



CASE STORIES

EFFECT4buildings

International Newsletter for building managers #3
October 2019

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Case stories

Since the beginning of the EFFECT4buildings, the project team has been actively working with municipalities and public building managers to develop and test different financial tools and methods to unlock the investments and lower the risks of implementing energy efficiency measures in public buildings.



EFFECT4buildings project team in regions invited public building managers to become case owners for different tools and instruments. Some of these cases are real cases for implementing energy efficiency measures, becoming both development cases and testing cases.

Stories of the cases in different regions will be the main focus for #3 EFFECT4buildings International Newsletter. We hope the stories will inspire you to find the right financing tool/instrument for your building.

Financial calculation tools



Financial calculation tools: knowledge and models for calculation of investments in energy efficiency measures to support decisions.

Web-tool for better financial calculations launched

Authors: Matti Pylkkö, Environmental office of Lappeneranta region, and Marit Ragnarsson, County Board of Dalarna, Sweden



Previous experiences indicate that different conclusions will be drawn, about whether an investment is profitable or not, depending on the calculation methods used. The majority of energy efficiency measures presented in energy audits is calculated with simple payback-time methods not taking in consideration technical lifetime of the investment.

The project has developed a web tool that makes it easy to do different types of financial calculation, just by adding a few parameters about the investment.

The tool calculates with net present value method, annuity value method, internal rate of return except for pay-back time.



"The tool was presented and trained to local regional stakeholders and released for them to testing. This part of testing was absolutely the most crucial and all the received feedback extremely important and precious, because testing was conducted by planned end users of the tool."

The tool was presented and trained to regional stakeholders on the session, which was organized simultaneously face to face and also by online connection.

This option enabled participation for more stakeholders, who were not able to join the training on site.

Also this training event provided lively discussions, questions and suggestions for further development of the tool," says Matti Pylkkö, Environmental office of Lappeenranta region, EFFECT4buildings project expert.

The tool includes also a comprehensive and practical guidance for using it. The guide consist a detailed presentation of tool with clear explanations of needed inputs and how to interpret the results and outputs. Furthermore, all financial calculation methods included in the tool are expressed and presented to facilitate the usage of tool. Find the tool [here](#).



Matti Pylkkö,
Environmental office of
Lappeenranta region

As a whole the developing work of the financial calculation tool has been an interesting journey so far.

Hopefully, the real customers (building managers, building owners and other stakeholders) of EFFECT4buildings project will active utilize the tool and it really will increase the implementation of energy efficiency investments and measures. That would be the greatest pleasure for the EFFECT4buildings project.



Energy Performance Contract



Energy Service Company and Energy Performance Contract: contracting where energy savings are used to repay investment costs.



Energy Performance Maintenance Contracts (EPC)

Author: Marit Ragnarsson, Länsstyrelsen Dalarnas län

Many building owners don't have their own qualified knowledge in operating the building systems, such as heating, cooling and ventilation. The consequences may be that the building consumes more energy than necessary, and that the lifetime of technical systems is shortened. To contract a service provider for maintenance of the building is often the solution, but even then, the building owner need to have quite a lot of own knowledge to assess whether the best possible maintenance of the building with the most optimal energy use is provided. For that, some kind of control is needed.

Service is often contracted as a specific number of visits or hours, without agreement on a specific function to be achieved. For that an other type of service contracts would be needed.

To add an incentive for energy savings and high performance would increase the chance of optimal building management. To solve this, County Board of Dalarna has together with the experience from professional building managers in the stakeholder group and a consultant that has worked for several years as a service provider, developed a tool.

The tool consist of a template for purchasing of services regarding ventilation, heating, cooling and controls in buildings, with the purpose of achieving best possible energy efficiency and system function, has been developed. The document contains suggestions for contents in both RFP:s (request for proposals) and final contracts. [Read more here](#).

EPC in Elverum municipality, Norway

Author: Liv Randi Lindseth, EFFECT4buildings project expert in Hedmark County council, Norway

The Energy Performance Contracting project (EPC) in Elverum municipality was initiated by an intermunicipal project called "Energy efficiency in municipal building in Sør-Østerdal" consisting of 5 municipalities in Hedmark County aiming to reach new and challenging municipal energy- and climate targets. Elverum was the largest of the five and started the EPC project ahead of the four others to gain experience and make it easier for the four smaller municipalities to follow suit.



Elverum implemented more than 300 energy efficiency measures in 38 municipal buildings. They have also reached the guaranteed savings so far. The municipal project leader is positive to the EPC concept and claim that neither the large amount of energy saving measures, the guaranteed savings not reaching the municipal energy - and climate targets would have been possible without EPC. The main goal of the EPC project in Elverum municipality is cost and energy saving, increased comfort and renewal of technical equipment and systems using energy performance contracting as a tool. The contract-based guarantee was perceived as important or even crucial in the decision-making process.

The contract was made between Elverum municipality, the customer and the Siemens, the EPC provider in 2012. Both tender, negotiations and the contract agreements were facilitated by an EPC consultant (Siv. Ing. Kjell Gurigard AS).

The project leader in the municipality, Svein Arild Nyhus, hopes the experiences made in Elverum can be of help for other municipalities considering EPC. [Read more here.](#)



Svein Arild Nyhus, Elverum municipality

To other municipalities I will say: Go for it! Stop contemplating and pondering. Large municipalities might have the resources to do a lot by themselves, but the guarantee is the alpha and omega for smaller municipalities.

We implemented almost 300 energy efficiency measures in Elverum. We would not have had the resources for this without EPC.

Partnering: Next step after EPC projects

Author: Marit Ragnarsson, County Board of Dalarna, Sweden

The municipality of Ludvika was one of the first municipalities to invest in larger EPC projects, which gave many valuable experiences. Now Ludvikahem has taken over the properties and instead wants to invest in partnering for the continued energy work.

The municipality of Ludvika was out early with EPC projects. Evaluation of EPC projects in Dalarna and Sweden shows that there are both advantages and disadvantages to the model. Municipalities that have tested the model in particular point out the challenges that you have to be very active in the project in order to get the right quality and the risk of sub-optimizations where the energy measures are not integrated into other operational issues.

Economically, it is questioned whether it really is the most economical way to carry out energy investments, especially as municipalities usually do not have difficulty borrowing money at a favorable interest rate. The municipality of Ludvika has been pioneers in Sweden with long experience of the EPC. In two projects of 5 million Euro + 5 million Euro, the goal has been to reduce energy use in the municipality's premises by 22% by 2020, while at the same time ensuring long-term value of the properties and technical standards for requirements for functionality and indoor climate. The municipality financed the investments through Kommuninvest (financial institutions for municipalities). [Read more here.](#)

Multi Service Contract (MSC)



Multi-service contracts: contracting that include several parameters except for energy to reach agreed service level without up-front capital cost and help to motivate costs.



Tool for mapping of indoor environmental quality in schools by students

Author: Marit Ragnarsson, County Board of Dalarna, Sweden

To make investments in energy efficiency more profitable it is essential also to take in consideration the additional values that the investments will lead to. One positive effect is very often the possibility to, at the same time, improve indoor environmental quality. A new ventilation system with heat recovery can both save energy and improve air quality. LED lightning improve the quality of light at the same time as it saves energy.

A good indoor environmental quality is of great importance also for well being and better production. Research has showed that the time for learning in schools can be reduced by 2 weeks per year if the indoor environmental is improved.

In Sweden student representatives is part of the required systematic environmental management work in schools, from year 7 in primary school. The project has together with the Swedish student organisation, Sveriges Elevkårer developed a tool for mapping of indoor environmental. Experiences from other/previous mapping tools from other partners have been used. By providing these representatives with the templates and instructions for mapping they can more actively participate in their assignment. The two tools, in English, can be found [here](#).

Danish installation company Kemp&Lauritzen would like to develop a more flexible model for renovation projects

Author: Jonathan Storm Simonsen, Gate 21, Denmark

The contractor Kemp and Lauritzen is working to develop a more flexible model for large-scale renovation projects. In addition to energy savings, the model will also take into account parameters such as user satisfaction and indoor climate.



Photo: Kemp & Lauritzen is a Danish installation company

It's about more than just energy savings

The thinking behind MSC is reminiscent of ESCO, but in addition to energy savings, a number of other parameters are considered, such as indoor climate, operation and maintenance. This means that the developer can get a package solution that is able to solve several challenges in a property. Although it often takes extra resources to include more parameters in the renovation planning phase, that money can often be earned several times over during the life of the building or project.

"When you're doing renovations today, you only look at the part you are renovating. You don't think about the connection between a window, a ventilation system and a heating system," says Esben Jacobsen, Head of the ESCO department in Kemp & Lauritzen

Interview with Esben Jacobsen, Head of the ESCO department in Kemp & Lauritzen [read here](#).



Green Leasing Contract



Green Leasing Contracts: rental agreements in which tenants commit to or gain incentives by participating in energy savings.



Vansbros first green leasing contract

Author: Benny Magnusson, Sustainable Building Cluster in Dalarna, Sweden

In May 2019, the municipality property manager, Olle Wiking and Camilla Andersson, the principal of the Smedsbergsskolan, signed the municipality's first green lease contract. It is a major step towards more conscious environmental work for both the school and the municipality. The agreement means, that both parties will work to reduce energy and material use.

It also states that both parties promise to choose environment friendly materials when refurbished or repaired the facility.

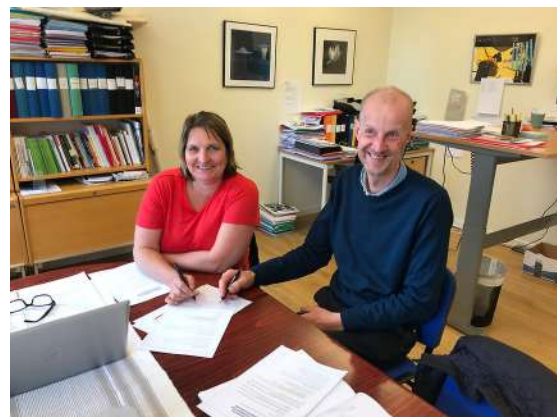


Photo: The principal of the smedsberssskolan, Camilla Andersson, and the municipality's acting property manager, Olle Wiking, have just signed their first green lease agreement.

A green lease contract gives the property owners the opportunity to contribute to a better environment. The municipality going to do an energy audit of the school, that will help them to priorities which energy measures will be best suited to implement. [Read more here.](#)



Green leasing contract in Vidzeme schools

Author: Baiba Šelkovska, Communication manager, Vidzeme Planning Region, Latvia

With September, the Vidzeme Planning Region School program "Effective energy consumption in the schools" is rapidly coming to an end. In early 2020, participants in the program - schools and municipalities - will have to continue to implement energy saving measures themselves.

On September 19, participants of the program visited Bilskas Primary School in Smiltene municipality with the aim to learn about other schools' experiences and get ideas on how to engage and educate school students on energy efficiency and environmental issues and how to reduce energy consumption in the building.

The event was attend by representatives of the Ministry of Economics of the Republic of Latvia, and proposals for the National Energy and Climate Plan 2021-2030. development was discussed. Elektrum Energy Efficiency Centre emphasized the importance of energy efficiency to the participants of the event, allowing them to play the game of augmented reality. Short video insight from the event is available [here.](#)



Poster for School program



**Efektīvs enerģijas
patēriņš
izglītības iestādēs**

Bilskas pamatskolā 2019. gada 19. septembrī



Prosumerism



Prosumerism: buildings as “prosumers” with producing on-site energy can lower the costs for energy and help finance other savings and to stimulate access to renewable energy more equitable.



Solar energy calculator helps to plan optimal size and profitability

Author: Marit Ragnarsson, County Board of Dalarna, Sweden

For calculation of solar PV plants, several national tools for calculating the production potential is available, but to plan for an optimal size of a PV plant more than that is needed. A tool is needed to compare the production with the energy use of the building, to choose the optimal size. Also a better tool for financial calculation is needed. Existing tool for that has most often very rough calculations without the possibility of changing different parameters.

EFFECT4buildings has developed a tool with input from all partners and translated into English. To excel-tool for solar energy calculations can be downloaded from www.effect4buildings.se

The result is an excel-tool to calculate optimal size of solar PV plant and the economical profitability in 3 steps:

Step 1: Find out the optimal size of the PV plant for the roof can produce more electricity than needed, step one help to calculate the optimal size. In this step a few data input is needed. Individual data for energy use can be inserted or general data can be used.

Step 2: Find out how much electricity your roof can produce. A list of national web calculation tools to calculate the production capacity of a roof.

Step 3: Financial calculation. In the last step the profitability can be calculated.



Ludvika municipality is investing heavily in solar energy

Author: Marit Ragnarsson, County Board of Dalarna, Sweden

The municipality of Ludvika has decided to invest 3 million Euro in solar energy. Several installations have already been made and they have learned a lot on the road, among other things, they have developed a model for tendering calls that will ensure that you avoid problems and get the right quality. Political decision behind a large investment in solar energy in the municipality of Ludvika.



Photo: Solar panels on the sports hall's facade in Ludvika where 175 kW traditional solar panels have been installed.



Jan Hedberg,
Construction manager

We have also learned how important it is to bring the grid owner in the planning from the start.

*They have their own rules for how the installations are to be made and after all, they are the ones who must approve the distribution of excess electricity. We have had a very good cooperation with our local grid company VB Energi. The Fire department demand clear signs that it is connected power installation. Standardized rules are beginning to emerge, but so far, local rules have to be followed in many respects, and responsible parties might not have enough knowledge and routines either. **The whole interview read here.***

How are prosumers settled in Poland?

Author: Barbara Łuksik, Association of Communities and Cities of Malopolska Region, Poland

The prosumer is both a producer and a consumer of energy. In Poland, the rules of prosumers functioning are described and regulated in the Act on Renewable Energy Sources. According to the Act, a prosumer in Poland is the owner of a photovoltaic micro-solar system with a capacity of up to 50 kWp.



For today, prosumers are divided into enterprises and physical people. Enterprises consume produced energy in real time, the excess can be sold to the network at the price of black energy - without any support. Physical people are encompassed by a preferential method of settlement - the so-called rebate system, known in Europe as a net-metering system.

The rebate represents a method of cashless settlement of electric energy consumed by a prosumer and produced in micro-installations. The settlement as part of the rebate is carried out after a one-year or shorter period depending on the provisions in the comprehensive contract with the seller of energy, where in for installations with a capacity of up to 10 kW for 1 kWh sent to the network, the prosumer may receive 0,8 kWh. In case of installations with a capacity of 10-40 kW, the settlement is carried out in a ratio of 1 to 0.7. [Read more here.](#)

In Latvia solar energy for electricity generation is rarely used

Author: Baiba Šelkovska, Communication manager, Vidzeme Planning Region, Latvia

In the framework of the EU Sustainable Energy Week Vidzeme Planning Region on the 17th of June, in Cēsī brought together local government specialists, energy managers, heat supply specialists, building managers and other interested parties to discuss the use of solar energy for electricity generation in Vidzeme and elsewhere in Latvia. The panel discussion showed that solar energy for electricity generation is rarely used. The moderator of the panel discussion was Inese Dosē, Global Energy MBA, Business Intelligence Manager, expert with over 10 years of experience in energy sector.

The aim of the panel discussion "From Sun to Electricity" was to stimulate a discussion on the use of solar energy for electricity production, identify existing barriers and possible solutions for using solar potential.

The Ministry of Economics, distribution network owner JSC "Sadales tīkls" and Latvian Solar Energy Association were the keynote speakers, and solar panel installers "AJ Power" and Gulbene municipality together with key speakers participated in moderated discussion between all involved parties. [Read more here.](#)



PANEĻDISKUSIJA:

No saules līdz elektrībai

17. Jūnijs
17 9:30 - 12:00

CĒSĪS, Rīgas iela 15
Vanadzīna mājā

Pasākuma laikā tiks fotografēts un/vai filmēts



Vidzeme municipalities are interested in installing solar panels for electricity generation

Author: Baiba Šelkovska, Communication manager, Vidzeme Planning Region, Latvia

In April this year, Vidzeme Planning Region invited Vidzeme municipalities to apply buildings for solar panel feasibility study. Nine municipalities (Ape, Alūksne, Burtnieki, Cēsis, Gulbene, Kocēni, Naukšēni, Smiltene and Valka) applied at least one of their object. In order to make the necessary calculations, the applied object had to meet several criteria - the building must be owned by the municipality; the smart electricity meter is installed and hourly data for 2018 is available; intensive use of the building during the summer period; a building inventory file is available; the building will be used for the same purposes as before and the roof of the building is technically suitable for solar panels.



Various municipal buildings were submitted for the evaluation - several preschool educational institutions, sport halls, boiler house, municipal administration building, social care center, sewage treatment plant, secondary school buildings. For some of the objects, municipal experts have developed Energy Action Plans in the framework of the project "Partnership for New Energy Leadership 2050 -PANEL 2050" implemented by Vidzeme Planning Region. [Read more here.](#)

Jānis Ikaunieks, Vidzeme Planning Region Energy Efficiency Expert

For Latvia conditions to produce the highest amount of energy, it is essential to install solar panels at angle of 45 ° and oriented to the south. PV panel power must be balanced with building power load. At one of the sites, electricity consumption fell by as much as 60% during the summer months, but that's when solar intensity is highest. For this building, solar panels with a minimum viewed power of 7.9 kWp would be unpaid over a period of 15 years. Solar panels can theoretically generate a certain amount of electricity, which solar panel dealers usually specify, but before installing, you need to evaluate the building's hourly power consumption to see if the electricity will be consumed at optimum levels.

Prosumerism best practise in Norway

Author: Kjell Vaagen, Hedmark County Council, Norway

Mr. Hjerkind and his family in the 14th generation is owning and managing hotel located in a very beautiful mountain nature and close to large nationalparks. The oldest building is from about 1890. The hotel is located close to 1000 m above sea level and in a really tough climate.

The hotel consist of several different buildings as a riding hall, horse shed/outbuilding and different hotel buildings. During the last years family invested in a heating pump, heat recovery from ventilation and a reduction from 5 to 1 electric meter.



Photo source: GD in Lillehammer newspaper

All these investments have also reduced the consumption of electricity and saved money in the long run. This summer family invested in solar panels covering about 350 m2 on a south-oriented roof on the outbuilding (horse shed).

Basic information about solar PV project:

- Investment on about 67000 euros (incl. VAT) in solar panels covering 350 m2 roof.
- No public support or grants.
- Producing about 60000 kWh a year and this is about 30% of the total energy consumption of the hotel buildings.
- The hotel uses all the energy and is not connected to the grid for selling surplus energy to the energy company.
- Pay back time is dependent of energy prices, but the suggestion is between 6-8 years and this is very impressing.
- HCC will follow up the company in 2020 for collecting new experiences (testing).

Technological solutions

EFFECT4buildings webinar: Technological solutions for energy efficiency measures in buildings

To share knowledge and experiences of energy efficiency solutions among building managers in the Baltic Sea Region project EFFECT4buildings on May 7, 2019 organized a webinar: Technological solutions for energy efficiency measures in buildings.

Energy efficient water taps, solar roofs, ceiling panels for efficient heating and cooling and energy efficient ventilation was the main topics.

Video presentations are available [here](#).

To measure is to know – new product released

Author: Hans Ahlin, EFFECT4buildings, Länsstyrelsen Dalarnas län

Most people spend approx. 90% of all time indoors. The quality of the indoor climate has therefore become very important to study. A great number of reports from researchers, institutions as well as reports from ordinary 'users' gives a common understanding that improvements are necessary and valuable for both society and individuals.

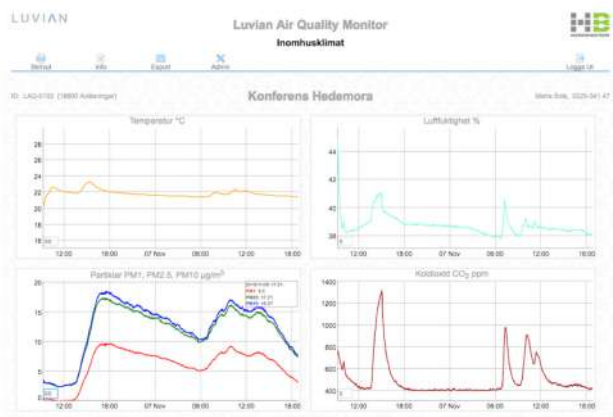
A new study by Future Workplace entitled, "The Workplace Wellness Study," finds that over 67% of the 1,601 North American employees surveyed said they are more productive in workplaces that promote a healthy environment. One-third said they lose at least an hour of productivity each day due to office environments that don't support their daily health. (<https://view.com/assets/pdfs/workplace-wellness-study.pdf>)

Mapping of indoor climate with a new Air Quality Monitor (LAQ) from the Swedish company Luvian AB

The LAQ collects data regarding the most important parameters that affects our health, well-being, comfort and performance when we are staying indoors.

- **Temperature:** The most important parameter. Affects our sleep and working ability.
- **Humidity:** Dry air wintertime, affects health and the spreading of viruses & bacillus.





- **Particles:** Carriers of disease and odours.
- **CO2:** High CO2-levels are indicators of inadequate ventilation.
- **TVOC & HCHO:** Keep track of unwanted emissions.

[Read more here.](#)



Pupil protection officers - important for the school environment - Soltorgsgymnasiet in Borlänge a model to follow

Author: Hans Ahlin and Marit Ragnarsson, Länsstyrelsen Dalarnas län, Sweden

The students are the ones who first and foremost suffer from poor school premises. Therefore, it is important to bring the students into the work of creating the best possible conditions. Here, student safety representatives can play an important role. They act as a link between the other students and the school's management.

Students' wellbeing is a prerequisite for being able to learn and perform in school and it is therefore important that pupils are allowed to participate in developing the quality of the school environment.

At Soltorgsgymnasiet in Borlänge we meet principal Hans Carlson, assistant principal Anita Brandt and the student Emilia Malm, who in a couple of weeks finish her three-year program. Since the second year in high school, she has served as a student protection officer at the school together with Linn Svärd.

Emilia Malm says: "I was elected through the school's student council and had to attend a training organized by Sweden's student associations. At the student council meetings, which are conducted once a month, I receive input from the other students and at the same time I tell them what has been said at the collaboration meetings and the annual safety round. At local collaboration meetings, which take place every month, school management, safety representatives, student safety representatives and union representatives participate."

At Soltorgsgymnasiet, the sports hall Maserhallen is used for the school's physical education.



For a long time, there have been problems with the environment in changing rooms and showers, which has been up for discussion both at the student council and at the collaboration meeting.

"At the school, Anita has meetings once a month with the student council and between the meetings the classes have class councils. It is very important for the students to be involved influencing the indoor environment," says Principal Hans Carlsson

[Read the interview here.](#)

EnergiCafé in Dalarna, Sweden

Author: Benny Magnuson, Sustainable Building Cluster in Dalarna, Sweden

In cooperation with Dalarna University, the Sustainable Building Cluster in Dalarna (Sweden) organizes a lecture series that deals with the latest in energy, EnergiCafé. Here, the work on the development of the tools within the EFFECT4buildings project is regularly presented.

Smart Energy Solutions: Take the leap - The right time is now:

Our society is facing a major challenge to meet our climate goals. How will we achieve our goals? Is there any technological solution available? These are tricky questions that we are face and maybe the solution is among the ones and zeros, this was discussed in the Energy Café "smart energy solutions are soon the new norm"(Wall, 2019).

It is often constraints that give life to new technological possibilities. New technology's enable development in our society, Steam locomotive, home telephones the fax machine are just a few examples on technology that has been of great importance in our society, but over time been replaced with new technology. It is difficult to predict future technology without defining the constraints with the technology we have today. The transition to a fossil-free society will require the development of new technologies and the phasing out some old ones. Solar cells, wind power, battery storage, electric cars and many other energy-related technologies are gaining momentum. This creates a more complex energy systems with several technological solutions and constraints. A better communication between the different technologies is a prerequisite to use the systems fully potential.

[Read more here.](#)



Benefits of new smart solutions:

There is great potential in energy-optimizing real estates in Europe, about 20% of the energy used in Europe goes to ventilation, warm water and heating/cooling properties. Two companies working hard to reduce this share is Ngenic and Healthy homes. [Read more here.](#)

Other articles about available technological solutions in Baltic Sea Region countries are available [here.](#)



[Few are familiar with the savings from mixers and showers, FM Mattsson Mora Group](#)



[2-in-1 solar panel solution, Roofit solar](#)



[Ceiling panels for efficient heating and cooling, Itula Oy](#)



[Smart ventilation unit - monitors and controls the indoor climate, Airobot](#)



[Healthier homes and reduced energy use with ventilation, Healthy Homes](#)

Energy efficient technologies for buildings in the Baltic Sea Region

18

greentech companies presenting technological solutions at the Green Est Summit in Estonia

Engineering solutions from Estonia, Finland, Norway, Sweden, Poland and Latvia

GreenEST Summit 2018: Future for Buildings - 18 smart solutions from 6 Baltic Sea states presented

Future for buildings was the focus of the first GreenEST Summit. More than 200 energy efficiency experts, building managers, architects and 18 greentech solutions providers gathered together on October 30, 2018 in Tallinn Creative Hub. The aim of the event was to improve energy efficiency in buildings. Read more about GreenEST Summit: Future for Buildings

<http://www.effect4buildings.se/>

Smart Load solutions OÜ, Estonia

Product: Thermost - thermostat for electrical floor heating that monitors different conditions (temperature, weather forecast, etc) inside and outside of the home and optimizes the energy use according to the actual energy price fluctuations.

Features: Simple installation, on-line and app surveillance. An interactive LED circle on the thermostat indicates the current energy price. When glowing red the price is at its peak signaling that might be a good idea to shut down other energy consuming devices in the home.

Energy savings: Savings of up to 40% of energy cost possible. When a lot of renewable energy is available in the grid the energy price drops and the thermostat will use this kind of green energy and thus reduce the amount of fossil energy used.

Interesting facts: The product was originally developed by some PhD students in Tallinn. The company has made an extra effort in product design, won second place in Design Award Estonia.

Read more: www.thermost.ee

Interviews with greentech companies are available [here.](#)

Other EFFECT4buildings news

EFFECT4buildings project partners and public building managers gain valuable experience in Viljandi, Tartu and Pärnu

From 27 to 29 August EFFECT4buildings project partners met in Viljandi and Tartu cities in Estonia. The main purpose of the meeting was to further develop the financial tools and instruments and learn more about Estonia's experience in energy efficiency solutions and financing opportunities in public buildings.

To learn more about Estonia's experience in energy efficiency solutions and financing opportunities, project team visited several public buildings and objects in Viljandi, Tartu and Pärnu - Rapla High School, private passive detached house in Viljandi.

kindergarten in Viljandi city, Paala High School in Viljandi, Estonian National Museum, Aura water park, Fortum district cooling station. In the framework of the EFFECT4buildings transnational working group meeting public building managers from Vidzeme Planning Region, Latvia, visited Estonia's largest solar power plant in Pärnu. [Read more here.](#)

Marit Ragnarsson, County Board of Dalarna, Sweden

We have come a long way with the development of many tools and testing has already started. For some of the more complex tools, like Energy Performance Contracting, Multi Service Contracts, Green Leasing Contracts this was a great opportunity to discuss next steps in the partnership.

There is a great deal to learn from each other and the tools are improved by adding experiences. The tool development in the project will now continue as well as more testing. We have also started to make plans for regional trainings that will be done in each partner region during the spring.



Regional stakeholder seminars in Hedmark, Norway

Author: Kjell Vaagen, Hedmark County Council, Norway

One of the tasks of EFFECT4buildings is to inform stakeholders about all the tools and interesting cases that EFFECT4buildings is working with. During 2019 Hedmark County Council will carry out 4 regional seminars for stakeholders in the sub-regions of Nord-Østerdal, Kongsvinger, Hamar and Sør-Østerdal. We are inviting stakeholders from public (politicians and civil servants) and private sector to these seminars and so far we have carried out 2 of 4 seminars. All seminars are organised together with the sub-regional council.

Together 22 stakeholders participated in our last seminar in Tynset in the sub-region of Nord-Østerdal with 6 municipalities. The program is about the 8 tools of EFFECT4buildings, indoor climate, climate and energyplanning, best practices of EPC (Energy Performance Contract) and more general about the work with energy efficiency. In the end of all the seminars we have a dialogue with the stakeholders about hindrances and opportunities of the work with energy efficiency.



Hedmark County Council find these seminars and the cooperation with the local authorities very valuable, and we are looking forward to our next seminar where we cooperate with the sub regional council of Kongsvinger with 5 municipalities.

EFFECT4buildings together with Act Now and LowTEMP projects organized experience exchange trip for Vidzeme municipalities

Author: Baiba Šelkovska, Communication manager, Vidzeme Planning Region, Latvia

In the framework of the Interreg Baltic Sea Region projects EFFECT4buildings, LowTEMP and Act Now and EU Sustainable Energy Week, on 17 and 18 June Vidzeme Planning Region together with Gulbene municipality organized experience exchange trip "Energy management solutions in neighboring municipalities – Daugavpils city in Latvia and Visaginas municipality in Lithuania". Vidzeme Planning Region invited public building managers, energy managers and other specialists on energy and heat supply issues to take part in the study visit.



The city of Daugavpils is one of the municipalities taking part in EU Covenant of Mayors for Climate & Energy. City has developed a Sustainable Energy Action Plan and Energy Management System according to energy management standard ISO 50001. In addition, the city actively informs and involves its citizens. "Creating and implementing an energy management system is a message to the citizens that the municipality is concerned about their well-being and the environment. This is a positive example and also calls for others to make efficient use of energy as an integral part of everyday life," says the municipality of Daugavpils.

The Visaginas municipality in Lithuania is special in that it has an Ignalina nuclear power plant (NPP) on its territory. Although the NPP has been closed since 2009, it plays an important role in implementing energy management measures in the municipality.

[Read more here.](#)

Want to know more about EFFECT4buildings?

A comprehensive decision-making toolbox with a set of financial instruments and methods for energy efficiency measures in buildings

EUSBSR flagship
Priority area
Energy,
HA Climate

Interreg
Baltic Sea Region

EUROPEAN REGIONAL DEVELOPMENT FUND
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Effective Financing Tools for implementing Energy Efficiency in Buildings



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Why building managers should know about the project EFFECT4buildings?

The project EFFECT4buildings is a collaborative effort between public building managers and private building owners to develop a set of financial instruments and methods to facilitate the financing of energy efficiency measures in buildings. The project aims to improve the energy efficiency of buildings and reduce the risk of implementing energy efficiency measures in buildings.

Financing toolbox

The main result of the project will be a comprehensive decision-making toolbox with a set of financial instruments and methods. Financial tools and methods will be tested in real-life cases during the project.

The toolbox developed during the project will be available online together with other project results. You can find it on the project website.

CLICK <http://www.effect4buildings.se>

EFFECT4buildings
International Newsletter for building managers #1
September 2018

EFFECT4buildings Newsletter 1#

About us

The project EFFECT4buildings is a collaborative effort between public building managers and private building owners to develop a set of financial instruments and methods to facilitate the financing of energy efficiency measures in buildings. The project aims to improve the energy efficiency of buildings and reduce the risk of implementing energy efficiency measures in buildings.

PROJECT PARTNERS

Examples of financial tools and methods

- FINANCIAL CALCULATIONS
- BUNDLING
- ENERGY INVESTMENT FUNDING
- CONVINCING DECISION MAKERS
- ENERGY EFFICIENCY CONTRACT
- MULTI-SERVICE CONTRACTING
- GREEN LEASING CONTRACT
- PROSILMERISM

PUBLIC BUILDING MANAGERS

Main target group is public building managers at local, regional and national level. Their tasks include taking care of rental agreements, lease management, everyday maintenance, renovation of the buildings, as well as their finance.

CASE OWNERS

Development case owners are the main target group in improvement work of the tools and methods. Examples of energy audits in buildings from each country and technology solutions identified in the project as well as ongoing real investment cases will be used for development of the financial toolbox.

TECHNOLOGY SOLUTION PROVIDERS

To increase availability of good technological solutions in the market there is a need to encourage mutual discussion between public building managers and technology providers. This dialogue will help technology providers to get the feedback on market needs to make further improvements in their solutions.

FINANCIAL TOOLBOX

The toolbox will contain tools and methods ready to use, ie. before there is any pilot guidelines, approaches for financing energy measures, decision support tools, decision guide and analysis of best practices, recommendations.

EFFECT4buildings Flyer for download



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Building managers meet companies with the smartest solutions for energy efficiency

What is so special about the companies that we met? They are not just building managers. They are also energy efficiency experts. They have developed smart solutions for energy efficiency in buildings. They have developed smart solutions for energy efficiency in buildings. They have developed smart solutions for energy efficiency in buildings.

GreenEST Summit 18: greentech companies from Baltic Sea Region countries

The GreenEST Summit 18 was a great opportunity for building managers to meet and learn from the best energy efficiency experts in the Baltic Sea Region. The summit was held in Tallinn, Estonia, and was attended by building managers from all over the region. The summit was a great success and we hope to see it again next year.

Multi-Services Contracting

Multi-Services Contracting is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods. Multi-Services Contracting is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods.

Green Leasing Contract

Green Leasing Contract is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods. Green Leasing Contract is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods.

Prosilmerism

Prosilmerism is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods. Prosilmerism is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods.

EFFECT4buildings Newsletter 2# Technologies

AN IMPORTANT TOOLKIT FOR ENVIRONMENT AND SUSTAINABILITY

Public building managers have a responsibility to ensure that their buildings are energy efficient and sustainable. This toolkit provides building managers with a set of financial instruments and methods to facilitate the financing of energy efficiency measures in buildings. The toolkit is a comprehensive decision-making toolbox with a set of financial instruments and methods for energy efficiency measures in buildings.

SEE THE WHOLE PICTURE

The toolkit provides building managers with a set of financial instruments and methods to facilitate the financing of energy efficiency measures in buildings. The toolkit is a comprehensive decision-making toolbox with a set of financial instruments and methods for energy efficiency measures in buildings.

FINANCIAL CALCULATIONS

Financial calculations are a key part of the toolkit. They allow building managers to calculate the costs and benefits of energy efficiency measures in buildings. Financial calculations are a key part of the toolkit. They allow building managers to calculate the costs and benefits of energy efficiency measures in buildings.

BUNDLING

Bundling is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods. Bundling is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods.

ENERGY INVESTMENT FUNDING

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CONVINCING DECISION MAKERS

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TAKE PART - GET IN TOUCH!

The toolkit is a comprehensive decision-making toolbox with a set of financial instruments and methods for energy efficiency measures in buildings. The toolkit is a comprehensive decision-making toolbox with a set of financial instruments and methods for energy efficiency measures in buildings.

ENERGY PERFORMANCE CONTRACT

Energy performance contract is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods. Energy performance contract is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods.

MULTI-SERVICE CONTRACTING

Multi-service contracting is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods. Multi-service contracting is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods.

GREEN LEASING CONTRACT

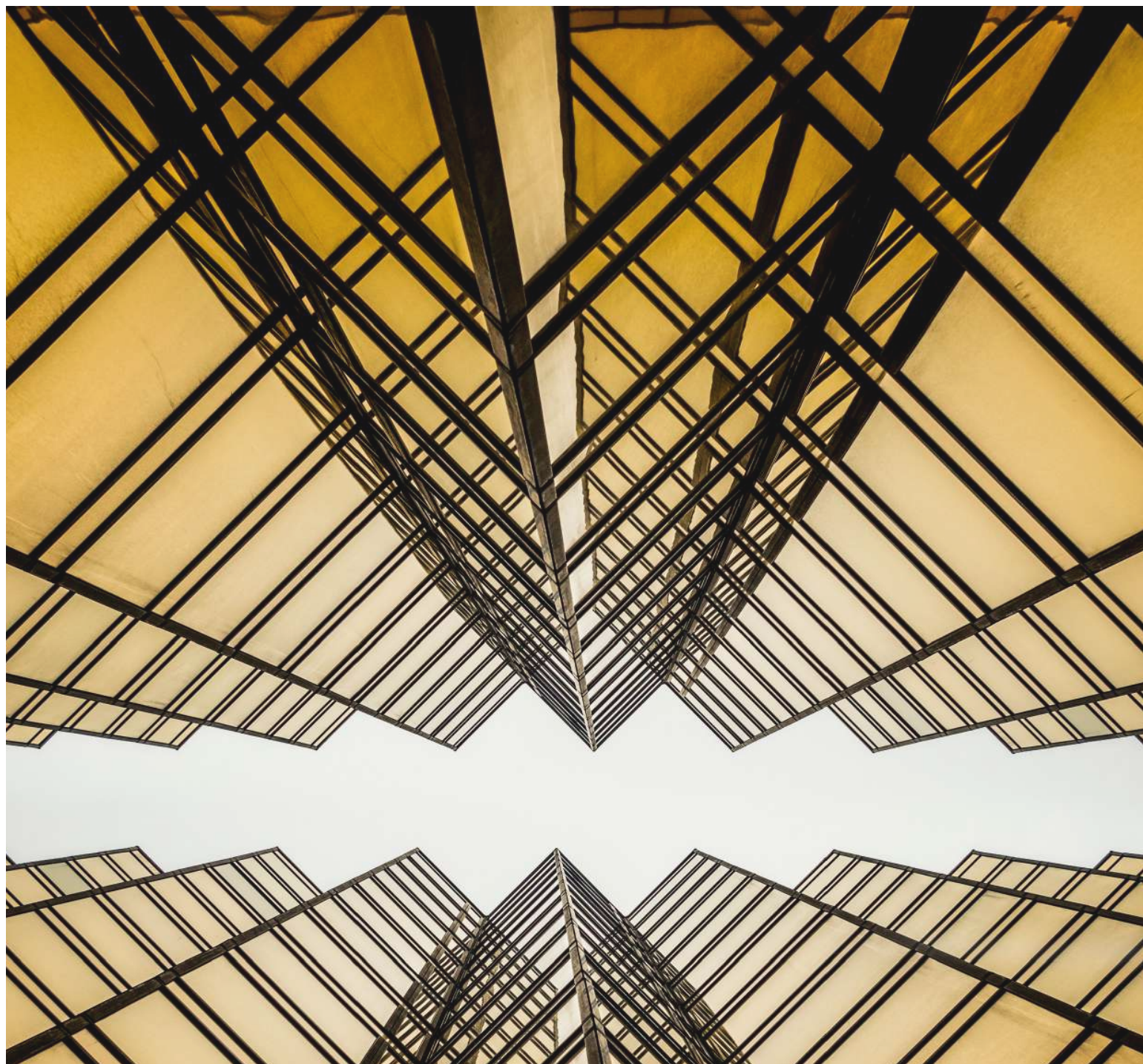
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PROSILMERISM

Prosilmerism is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods. Prosilmerism is a new way of financing energy efficiency measures in buildings. It allows building managers to finance energy efficiency measures in buildings by using a set of financial instruments and methods.

A TOOLKIT FOR IMPROVED ENERGY EFFICIENCY IN PUBLIC AND PRIVATE BUILDINGS

EFFECT4buildings Toolkit for Environment and Sustainability for download



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International Newsletter for building managers #3 Case stories October 2019

EFFECT4buildings project is implemented with the support from the EU funding Programme Interreg Baltic Sea Region (European Regional Development Fund) and Norwegian national funding. The aim of the project is to improve the capacity of public building managers in the Baltic Sea Region by providing them a comprehensive decision-making support toolbox with a set of financial instruments to unlock the investments and lower the risks of implementing energy efficiency measures in buildings owned by public stakeholders.

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