

PERSONAL INFORMATION

Romanas Savickas



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Sex Male | Date of birth 09/07/1977 | Residence Denmark

WORK EXPERIENCE

15 01 2017 - now



UNEP-DTU Partnership, Copenhagen Centre on Energy Efficiency. Senior Advisor, Principal/Managing Consultant and Expert for Global Energy, Energy Efficiency and District Heating development

Intercontinental experience developing Energy Efficiency projects in District Heating and Buildings Efficiency sector (EU countries, Chile, Balkan, Baltic sea region, Ukraine, Belarus, Russia, Moldova etc.).

Encourage national and local governments for climate mitigation, to increase Energy Efficiency, explanation of main benefits (reduced GHG emissions, improved air quality, reduced health costs, increased energy efficiency, better energy security, decreased fuel poverty, etc.), to explain that climate mitigation options can deliver a cost-effective decarbonisation as it foreseen in European Commission's Energy Roadmap 2050. The working with developing countries is much more difficult as they do not follow EU regulations but the final result of climate mitigation and energy efficiency increase has much bigger potential comparing with EU countries.

Technical, Economical and Legal expertise and assistance for national/local governments. Rapid assessments/Deep dive studies for the potential cities. Identification of short and long-term technical, economical, regulatory potential of district energy, analysis of barriers for project development, identification of potential policy options, preparation of project pre-feasibility studies, including financial estimates, conduction of pre-assessments of city potential and opportunities in focus regions, development of heat and hot water metering long term strategy for energy production and final customers, expertise and technical assistance, advice on heat or cool planning, training and other direct support to city authorities, development of best practice guidance for wider city use based on pilot activities, to build an overall work plan. Lead and expertise of rapid assessments/deep dive studies for outsourced contractors. Management of external engagements in alignment with project goals, development of Interactive Energy Map for Belgrade, etc.

Prepared studies:

- Waste for heating and cooling: how district energy transforms losses into gains. (development of six case studies of District Energy Systems in Cities in different countries, analysis how waste energy can be utilized by the help of district heating, analysis of their business models, identification of replication strategies, exploration of opportunities for promotion of the Eco Energy Town approach internationally).
- Energy efficiency improvements in Astrakhan city's (Russia) buildings and district heating system. (Developed the methodology to improve energy efficiency of buildings and district heating system in Astrakhan, which includes a statement of work and selection of pilot projects, a walk-through technical audit of pilot facilities, development of a technical solution, evaluation of economic parameters and selection of a financing model, project implementation and subsequent monitoring).



- District Heating development in Belgrade. Rapid Assessment.
- Financial Due Diligence and Business models for PPP in Temuco, Chile to implement District Heating.
- Heat Metering Strategy (Draft).



Business or sector Energy, Government, Local government, Public organisations, Private sector

02 11 2010 - 12 01 2017



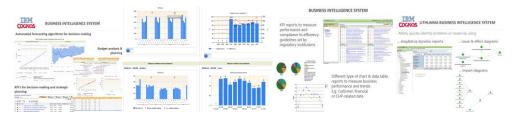
Veolia Energy in Lithuania (JSC "Vilniaus energija") Head of Engineers Analysts Office (8 energy engineers-analysts)

- (1) Title and role of management position. Head of Engineers Analysts Office.
- (2) Numbers of staff overseen in these positions. 8 engineers analysts.
- (3) The size of budgets managed. The salaries of employees. No special budget required for energy management, can be indicated the total annual energy sales of company.
- (4) Numbers of hierarchical layers above and below and number of peers. No hierarchical layers below, above the director of Projects department.

Energy Efficiency and Energy Management of the main biggest 9 cities in Lithuania. Company owns and manage district heating utilities in 9 cities: energy generation, distribution and demand side. Assessment of produced, supplied and consumed heat and hot water. Developed a methodology how according to historic data to identify theoretical monthly energy consumption for every final customer (building level), how to adjust these data according to actual outside/inside air temperature, heated area, building type, etc. and how to compare these data. The special key indicators have been developed to identify energy consumption discrepancies automatically and to get the reports. Report data also are used to avoid mistakes in billing procedure. Big data management.

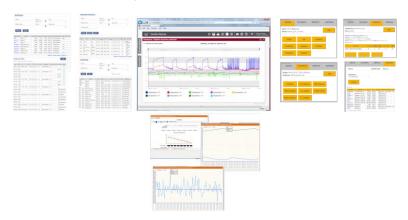
Methodology to forecast energy and hot water consumption for the next calendar year for every final customer (building level). As practice shows forecasts were made very precisely with coefficient of determination R²=99,5 value. Financial department to predict sale rates of the next year uses these forecasted data, so precision is very important and inaccuracy of every percent makes millions of Eur. These forecasted energy consumption data are very important to identify the most sensitive customers with smallest energy efficiency. Later these customers are put on a list for municipality and municipality can encourage them for building reconstruction (insulation of partitions, reconstruction of heating systems, installation of individual heat metering, etc).

All these calculations, methodologies and improvements per few years were transferred from Excel sheets to one IBM Cognos system. That solved a data collection issue from different people, saved a lot of time preparing and generating reports, some data automatically transferred into Navision Financials. Development and improvement of IBM Cognos system functionality advising IT department.





Control, management, exploitation, prevention and maintenance of heating systems in buildings by the help of smart wireless control and management system ENCO. Development and improvement of smart wireless control and management system functionality.



Assessment, preparation, improvement and expertise of energy sector legislation (implementation of 2012/27 EU Energy Efficiency Directive for individual metering, energy efficiency, heat metering, energy production, preparation of recommendations and strategies for national and local government institutions, state energy inspection, tax/price regulator, ministries and other stakeholders).

I am the author and I have developed and implemented an Interactive Actual Energy Consumption Class (AECC) map. Collaboration with 9 Lithuanian municipalities in the preparation of Interactive Actual Energy Consumption Class (AECC) map.

The Interactive Actual Energy Consumption Class (AECC) map is a tool to stimulate the population in residential buildings to consume heat energy in efficient way. It was introduced to the mayor and citizens of Vilnius city in 2013 when the analysis of heat consumption of buildings and recommendations were provided for citizens. Actual energy consumption is presented in 15 classes (1 is the best and most efficient building, 15 is worst). This energy efficiency criterion AECC is a unit, from which is eliminated various influencing factors - different heating seasons temperatures, durations, heating areas, so by the help of this indicator can be compared different buildings per different heating seasons. I have developed a special methodology for the calculation of AECC. According to AECC people can online evaluate how efficient is energy consumption in his building, consumers can compare energy consumption between buildings of the same project type. This project significantly contributes to the establishment of ESCO model in municipalities. Citizens are very interested in this project, as prime minister of the Republic of Lithuania Algirdas Butkevičius, minister of Ministry of Environment of the Republic of Lithuania Valentinas Mazuronis, mayor of Vilnius City Artūras Zuokas and other important persons also. This project is a winner of "Eurocities 2014" for the innovation in energy and contributes to the obligations according to Covenant of Mayors. More about this project:

https://www.youtube.com/watch?v=KiVII7hqsI0

Visit online website: http://www.vilnius.lt/vmap/t1.php?layershow=siluma.

Interactive AECC map for Biržai municipality was presented in 02/2014. Before 2017 AECC was implemented for remaining 7 cities.





Business or sector Energy, Private company

03 09 2007 - 03 02 2017



Vilnius Gediminas Technical University, Department of Energetics Associated professor/Lecturer Part time (half of workday)

Teaching disciplines:
Buildings Energy Efficiency;
Energy Generation;
Energy and Water Supply Systems;
Energy Systems and Technologies;
Building Engineering Systems;
Building Engineering Systems maintenance.

Supervision of bachelor and master thesis. Business or sector: Academic & Education, Energy

22 06 2009, 28 06 2010,



Lithuanian Energy Institute

Board member and Reviewer of scientific articles in CYSENI Conference on Energy Issues

Board member and Reviewer of scientific articles in CYSENI Conference on Energy Issues. Annual CYSENI 2009 and CYSENI 2010 conferences. Business or sector: Academic, Education, Energy

01 01 2014 - 31 12 2016



Lithuanian District Heating Association Independent Expert and Consultant

To prepare legal and technical acts and to provide all the necessary legal and technical consultancy regarding development and management of energy, energy efficiency, district heating sector and to present that to Lithuanian government bodies, parliament, ministries, public institutions (State Energy and Price Commission, Energy Committee of LR Parliament, Lithuanian Energy Agency, State Energy Inspectorate, State Tax Inspectorate, Lithuanian Metrology Inspectorate, etc.) and other organisations.

To provide all the necessary consultancy, the information on new technologies, business and managements subjects to the members.

Prepared studies:

- Implementation of 2012/27/EU Energy Efficiency Directive provisions at minimal costs in the district heating sector.
- Distant smart metering, monitoring and control system for the implementation of 2012/27/EU
- Energy Efficiency Directive.
- Heat and hot water metering strategy and implementation to increase energy efficiency in residential multiflat buildings.

Business or sector: Energy, Public organisation

29 08 2000 - 29 10 2010



SC "City Service" Projects Manager

- (1) Title and role of management position. Projects Manager.
- (2) Numbers of staff overseen in these positions. >50.
- (3) The size of budgets managed. >10 mln Eur.
- (4) Numbers of hierarchical layers above and below and number of peers. 3 hierarchical layers below, 3 hierarchical layers above.



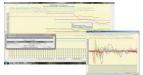
Experience running several large scale projects at the same time:

2000-2010. Project manager of Grand Education Project. All schools and kindergartens (245 objects, 750'000 m²) in Vilnius City. Annual turnover >10 mln. €. More than 50 employees under subordination. Activity - to increase energy efficiency by the help of sustainable and reliable heat energy supply, energy management, maintenance of heat, hot/cold water systems, big data management. The special energy efficiency indicator has been developed to show the change in energy efficiency. This indicator was applied to every final customer (building level) and every month data were consolidated to identify total efficiency. For everyday energy efficiency monitoring in every building were installed different sensors collecting energy consumption, inside temperature and other data. A special key indicator consolidating all these data from different objects and converting that into a final key indicator was developed and used. Energy efficiency has increased by more than 20%, so final energy consumption decreased drastically.

Energy efficiency and energy management have been performed by the help of smart wireless distant cloud based data control, monitoring and management system, which at early 2000 year was absolutely novelty and innovative high-tech technology. Development and improvement of smart wireless control and management system functionality. One of the project issues was that you never can expect to have 100% data, especially working with Big Data Management and different key indices, so you always have to work on that, apply different statistical or other methodologies to solve that.









2000-2010. Project manager for energy audits, energy efficiency means for public, commercial
and residential sector buildings, technical, economical and legal due diligences (TDD, EDD &
LDD). Consultation of commercial real estate companies how to manage energy consumption in
buildings, decrease expenses for energy and increase overall energy efficiency. Based on the
conclusions and recommendations of one of mine due diligences was sold a business centre
(Saltoniškių str. 2, Vilnius, Lithuania) – it was one of the largest real estate contracts in Baltic
States countries during 2009.







 Development of new business activities projects and markets. One of projects – assessment of business economic indices related to maintenance of building constructions, HVAC, boiler house, steam, hot/cold water, sewerage, compressed air, gas, electricity systems, cleaning services, employee leasehold, employee transportation, canteen services, etc) for Philip Morris plant.



PHILIP MORRIS INTERNATIONAL

2004-2008. Project manager for development of facility management and efficient heat economy maintenance in Kaunas city for multiflat residential buildings sector. Before all these activities were owned and managed by the public sector (municipality). I was working to help municipality to transfer these activities from public to liberalised private sector market, to describe terms of reference, to put these activities under different public tenders. The participation in public tenders for privatisation was successful, so our company finally managed 2/3 of all residential buildings in Kaunas City. Per next few years the facility management and efficient heat economy maintenance activity was successfully developed and placed on a right track.

Business or sector Energy, Private company



03 05 1999 - 02 05 2000

JSC "Rubikon Apskaitos Sistemos"

- (1) Title and role of management position. Not managerial role.
- (2) Numbers of staff overseen in these positions. 0.
- (3) The size of budgets managed. 0.
- (4) Numbers of hierarchical layers above and below and number of peers. Not managerial role.

JSC "Vilniaus Vatas" was reorganised and connected to bigger JSC "Rubikon Apskaitos Sistemos", transferring all employees, so the same tasks as in the company before.

Design of energy efficient heat substations for buildings converting open type heating systems into independent type with heat exchangers for heating and hot water preparation and advanced automatics. Heating and hot water systems maintenance inside buildings, technical and maintenance issues for energy efficient exploitation keeping OPEX as low as possible.

Business or sector Energy, Private company

01 07 1998 - 03 05 1999

JSC "Vilniaus Vatas" Energy Engineer

- (1) Title and role of management position. Not managerial role.
- (2) Numbers of staff overseen in these positions. 0.
- (3) The size of budgets managed. 0.
- (4) Numbers of hierarchical layers above and below and number of peers. Not managerial role.

Design of energy efficient heat substations for buildings converting open type heating systems into independent type with heat exchangers for heating and hot water preparation and advanced automatics. Heating and hot water systems maintenance inside buildings, technical and maintenance issues for energy efficient exploitation keeping OPEX as low as possible.

Business or sector Energy, Private company

EDUCATION AND TRAINING

2002-2007 Doctoral degree,

Energy and Thermal Engineering, Vilnius Gediminas Technical University

2000-2002 Master degree,

Energy and Thermal Engineering, Vilnius Gediminas Technical University

1996-2000 Bachelor degree,

Energy and Thermal Engineering, Vilnius Gediminas Technical University

PERSONAL SKILLS

Mother tongues

Lithuanian, Russian

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Russian	C2	C2	C2	C2	C2



Communication skills

Communication skills with:

- Business people developing new business activities;
- Academic people;
- Intercontinental national and local government institutions;
- Intercontinental energy sector private companies;
- Intercontinental associations and organisations.

Organisational / managerial skills

- Management and coordination of large scale projects with international partners;
- More than 15 years management experience from 8 to 51 employee.

Computer skills

- Expert level in MS Excel, big data analysis, statistical and analytical analysis, etc., some programming knowledge;
- Expert level in MS Word;
- Expert level in MS Power Point;
- Pascal basic knowledge;
- Basic basic knowledge;
- macOS;
- Many other work related computer programs.

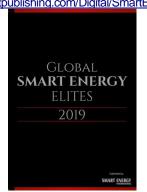
Driving licence

■ B from 1997.

ADDITIONAL INFORMATION

Honours and awards

Awarded as a "GLOBAL ENERGY ELITE 2019" by "SMART ENERGY INTERNATIONAL". http://spintelligentpublishing.com/Digital/SmartEnergy/GlobalSmartEnergyElites2019/index.html









Honours and awards

Winner of "Eurocities 2014" (organisation covers all Europe Cities): **first place for the Innovation** in Energy in EU.

I am an author and manager of Interactive Actual Energy Consumption Class (AECC) map, which is a tool to stimulate the population in residential buildings to consume heat energy in efficient way. I am strongly experienced in the analysis of actual energy consumption, introduction and calculation of energy efficiency criteria and evaluation and thorough analysis of energy consumption in buildings. The project is acknowledged by prime minister of the Republic of Lithuania Algirdas Butkevičius, minister of Ministry of Environment of the Republic of Lithuania Valentinas Mazuronis, mayor of Vilnius City Artūras Zuokas and others.

This my project is a winner of "Eurocities 2014" (organisation of all Europe Cities): first place for the Innovation in Energy.

More about this project: https://www.youtube.com/watch?v=KiVII7hqsl0 Visit online Interactive map website:

http://www.vilnius.lt/vmap/t1.php?layershow=siluma







Honours and awards

In October 2016 my project was recognised worldwide and I have presented Interactive Actual Energy Consumption map in a **World Energy Congress (WEC)** in Istanbul.



Presentations in Conferences

Most recent presentations per last 3 years:

• Energy efficiency in buildings, 2014



Smart Energy Management: interactive actual energy consumption class map, 2015



Interactive Actual Energy Consumption Map, 2015





World Champion Cities for District Energy Use: Insight into Vilnius, 2015



 Energy efficiency means according to energy efficiency 2012/27/EU directive to decrease energy consumption for a final consumer, 2015



 smart assets management. Asset replacement: all at once VS. one by one. Case study: Vilnius City and other 10 Cities in Lithuania, 2016



• Combined technical and policy approaches to building efficiency and district energy in Vilnius, Lithuania, 2016



Smart Energy Management: online interactive building energy consumption information in vilnius, 2016



 Resolving Energy Trilemma by the help of Smart e-Energy Efficiency Management Technologies – Interactive Online Actual Energy Consumption Class (AECC) map, 2016



Synergy of Buildings Efficiency and district heating, 2017



International Best Practices on Energy Mapping for District Energy, 2017



• Increasing energy efficiency in accordance to energy efficiency 2012/27/EU directive to decrease energy consumption for a final energy end user, 2017



Development of district heating projects in developing countries smart thermal grid energy mapping



Aktyvių ir pasyvių sistemų bilaterali įtaka pastato ir šilumos šaltinio energiniam efetyvumui





Publications

Publications with International Standard Serial Number (ISSN):

- 1. Savickas R., Skrinska A. Analysis of Legionella pneumophila risk assessment of the hot water supply system with continuous circulation. Energetika. ISSN 0235-7208. Vilnius: Lithuanian Academy of Sciences, 2006, nr. 2, p. 57–62.
- 2. Savickas R., Skrinska A. Probabilistic analysis of hot water consumption uniformity. Energetika. ISSN 0235-720. Vilnius: Lithuanian Academy of Sciences, 2006, nr. 4, p. 50–58. 3. R. Savickas, A. Skrinska. Analysis of efficiency and uncertainty of consumption of hot

water metering systems in multiflat buildings. Energetika. ISSN 0235-7208. Vilnius: Lithuanian Academy of Sciences, 2007, nr. 4, p. 76–83.

- 4. Savickas R. Heating systems management and maintenance using distant control, monitoring and management system Rubisafe. National conference "Engineering systems", 2004-02-27 conference, Vilnius Gediminas technical university, material for an article (ISBN 9986-05-712-4). Vilnius: Technika, 2004, p. 66-69.
- 5. Savickas R. Determination of trends for hot water preparation energy. Conference "Young Scientists on Energy Issues 2006". 2006-06-08 conference, material for an article (ISBN 9986-492-92-0), 8 pages., CD-rom (ISBN 9986-492-91-2). Kaunas: Lithuanian energy institute. 2006.
- 6. Savickas R. Influence of building shape indicator on building energy consumpion efficiency. Conference "Young Scientists on Energy Issues 2009. CYSENI 2009". 2009-05-28 2009-05-29, material for an article (ISSN 1822-7554), 10 pages. Kaunas: Lithuanian energy institute, 2009.
- 7. Baronas R., Cikanaitė A., Miliauskas I., Savickas R., Zabarauskas R. Facility management guides for multiflat buildings / Vilnius: Europe social fund, 2010. 49-79 p.
- 8. Savickas R. Influence of heat measurement method on consumed amount of heat in multiflat dwelling houses. Conference "9th international conference of young scientists on energy issues CYSENI 2012, on 24-25th may". 2012-05-24 2012-05-25 conference, material for an article (ISSN 1822-7554), 9 pages. Kaunas: Lithuanian energy institute, 2012
- 9. Savickas R. Precise evaluation of heat energy for hot water for energy efficiency calculations. Conference "9th international conference of young scientists on energy issues CYSENI 2012, on 24-25th may". 2012-05-24 2012-05-25 conference, material for an article (ISSN 1822-7554), 10 pages. Kaunas: Lithuanian energy institute, 2012.
- 10. Savickas R., Jaugielavičius R. Potential and possibilites of a new smart heat network. Šiluminė technika. ISSN1392-4346. Vilnius: Šiluminė technika, 2013, no.2 (No. 55) July, p. 20–22.
- 11. Savickas R., Stasiūnas V., Paulauskas M. Forecasting energy consumption and payments for heating and hot water preparation for 2013–2014 heating season. Šiluminė technika. ISSN1392-4346. Vilnius: Šiluminė technika, 2013, no.3 (No. 56) October, p. 3–6.
- 12. Savickas R. Study and assesment of an Actual Energy Consumption Class (AECC) and energy consumption efficiency in Vilnius. Šiluminė technika. ISSN1392-4346. Vilnius: Šiluminė technika, 2014, no.1 (No. 58) March, p. 3–6.
- 13. Savickas R., Ropaitė G. Energy consumption dependance on multiflat building age, consumers age and social-econimical factors. STATYBA / CIVIL ENGINEERING. 17th Lithuanian conference of young scientists "Science future of Lithuania". eISSN 2029-7149, 5 pages. 2014-03-19 2014-03-28, Vilnius.
- 14. Savickas R., Ropaitė G. Assesment of multiflat buildings in Vilnius City. STATYBA / CIVIL ENGINEERING. 17th Lithuanian conference of young scientists "Science future of Lithuania". eISSN 2029-7149, 6 pages. 2014-03-19 2014-03-28, Vilnius.
- 15. Savickas R. Vilnius most innovative among Europe Cities in energy sector. Šiluminė technika. ISSN1392-4346. Vilnius: Šiluminė technika, 2014, no.4 (No. 61) December, p. 10-11.
- 16. V. Martinaitis, D. Bieksa, A. Rogoza, R Savickas Quantitative estimation of improvements in the efficiency of district heating substation control system. Building Services Engineering Research and Technology. 2014. CIBSE Chartered Institution of Building Services Engineers.
- 17. Savickas R., Savickienė L., Paulauskas M. Energy efficiency means according to energy efficiency 2012/27/EU directive to decrease energy consumption for a final consumer. Conference "12th international conference of young scientists on energy issues CYSENI 2015, on 27-28th May", (ISSN 1822-7554), 10 pages. Kaunas: Lithuanian Energy Institute, 2015.
- 18. Savickas R., Savickienė L., Bielskus J. Technical measures to decrease heat energy consumption of final customer in multiflat buildings according to energy efficiency directive. ISSN 2029-2341 / eISSN 2029-2252. Science Future of Lithuania, 2015 7(4), p. 461-467.
- 19. Savickas R., Savickienė L., Increasing Energy Efficiency in accordance to Energy Efficiency 2012/27/EU Directive to decrease energy consumption for a final energy end user. 48th International Congress on Heating and Refrigeration and ASHRAE Region XIV, Belgrade, 6–8 Dec. 2017, 8 pages. Belgrade.

