turkey in September and connected them to the grid. The projects in Antalya were implemented through ET Solutions Istanbul, founded in the summer with the aim of a long-term commitment to the Turkish photovoltaic market, according to the company. Solar power plants have capacity of 1.11 MW each and were installed for a local investor. Both will generate 1.85 GWh per year.

ET Solutions Istanbul offers engineering, procurement and construction (EPC) services as well as operation and maintenance of the projects totaling. Projects are based on German engineering from the Munich headquarters for Europe, Middle East and North Africa (Emena), the company said.

The company expects to begin construction of up to 50 MW of solar plants in Turkey next year.

## Turkey to help Sub-Saharan Africa with solar modules

November 10

Within the scope of the preparations for the meeting of the Group of Twenty in Antalya, Turkey set a target to bring solar energy to Sub-Saharan Africa, Turkey's acting energy minister said, according to a report by the Energy Terminal.

Ali Rıza Alaboyun told Anadolu Agency that the government will send **100 solar modules, under the sponsorship of Turkish Airlines**, to generate electricity for health institutions, initially in Niger. „There are 1.3 billion people in Sub-Saharan Africa, and 900 million of the total population of the region have no access to electricity. It is a human right to access energy and water,” Alaboyun said.

The summit of the Group of Twenty (also known as G20) is an international forum for governments and central bank governors from 20 major economies which drive 85 percent of the global economy.

The G20 Summit has run for the past 19 years. Turkey hosted the G20 Energy Minister Meeting, which was held for the first time in Istanbul in October, and was chaired by Alaboyun.

## G20 sets frame for joint green energy policy

November 13



The Group of Twenty is expected to boost the adaptation and use of clean energy, Turkey's acting energy minister Ali Rıza Alaboyun told Anadolu Agency. Energy sustainability is one of the key themes for the G20 under the Turkish presidency. Its leaders adopted principles for collaboration, the agency's Energy Terminal reported.

Energy Sustainability Working Group (ESWG) within G20 has requested the International Renewable Energy Agency (Irena), in close cooperation with the International Energy Agency (IEA) as well as other regional organizations, to develop a toolkit of options to accelerate renewable energy deployment, Alaboyun explained.

“Applications for a further 2 GW of wind power capacity are pending.”

He added that the toolkit, or guide, can be used as a basis for countries to develop their own customized renewable energy policies taking into account national circumstances and each nation's sustainable development priorities. The G20 member countries are hosting 80% of existing renewable power generation capacity around the world. In 2013, member countries provided 82% of global renewable capacity additions. Moreover, member countries installed **more than half of new power generation capacity** from renewables. Alaboyun said that Turkey will keep the momentum going over the next following months to install more green energy capacity.

Unlicensed renewable applications amount to more than 8,500, 80% of which are for solar energy while

20% is from wind energy, he said and added that licensed wind energy capacity in the country is around 7 GW.

Turkey's wind energy applications are on the rise. Alaboyun underlined that upcoming government deals will have more capacity applications. He said that for 2016, wind energy license applications of up to 3 GW capacity are received while applications for a further 2 GW capacity are pending.

Turkey's installed capacity reached 72.46 GW by the end of October, according to data from the Ministry of Energy and Natural Resources. The country's installed capacity rose by 5% during the first ten months of this year, from 69.5 GW at the end of 2014. The number of power plants rose to 407 by the end of October, from 126 at the end of 2014.

## TuReeff contributing to housing market's overhaul

November 16

The European Bank for Reconstruction and Development said it is helping investments in energy efficient and anti-seismic property development through its Turkish Residential Energy Efficiency Financing Facility (TuReeff).

The programme combines as much as USD 216 million (EUR 201.6 million) of loans from the EBRD and EUR 50.41 million of grant co-financing from the Clean Technology Fund (CTF). In addition, the European Union provides EUR 9 million and the CTF secured EUR 1.87 million for technical cooperation projects, the report on the bank's website said.

The seismically active area is known for some of the worst earthquakes in history. There is a collision zone of the Eurasian Plate and both the African and Arabian Plates, and it is considered a hotspot for potential damaging hazards.

The government has implemented an urban transformation plan (UTP): **to demolish and reconstruct thousands of buildings** in those earthquake-prone areas deemed to be unsafe. EBRD developed it even further. TuReeff encourages companies to build **not only safer, but more energy-efficient housing**. Construction enterprise DMS Yapı, based in Istanbul, is one of the early beneficiaries, thanks to the loan it received from Şekerbank TAŞ, the very first to join TuReeff, the bank stated.

The facility provides finance to small and medium-sized construction companies and project developers willing to invest in sustainable energy projects. In fact,



this is currently one of the top priorities for Turkey, as its residential sector is identified as one of the most energy intensive ones. Jean-Patrick Marquet, EBRD's country director, said: „The reason why we focus on investments that promote energy efficiency in the residential sector in Turkey is because we believe that they provide high value for money. With the TuReeff programme and its advisory services we can also help increase the awareness of the benefits of the energy efficiency improvements in households across the country.”

To support this upgrade, TuReeff's engineering team provided the company with technical assistance through every phase, according to the article. „These included help in raising awareness on energy efficiency measures, developing and implementing the project, as well as verification of the results. The banks participating in the programme, on the other hand, received a helping hand in a number of areas – from product development, marketing and communications, pipeline development, eligibility assessments and outcomes reporting,” EBRD said.

Households' energy bills are likely to decrease and at the same time their standard of living, as well as safety, will increase considerably, the bank claims.

## IC İçtaş acquires Kadincik hydropower plants

November 17

At a cost of TRY 864 million (EUR 283 million), hydro systems Kadincik 1 and Kadincik 2, located in Mersin in the south of the country, were bought at a tender by IC İçtaş Energy Investment Holding, Anadolu Agency's Energy Terminal said.

The installed capacity is 70 MW in Kadincik 1 and 56 MW in the second power plant. In total, 10 companies applied for the tender. The first offer in the tender round **started at EUR 255 million** and was followed by four elimination rounds. After the elimination rounds, the qualifying companies then proceeded to open bidding, the article said.

The opening bid started with an offer of EUR 281.58 million. IC İçtaş Energy has total installed capacity of 1.33 GW, entirely based on hydro sources for the domestic market, Energy Terminal said.

## Cost of photovoltaic installations eases decline

October 22



By the end of last year, annual contribution of photovoltaic power systems (PVPSs) to electricity demand has passed the 1% mark in at least 22 countries, where Italy was at the top with close to 8%, **Greece reached 7.6%** and Germany was above 6%, International Energy Agency said in its international publication 'Trends in Photovoltaic Applications'.

After years of fast market development, last year saw reduced growth, with Japan and the United States driving it. Overall, 34.3 GW of photovoltaic capacity was installed in the IEA PVPS programme's member countries during 2014, compared to 33 GW the year before, while combined with other major markets the yearly addition was 39.8 GW. Prices have seen a slower decline than in the years before, or even small increases, confirming that the speed of future cost reduction is likely reduced, the report said.

### Beating the world average

Global capacity is estimated to have been at 177 GW at the end of last year, or over 1% of world's electricity demand. As for the other markets followed by Balkan Green Energy News, photovoltaics met almost 4% of electricity demand in Bulgaria and between 2% and 3% in Romania and Slovenia, according to data from the publication. On the other hand, Turkey's capacity is neglectable compared to its demand. Turkey, having photovoltaic capacity's penetration at just 0.1% with 0.1 TWh generated last year, actually more than tripled overall installations in 2014, adding 40 MW to bring them to 57.7 MW. At the end of 2011 the country's cumulative capacity was at 6.7 MW.

## Implosion in three markets

Romania added 72 MW last year, raising the cumulative capacity to 1.23 GW. Greece and Bulgaria added very little installations last year, 17 MW and 2 MW, respectively. The overall capacity in Greece was 2.6 GW and Bulgaria had 1 GW. All three countries dropped out of the list of top ten markets by addition, after rapidly growing for several years.

After installing 912 MW in 2012, Greece added 1,04 GW in 2013. Since then the market went down to 17 MW in 2014. It was driven by feed-in tariffs, which were then cut several times. The installations are mainly concentrated in the rooftop segments (commercial and industrial in particular). With dozens of islands powered by diesel generators, the deployment of photovoltaics in the Greek islands went quite fast in 2012 and 2013. Due to the rapid market uptake, grid operators asked in 2012 to slow down the deployment of photovoltaic systems, in order to maintain the ability of the grid to operate within normal conditions.

**“Greece, Romania and Bulgaria dropped out of the list of top ten markets by addition, after rapidly growing for several years.”**

Bulgaria experienced a very fast boom in 2012 that was fuelled by relatively high feed-in tariffs. Officially, 1 GW was installed in the country with 7 million inhabitants in a bit more than one year, creating the fear of potential grid issues. In addition to possible retroactive measures aiming at reducing the level of already granted tariffs, Bulgarian grid operators have opted for additional grid fees in order to limit market development. The consequence is that the market went down to 10 MW in 2013 and 2 MW in 2014.

Romania experienced a rapid market development with 1,1 GW installed in one year, driven by an renewable portfolio standard (RPS) system with mandatory quotas paid during 15 years. Financial incentives can be granted but reduce the amount of green certificates paid. In 2014, the government decided to freeze two out of six green certificates until 2017 in order to limit the decline of the green certificates price on the market. In addition, the number of certificates granted for new photovoltaic installations went down to three. Romania illustrates the case of an RPS system with green certificates where the level was not adjusted fast enough to cope with the growth of installations, according to IEA's paper.

## Trends for remote islands

In some countries, off-grid systems with backup (either diesel generators or chemical batteries) represent an alternative in order to bring the grid into remote areas. This trend is specific to countries that have enough solar resource throughout the year to make a photovoltaic system viable. In most developed countries in Europe, Asia or the Americas, this trend remains unseen and the future development of off-grid applications will most probably be seen first on remote islands. The case of Greece is rather interesting in Europe, with numerous islands not connected to the mainland grid that have installed dozens of megawatts systems in the previous years. These systems, providing electricity to thousands of customers will require rapid adaptation of the management of these mini-grids in order to cope with high penetrations of photovoltaics, the report said.

Asian countries represented the first regional market for PV for the second year in a row, with China (stable at 10.6 GW) and Japan (9.7 GW) representing 50% of all installations in 2014. American countries progressed, where the United States added 6.2 GW, while the market went down for the third year in a row in Europe (7 GW). Feed-in tariffs remain the dominant driver for photovoltaic capacity market development with 59% of installations in 2014. However, the share of new business models, including competitive power purchase agreements, tendered feed-in tariffs and installations driven by own consumption rose to more than 22%.

The 20<sup>th</sup> yearly paper within IEA's PVPS programme includes information confirmed by national governments; membership includes 24 countries, including Turkey and ten members of the European Union, and five supranational organizations: EU itself, solar associations and the International Copper Alliance.

## Moderate progress made in tackling climate change

### November 4

While primary consumption of energy stood in 2013 at its level from the early 1990s, renewables have increased their share in final energy consumption, and greenhouse gas emissions decreased over the same time period, [Eurostat said in a special report](#) on the occasion of the publication of the 2015 Energy, Transport and Environment statistical book and with regard to the forthcoming United Nations Climate Change Conference (COP21) in Paris. Compared with 1990, most member states reduced their greenhouse

gas emissions by 2012, led by the three Baltic countries and Romania, which all more than halved their levels.

From other countries tracked by Balkan Green Energy News, Bulgaria registered the biggest drop in emissions, 44.1%. It reduced the level by 2.67 million tonnes of carbon dioxide equivalent from 2005, to 61.76 million. Romania made a greater absolute and relative progress, lowering emissions from 141.73 to 119.19 million tonnes in the seven-year period, or 52% compared to 1990. Croatia cut its emissions by 17.4% from the 1990 level of 32.32 million tonnes. EU average was 17.9%. Compared to 2005, a reduction of 4.24 million to 26.71 million tonnes of carbon dioxide equivalent was registered in the country, according to Eurostat's data.

“*The three Baltic countries and Romania more than halved their levels of greenhouse gas emissions from 1990 to 2012.*”

Emissions in Cyprus soared 47.7% to 10.07 million tonnes, ranking second in the EU by the relative addition since 1990, between Malta and Spain, but the country did register a drop from the 10.78 million tonnes detected in 2005. A rise in emissions of 2.7% was detected in Slovenia, while Greece added 5.7% compared to 22 years before. Both markets reduced the equivalent of carbon dioxide from 2005.

The target cut in primary energy consumption for 2020 was reached by twenty EU member states in 2013, and there is a steady trend of decline since 2006, according to the report. Greece ranked second and Romania was sixth with a reduction of 22.6% and 15.8% from 2005, respectively. Bulgaria took the eighth position in the chart with a 13.8% cut, and Cyprus was eleventh, having reduced primary energy consumption by 12%. Bulgaria is in the group of seven countries which still need to reach the 2020 target, while Croatia's target wasn't determined. It registered a cut of 11% from 2005, and Slovenia had its primary energy consumption decrease by 4.3%.

The EU's members from Southeastern Europe, including Cyprus, were all positioned closer to the middle of the chart for the share of renewable sources in gross final consumption of energy in 2013. Bulgaria, with 19%, was in the group of four EU member states which reached their target level for 2020. Romania, with 23.9% share, and Italy, with 16.7%, were less than 0.5 percentage points away. Greece advanced from 6.9% in 2004 to 15%, compared to target 18%. Croatia added 4.8 percentage points in the same period, reaching an 18% share, while it needed to advance to 20%. Cyprus stood at 8.1% in 2013 and it should reach 13%. Slovenia had a 3.5 percentage point gap to fill and get to a 25% share, Eurostat said.



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**A roadmap for deploying renewable energy sources in Serbia and regional perspective**  
Belgrade, Serbia

**December 1, 2015**

**Serbian biogas market trends and challenges**  
Belgrade, Serbia

**December 1-3, 2015**

**GeoPower Global Congress**  
Istanbul, Turkey

**December 2, 2015**

**6th International Wood Energy Conference for Biomass and Renewable Energy Sources**  
Zagreb, Croatia

**December 9-10, 2015**

**South Eastern European Power Summit 2015**  
Bucharest, Romania

**December 11, 2015**

**The Power of Serbian Energy Sector**  
Belgrade, Serbia

**April 5-7, 2016**

**South-East European Exhibition on Energy Efficiency and Renewable Energy**  
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