



INTERNATIONAL ENERGY AUDIT WORKSHOP

MOSCOW DECEMBER 4TH, 2014

SMART CITY TECH GROUP REPORT

The Workshop “Energy Audit as a Basis for Energy Saving Programmes” (hereinafter referred to as the “Workshop”) took place in Moscow on December 4th, 2014. The agenda of the Workshop included three main sessions (*Annex I*)

- Legal Framework, Financing Models and Regulatory Issues for Energy Audit in Russia
- Energy Audit in Industrial Facilities and Heating Networks
- Energy Audit in Residential and Commercial Buildings

Initially, it was planned that the workshop will be named “Practical Implementation of Energy Efficiency Policy in the Baltic Sea Region: Energy Audit as an Instrument of Raising Energy Efficiency in Buildings”. However significant changes have occurred in the law since the project was proposed to date. It was announced that regulative amendments are expected in the main Federal Law № 261 of November 2009 on Energy Conservation and Energy Efficiency in the field of energy audit. In connection with the expected changes and after the numerous consultations with professional community, it was decided to discuss all the implications that these changes will bring to the practice of auditing. It was also important to hear a comparative analysis of auditing practices in Russia and in the European Baltic Sea regions countries, having heard the opinion of professionals from abroad.

1. The Workshop started from the presentation delivered by **the Head of the Department for Energy Saving and Energy Efficiency Improvement , Ministry of Energy of Russian Federation Mr. Roman Neustupkin**, who addressed the issue of mandatory energy audits in Russia, the provisions for which are included into the Federal Law N 261-FZ Energy Conservation and Energy Efficiency. His presentation outlined the main trends in mandatory energy audit policy in Russia, such as the number of self-regulated organisation providing energy audit services, the total volume of planned and actually implemented mandatory energy audits in Russia in the period of 2010-2014, the supply of energy passports to the Ministry of Energy of the Russian Federation, and finally the measures taken by the Ministry of Energy of

the Russian Federation to ensure better execution of energy audits in Russia. His speech was appreciated by all participants and stroke the keynote for the rest of the Workshop duration.



Roman Neustupkin is delivering his speech at the Workshop

2. The second speech was delivered by the **CEO of “INTEN” company Mr Alexey Chikov (Russia)**. He focused on the main barriers to more qualitative energy audits in Russia. Among them, according to Mr Chikov, were the low qualification of Russian energy auditors, formalism and bureaucracy in conducting mandatory energy audits in public buildings such as schools, sport centres, hospitals etc. and the absence of interest in conducting qualitative energy audits from the clients themselves. Altogether, he outlined six main drawbacks preventing energy audit industry from more sustainable development path.

3. **Mr Toomas Niinemae, Vice-President of the Fortum Power and Heat OY (Finland)**, delivered the third presentation. At the beginning, he provided a brief description of his company, which is a renowned power and heat operator not only in Finland and in other Scandinavian countries, but also in Russia as well. He stressed key parameters of Forum’s performance both in Finland and in Russia and compared them. Afterwards he outlined main types of services provided by his company. These are atomic energy, hydro energy, heat energy, and power solutions. In addition, Mr Niinemae focused on specific types of software, which his company uses for modelling the energy processes on its power plants, such as Fortum Ecotuning

programme. All three above presentations aroused a great interest among the audience and very spirited question and answer session, which lasted about 30 minutes, because allowed to directly conduct a comparative analysis of audit techniques and their compatibility, as well as to draw conclusions on best practices.

After his presentation, Mr Niinema discussed opportunities for co-operation with other Russian participants, especially with the Head of the Kirov Branch of the Volzhskiy Electricity Generation Company Mr Dmitry Trushkov and representatives from the Republic of Sakha Yakutia .

4. The fourth presentation was delivered by the **Head of Project Department of the ENSI - Energy Saving International AS company (Norway) Mr Viktor Kotomkin**. He outlined the Russian experience of his company in conducting energy audits, and stressed the right path towards financial implementation of the energy service projects in Russia. He also described the possible ways of risk management during the energy audit stage of comprehensive energy assessment of building or other construction. At the end, he recommended specific types of the software product that his company could supply to Russian counterparts when conducting energy audits, and its main features and competitive advantages when compared to similar products by other companies. Representatives of ENSI also discussed co-operation opportunities with Russian colleagues, specifically with Mr Vladimir Syromyatnikov from Energy-Saving Technologies LLC.

5. Next speech was delivered by the **Mr Vadim Yuzyuk, who is the CTO of the “ENERGOTEST” company (Russia)**. He described the broader context of energy audits in Russia, and the experience of his company in conducting this type of energy assessment. Specifically, he shared his practices on conducting energy audit at various specific segments of economy, e.g. at agricultural facilities, military plants etc. His main observation was that it is difficult but necessary to find ways and make the company - client which is ordering energy audit services interested in receiving real not formally positive results of energy audits, and in this outcome he fully supported Mr Chikov from “INTEN” company.

6. The sixth speaker **Mr Yury Tikhonenko, Head of the Project and Programme Department of OAO ARTPOL Engineering (Russia)**, shared his view on the main difference between the energy audit practices in EU and in Russia. He stressed that while in the EU the energy audit is only one of the links in more comprehensive energy assessment processes the

final target of which is the minimisation of energy consumption, in Russia energy audit is more like the end result of this processes, a stand alone action leading to the issuing of energy passport which is stating the characteristics of energy consumption. It was noted that while obtaining the energy passport is a positive and progressive step of any enterprise, the energy audit should lead to further investigation and actual measures taken, which would lead to energy saving.

Opportunity for adoption of international experience in Russia and changing the situation with formalism and bureaucratic approach when conducting it he views only in energy audit clients becoming the true participants of the legislative process setting energy audit standards and legal framework.

7. The seventh presentation, which was particularly welcomed by the audience, was delivered by **Mr Vladimir Syromyatnikov, who is the CEO of “Energy-Saving Technologies” (Russia, Yakutia)**. His company applies the Energy Service Company model, offering a broad range of energy solutions for commercial, public, and industrial buildings. At their company, ESCO consists of an energy audit, project design and implementation, maintenance, and operation. The project is financed with saved money, typically the energy cost. As demonstrated by **“Energy-Saving Technologies” company**, ESCO is, therefore, an efficient and flexible way to enhance energy efficiency and energy audit is an organic part of the process.

Mr. Syromyatnikov particularly shared his experience in conducting energy services projects in his region based on the technologies of companies originating from BASREC member countries (Danfoss, Ramboll, Buderus etc.). He described the crucial role of the government subsidising the population expenses for the utility services in the region of extreme cold climate and the government support provided to his company in dealing with various financial and tariff system issues. In general, his company was a real example of ESCO entrepreneurship, and his speech produced a profound impact on other Workshop participants.

8. Next speaker – **Mr Igor Petkov from “Zelenograd Electronic District” company (Russia)** – also provided a real example of conducting energy audit in the Moscow Oblast (Kovrov Raion/ district). He described several examples of 59 energy audited buildings in this raion, and paid a special attention to the experience of his company in conducting energy audit at the local sport centre, several local power generation stations and local libraries. At the end, he suggested three measures on how to improve the quality of energy auditing in Russia: these are better education and popularisation, use of best European practices and technologies, and the

establishment of the unified information field for demonstration of best examples of conducting energy audit.

9. The ninth presentation was devoted to the automatic calculation of energy consumption in buildings and was delivered by the **CEO of “Complex Innovative Decisions” company Ms Marina Maslovskaya (Russia)**. She briefly described the theory and practice of this method of energy assessment, and introduced her corporate tools serving for automatization of energy consumption calculations.

10. The final presentation was delivered by **the team of Smart City Tech Group LLC (Russia)**. They suggested more comprehensive approach to conducting energy audit in Russia (in line with recommendation of Mr Tikhonenko), based on the integrated methods of optimisation and audit of various types of resources during modelling of a building or a city master plan. They also briefly introduced the term “smart city” to the audience that it is not only about modernisation of physical assets of a city, but more about ensuring connectivity of various physical assets into one system based on the ICT technologies. They processed with components of smart city and described an in-depth process of building optimisation based on comprehensive assessment of various parameters. This process is applicable both to existing buildings and to planned ones. Their presentation was appreciated by the Workshop participants, who immediately suggested a number of co-operation opportunities with Smart City Tech Group LLC.

After the Workshop its participants continued their informal discussion during the dinner. The bottom line of the Workshop is that: (1) energy audit shall gradually evolve itself in Russia and methods and industrial standards will be compatible with those from the EU practice because of the close proximity of the markets and inevitable international cooperation. Energy audit is viewed as an intermediate link between comprehensive energy assessments aimed at decreasing energy consumption by end-users; (2) in order to transit towards such understanding of the role of energy audit, the best available European practices could be adopted in Russia; (3) there is a certain demand for European technologies in Russia due to quite similar climate and geographic conditions and the closer cooperation between the companies of BASREC region to initiate more public private partnership projects for increasing energy efficiency in buildings or industrial facilities should be encouraged.

Smart City Tech Group company produced the final resume of the Workshop, which was sent out to its participants (*Annex IV to the report*). Several companies have already provided their feedback and recommended follow up workshops or a research to be undertaken in the future on the theme of energy audit and related topics .

There were around 40 participants of the Workshop, some of them were arriving later during the day due to the regional train schedules and some left straight after the workshop to catch a train and did not attend the evening dinner.

A list of participants is in the Annex II to the report. Presentations are attached in the Annex III.



Samples of the workshop material are on the photo, including programs, name cards and badges (seen on Mr. Neustupkin)

Thank you letters with recommendations are below:

Based on recommendations brought up by the participants of the workshop “Energy Audit as a Basis for Energy Saving Programmes”, Smart City Tech Group will submit a project proposal to the Ministry of Energy of Russian Federation for further considerations.

12 December 2014

| ООО «Смарт Сити Тех Груп»
Генеральному директору
Сегизовой Неле Тураховне

Благодарим коллектив ООО «Смарт Сити Тех Груп» за организацию международного практического семинара "Энергетический аудит как инструмент реализации программ энергосбережения" 4 декабря 2014 года в рамках программы сотрудничества стран Балтийского моря в сфере энергетики БАСРЕК.

Темы докладов носили практический характер и включали в себя широкий круг вопросов, связанных с практикой реализации мероприятий энергоаудита на объектах различной формы собственности и системы хозяйствования. Было очень приятно стать участником активной дискуссии профессионального сообщества и иметь возможность обсудить важные вопросы развития методик энергоаудита как меры повышения энергоэффективности промышленности и других секторов экономики.

В качестве пожелания развития дальнейшего сотрудничества, мы хотели бы порекомендовать вам не останавливаться на достигнутом и продолжить дискуссию для более узкого круга профессионалов по секторам энергетики, например, рассмотреть меры стимулирования заинтересованности в проведении энергоаудита теплоэнергетических компаний с точки зрения повышения энергоэффективности, а не для подготовки отчетности, причем было бы интересно обсудить эти вопросы с группами представителей ТЭЦ: генерации, распределения и потребления. Мы с удовольствием примем самое активное участие в подобном семинаре.

Мы надеемся на успешное развитие наших деловых отношений и желаем вашей компании новых достижений.


Antti Malve
Head of Sales
Thermal Production and Power Solutions
Fortum Power and Heat Oy



«Научно-внедренческая фирма «Электронный округ»

124683, г. Москва, Зеленоград, Панфиловский проспект, корп.1539 н.п.7

Тел: 8(499)729-96-91, 8(499)729-94-70; факс: 8(499) 733-21-11;

E-mail: info@eokr.ru, Web: www.eokr.ru

Исх. № 486-ЭО/14
от «11» декабря 2014 г.

**Генеральному директору
ООО «СмартСитиТехГрупп»**

Сигизовой Н.Т.

Уважаемые коллеги!

Благодарим Вас за предоставленную возможность принять участие в подготовке и проведении международного практического семинара по теме «ЭНЕРГЕТИЧЕСКИЙ АУДИТ КАК ИНСТРУМЕНТ РЕАЛИЗАЦИИ ПРОГРАММ ЭНЕРГОСБЕРЕЖЕНИЯ», прошедшем под руководством МинЭнерго РФ.

Для нашей компании этот опыт был чрезвычайно важен. Крайне продуктивным был обмен опытом и мнениями с компаниями-участниками.

Надеемся, результатом этого мероприятия будет взаимовыгодное сотрудничество по реализации проектов в сфере энергосбережения.

Генеральный директор



Мельников В.П.



Республика Саха (Якутия)
677018, г. Якутск, ул. Дежнева 35/1
Тел./факс (4112) 320-138
E-mail: ykko2004@mail.ru
www.ensatech.ru
ИНН/КПП 1435224255/143501001
№ 391 от 03.12.2014г.

Предложения

Для развития энергосервисной деятельности компаний в России необходимо принять ряд ключевых нормативных актов. Наша компания занимается реализацией энергосервисных контрактов с 2011г. и на своем пути мы преодолеваем трудности нормативно-правового характера, без решения которых, энергосервис развиваться не сможет, так как риски слишком высоки.

1. Согласно ПП РФ №1075 от 22.10.2012г. теплоснабжающие организации могут перейти и заключить с Потребителями по двуставочному тарифу, что является на сегодня, серьезным риском для энергосервиса. В двуставочном тарифе составляющая тарифа делится на две части «Условно-постоянная» и «Условно-переменная» где в первой части не учитываются данные приборов учета тепловой энергии при оплате. В этом случае исчезает (сокращается) источник возврата – фактическая экономия.
2. Для работы с финансовыми структурами, одним из основных вопросов является гарантия сохранения финансирования для бюджетных учреждений и гарантия сохранения тарифа на тепло для ТСО в случае работы с ТСО (теплоснабжающей организации). На данный момент нет ни одного федерального подзаконного акта по данному вопросу.
3. Для энергосервисных компаний также является препятствием сдача приборов учета тепловой энергии на коммерческий учет. Правила коммерческой учета тепловой энергии и теплоносителя не регламентируют и не конкретизируют всю цепочку от проектирования, получения техусловий, до написания заявлений на приемку, приглашения инспектора и выдачу акта, а также проведения профилактических работ с вытекающими бюрократическими препятствиями, затягивающими и усложняющими процесс фактического коммерческого приборного учета.

Все эти вышеназванные проблемы влияют на инвестиционную привлекательность в данной сфере, а также серьезно искажает истинное положение дел при формировании энергопаспорта или отчета энергоаудитора. Все действия по энергосбережению должны оцениваться объективно непосредственно приборами учета.

Директор

Сыромятников В.В.