

Curriculum Vitae

Personal information

First name / Surname

Behnam Zakeri

Contact information

Mobile: +43 67683807532 E-mail: zakeri@iiasa.ac.at Marital status: married (father of one child)

Summary of my expertise

I investigate the role of technology, systems integration, large data, and markets/policies that enable energy transitions, including the impact of such transitions on the environment and the economy.

Work and research experience

Dates

Sep 2017 – onwards

Occupation or position held

Research Scholar / Senior Research Scholar (as of Jan 2023)

Main activities and responsibilities

- Coordinator of the theme “Modeling for National Transformations”
- Developing tools for integrated modeling and simulation of (net-zero) energy and climate scenarios
- Application of data analytics in modeling the energy transition for informing energy policy
- Coordinating training and capacity-building activities, and developing teaching materials

Name and type of employer

Energy, Climate, and Environment (ECE) Program, International Institute for Applied Systems Analysis (IIASA), Austria

Dates

Sep 2017 – Dec 2020 (part-time)

Occupation or position held

Assistant Professor / Visiting Lecturer

Main activities and responsibilities

- Teaching and supervision of students' project work on low-carbon and sustainable energy solutions
- Big energy data analysis and opensource modeling of European energy systems

Name and type of employer

Sustainable Energy Planning Research Group, Aalborg University, Denmark

Dates

Sep 2013 – Sep 2017

Occupation or position held

Project Researcher / Junior Researcher / Postdoctoral Researcher

Main activities and responsibilities

- Developing quantitative models for the analysis of energy systems in transition
- Modeling and analysis of the role of flexibility solutions, focusing on energy storage
- Feasibility study of energy storage for the island of Jersey (consultancy for a commercial client)
- GIS-based analysis of renewable energy resources and big energy data analytics

Name and type of employer

Energy Efficiency and Systems Lab., Department of Mechanical Engineering, Aalto University, Finland

Dates

Jun 2012 – Jun 2013

Occupation or position held

Research Assistant

Main activities and responsibilities

- Modeling and analysis of subprocesses in steam power plants and optimization of such systems
- LUT Energy, Lappeenranta University of Technology, Finland (research laboratory)

Name and type of employer

Awards/Honours

- **Top 10 Downloaded Articles** in the field of Energy Management SSRN (See Publications, No. 4)
- **Best Paper Award** for the most downloaded paper, Energies (MDPI), 2021 (See Publication No. 29).
- **Best Paper Award** for “an outstanding presentation” at the 9th International Conference on Sustainable Development of Energy, Water and Environment Systems, Venice-Istanbul, Sep 2014 (see the Publication list, No. 55).
- **Best Paper Award** for one of the three “Best papers presented by Ph.D. and post-doctoral students” at the 11th International Conference on the European Energy Markets, Krakow, Poland, May 2014 (see the Publication list, No. 57).
- **Best Publication Award**, Aalto School of Engineering, 2014, for a “young researcher publishing a high-quality article in a high-impact journal” (see the Publication list, No. 41).
- **Top 25 Articles** in the field of Energy (among articles from 69 journals) and **The 3rd Most Downloaded Article** in Renew Sustain Energy Rev (Elsevier) as of Jan 2020 (Publication No. 41).

Education	
Dates	Sep 2013 – Sep 2016
Title of qualification	Doctor of Science (Tech.), Energy Systems Analysis (GPA: 4.4 out of 5.00, <i>Excellent</i>)
Title of dissertation	<i>Integration of variable renewable energy (VRE) in national and international energy systems – Modelling and assessment of flexibility requirements</i> (direct link)
Name of institution	Energy Efficiency and Systems, Department of Mechanical Engineering, Aalto University, Finland
Dates	Sep 2011 – Aug 2013
Title of qualification	Master of Science (Tech.), Energy Technology (<i>Graduated with distinction</i> , GPA: <u>4.86</u> out of 5.00)
Name of institution	Minor studies: Modelling of Energy Systems Lappeenranta University of Technology, Lappeenranta, Finland
Principal subjects	Optimal Power Systems, Emission Trading, Air Pollution Control, and Environmental Management
Dates	Sep 1997– Aug 2003
Title of qualification	Bachelor of Science, Mechanical Engineering (Thermo-Fluids)
Name and type of institution	Iran University of Science and Technology (IUST), Tehran, Iran
International research visits	
Dates	Apr 2016 – June 2016
Position held	Visiting Scholar (Whole System Energy Modelling, WholeSEM Fellow)
Host institution	The Energy Institute, University College London (UCL), UK
Area of expertise	- (i) Tempo-spatial data for modeling of variable renewable energy (VRE) and (ii) Linking power systems, buildings, and long-term energy models.
Supervisor	Prof. Neil Strachan, Dr. Ilkka Keppo
Dates	April 2015 – June 2015
Position held	Visiting Researcher
Host institution	Sustainable Energy Planning Research Group, Department of Planning, Aalborg University, Denmark
Area of expertise	Modeling and analysis of the impacts of VRE integration in multi-country energy systems
Supervisor	Prof. David Connolly, Prof. Brian Vad Mathiesen
Teaching experience	
Course title, scope, institution, dates	Global Energy Transitions and Climate Policy (3 ECTs), Master's level, TU Wien (Austria) (link)
Role and responsibilities	Designing the course, developing teaching material and exercises, and lecturing, March 2020-onwards
Course title, scope, institution, dates	MESSAGEix Workshop Series , training, IIASA (Austria) (link)
Role and responsibilities	Co-designing the course, developing teaching material, coordinating lecturers, Summer 2017-onwards
Course title, scope, institution, dates	Energy Data and Models for Policy Making (3 ECTs), Graduate level, East China University of Science and Technology (ECUST), intensive seminar and workshop, Fall 2019
Role and responsibilities	Lecturer, preparing material, designing the workshop, and supervision
Course title, scope, institution, dates	Energy Economics and Modelling (~5 ECTs), Master's level, Int. summer school in Energy Technology, Saint. Petersburg Polytechnique University (Russian Federation), intensive course, Summer 2018
Role and responsibilities	Designing the course (lectures and workshops), lecturing, supervising group works
Course title, scope, institution, dates	Optimization vs. Simulation: Contemporary Topics in Energy Modelling (3-day workshop), the Energy Conversion and Renewable Resources Research Centre KEZO (Poland), Summer 2018
Role and responsibilities	Designing the workshop and tutorials, lecturing and supervising group work, feedback
Course title, scope, institution, dates	Energy Markets (5 ECTs), Master's level, Aalto University (Finland), 2014-2018
Role and responsibilities	Lecturer (the part related to the economics of energy storage) and relevant exercises
Pedagogical training	
Completed courses, credits	Following formal courses taken: - Introduction to Pedagogy (AI Peda Intro) (5 ECTs), - Course Design (5 ECTs), - Providing and Utilizing Feedback (3 ECTs), - Teaching and Learning in Higher Education (5 ECTs), - Supporting Teachers' Competence in Multicultural Environments (5 ECTs)
Institution, country, dates	Aalto University, Finland (2015-2017)

<p>Supervision and instructions*</p> <p>Dates, role, institution</p> <p>Dates, role, institution</p> <p>Dates, role, institution</p> <p>Dates, role, institution</p> <p>Dates, role, institution</p>	<p>2021, Supervisor of Young Scientist Summer Program (YSSP), Siddharth Joshi (Machine-learning and GIS-based analysis of rooftop solar PV in global scenarios, Winner of Best YSSP Award), IIASA</p> <p>2020, Supervisor of Young Scientist Summer Program (YSSP), Maarten Brinkerink (Linking integrated assessment models to a power system tool), IIASA</p> <p>2019, Co-supervisor of Young Scientist Summer Program (YSSP), June Shepard (International energy trade and energy security), IIASA</p> <p>2015-2019, Instructor of the doctoral thesis of Helin Kristo titled "Energy transition impacts and opportunities in the Nordic electricity and district heating markets", Aalto University, Finland</p> <p>2016-2019, Instructor of the doctoral thesis of Jaakko Jaaskelainen, titled "An interdisciplinary assessment of energy security risks in the Finnish energy market", Aalto University, Finland (*not including the instruction of master's thesis workers)</p>
<p>Positions of trust</p> <p>Dates, Institution, Role</p> <p>Dates, Institution, Role</p> <p>Dates, Institution, Role</p>	<p>2017-onwards, Research Council of Norway, External Expert in evaluating research proposals</p> <p>2021-onwards, Dutch Research Council, External Reviewer</p> <p>2020-2021 IIASA-ISC Covid-19 Initiative on Bouncing Forward Sustainably, Co-leader of "Energy"</p>
<p>Sample Funded Projects</p> <p>Funding institution, date, project, role/amount, topic</p> <p>Funding institution, date, project, role/amount, topic</p> <p>Funding institution, date, project, role/amount, topic</p> <p>Funding institution, date, project, role/amount, topic</p> <p>Funding institution, date, project, role/amount, topic</p> <p>Funding institution, date, project, role/amount, topic</p>	<p>UN Economic Commission for Europe (UNECE), 2018-onwards, Lead modeler and consultant 500k€. Projects: Pathways to Sustainable Energy (2018-20) and Carbon Neutrality (2021-22)</p> <p>European Commission, 2021-2025, Energy and Climate Modelling Forum for Europe (ECEMF), Total 5 M€ (Task Leader /-100k€), Role of energy demand in achieving net zero scenarios</p> <p>South Korea Environment Center, 2022-2027, GUIDE (Total 5,8 M€, co-writer of IIASA's role ~1 M€, Lead modeler) Global energy and climate pathways and their implications for air pollution and health</p> <p>Green Climate Fund (GCF), 2019-2020, Country Program, Total 1 M€ (Led IIASA's role ~178 k€, Technical advisor) Mitigation pathways and vulnerability analysis of several GCF member countries</p> <p>Academy of Finland, 2017-2020, Research project grant, Total 300k€ (co-writer of the proposal) Transformation pathways towards 2050 low-carbon targets in Finland</p> <p>Aalto University (Finland), 2013-16, full doctoral scholarship, Total 120k€ Integration of renewable energy in a country with a high share of nuclear power and interconnection</p>
<p>Editorship and reviewer</p>	<p>Ad-hoc reviewer of journals of Nature, Nature Communications, Energy, Applied Energy, etc. Editor of Special Issue in Economics of Energy Storage, Energies, 2022 (link) and Covid-19 and Sustainable Energy Transitions (link)</p>
<p>Skills and qualifications</p> <p>Language skills Official language test</p> <p>Computer skills and competences</p> <p>Research fields of interest</p>	<p>Persian (native), English (excellent), Swedish (intermediate), Finnish (intermediate), German (basic) IELTS (Academic Training), overall band score=7.5 (test date: 2010)</p> <ul style="list-style-type: none"> - Programming, data analysis, modeling, and optimization: Python, MATLAB, GAMS - Energy-economic models: EnergyPLAN, MESSAGEix, LEAP, energyPRO, HighRES, Enerallt - Power plant and process simulation: IPSEpro, BALAS, Aspen Plus - Own developed models in MATLAB: a multi-region energy market model (Enerallt) <ul style="list-style-type: none"> - Analysis of energy systems and their interrelations with environmental-economic systems - Energy data, renewable energy integration, energy storage, energy markets, and policy analysis
<p>List of relevant publications</p> <p>Journal articles (peer-reviewed)</p>	<p>A guidance for finding my sample publications: Sample Modeling (SM); Sample Leadership (SL); Sample Supervision (SS); Sample Writing (SW)</p> <ol style="list-style-type: none"> 1- Joshi, S., Zakeri, B., Mittal, S., Mastrucci, A., Holloway, P., Krey, V., et al, 2023. Assessing the growing role of decentralised rooftop solar photovoltaics in future global energy system. Joule (under review). 2- Guo, F., van Ruijven, B.J., Zakeri, B., Zhang, S., Chen, X., Liu, C., Yang, F., Krey, V., Riahi, K., Huang, H. and Zhou, Y., 2022. Implications of intercontinental renewable electricity trade for energy systems and emissions. Nature Energy, pp.1-13. [SM]

- 3- Zakeri, B., Paulavets, K., Barreto-Gomez, L., Echeverri, L.G., Pachauri, S., Boza-Kiss, B., Zimm, C., Rogelj, J., Creutzig, F., Ürge-Vorsatz, D., Victor, D.G., et al. 2022. Pandemic, War, and Global Energy Transitions. *Energies*, 15(17), p.6114. [SL]
- 4- Zakeri, B., Staffell, I., Dodds, P., Grubb, M., Ekins, P., Jääskeläinen, J., Cross, S., Helin, K. and Castagneto-Gissey, G., 2022. Energy Transitions in Europe–Role of Natural Gas in Electricity Prices. Available at SSRN: <http://dx.doi.org/10.2139/ssrn.4170906> (Top 10 Downloaded Article) [SW]
- 5- Zakeri, B., Hunt, J.D., Laldjebaev, M., Krey, V., Vinca, A., Parkinson, S. and Riahi, K., 2022. Role of energy storage in energy and water security in Central Asia. *Journal of Energy Storage*, 50, p.104587. [SM]
- 6- Brinkerink, M., Zakeri, B., Huppmann, D., Glynn, J., Gallachóir, B.Ó. and Deane, P., 2022. Assessing global climate change mitigation scenarios from a power system perspective using a novel multi-model framework. *Environmental Modelling & Software*, 150, p.105336. [SS]
- 7- Shepard, J.U., van Ruijven, B.J. and Zakeri, B., 2022. Impacts of Trade Friction and Climate Policy on Global Energy Trade Network. *Energies*, 15(17), p.6171. [SS]
- 8- Hunt, J.D., Nascimento, A., Zakeri, B., Jurasz, J., Dąbek, P.B., Barbosa, P.S.F., Brandão, R., de Castro, N.J., Leal Filho, W. and Riahi, K., 2022. Lift Energy Storage Technology: A solution for decentralized urban energy storage. *Energy*, 254, p.124102.
- 9- Hunt, J.D., Jurasz, J., Zakeri, B., Nascimento, A., Cross, S., ten Caten, C.S., de Jesus Pacheco, D.A., Pongpairoj, P., Leal Filho, W., Tomé, F.M.C. and Senne, R., 2022. Electric Truck Hydropower, a flexible solution to hydropower in mountainous regions. *Energy*, 248, p.123495.
- 10- Hunt, J.D., Nascimento, A., Zakeri, B. and Barbosa, P.S.F., 2022. Hydrogen Deep Ocean Link: a global sustainable interconnected energy grid. *Energy*, 249, p.123660.
- 11- Hunt, J.D., Nascimento, A., Zakeri, B., Barbosa, P.S.F. and Costalonga, L., 2022. Seawater air-conditioning and ammonia district cooling: A solution for warm coastal regions. *Energy*, p.124359.
- 12- Ding, B., Makowski, M., Zhao, J., Ren, H., Zakeri, B. and Ma, T., 2022. Analysis of technology pathway of China's liquid fuel production with consideration of energy supply security and carbon price. *Journal of Management Science and Engineering*, 8(1), pp. 1-14.
- 13- Liu, J., Zhou, W., Yang, J., Ren, H., Zakeri, B., Tong, D., Guo, Y., Klimont, Z., Zhu, T., Tang, X. and Yi, H., 2022. Importing or self-dependent: energy transition in Beijing towards carbon neutrality and the air pollution reduction co-benefits. *Climatic Change*, 173(3), pp.1-24.
- 14- Zakeri B., Cross S., Dodds P., Castagneto G., 2021. Policy options for enhancing economic profitability of solar PV with battery energy storage. *Appl Energy*, 290, e116697. [SW]
- 15- Zakeri, B., Gissey, G.C., Dodds, P.E. and Subkhankulova, D., 2021. Centralized vs. distributed energy storage–Benefits for residential users. *Energy*, 236, p.121443.
- 16- Kikstra, J.S., Vinca, A., Lovat, F., Boza-Kiss, B., van Ruijven, B., Wilson, C., Rogelj, J., Zakeri, B., Fricko, O. and Riahi, K., 2021. Climate mitigation scenarios with persistent COVID-19-related energy demand changes. *Nature Energy*, 6(12), pp.1114-1123. [SM]
- 17- Chang M., Thellufsen J.Z., Zakeri B., Pickering B., Pfenninger S., Lund H., Østergaard P., 2021. Trends in tools and approaches for modelling the energy transition. *Appl Energy*, 290, e116731.
- 18- Pusceddu E., Zakeri B., Castagneto Gissey G., 2021. Synergies between energy arbitrage and fast frequency response for battery energy storage systems. *Appl Energy*, 283:116274.
- 19- Castagneto Gissey G., Zakeri B., Dodds P.E., Subkhankulova D., 2021. Evaluating consumer investments in distributed energy technologies. *Energy Policy*, 149:112008.
- 20- Riahi, K., Bertram, C., Huppmann, D., Rogelj, J., Bosetti, V., Cabardos, A.M., Deppermann, A., Drouet, L., Frank, S., Fricko, O., Fujimori, S., et al. 2021. Cost and attainability of meeting stringent climate targets without overshoot. *Nature Climate Change*, 11(12), pp.1063-1069. [SM]
- 21- Drouet, L., Bosetti, V., Padoan, S.A., Aleluia Reis, L., Bertram, C., Dalla Longa, F., Després, J., Emmerling, J., Fosse, F., Fragkiadakis, K., Frank, S., et al. 2021. Net zero-emission pathways reduce the physical and economic risks of climate change. *Nature Climate Change*, 11(12), pp.1070-1076.
- 22- Harmsen, M., Krieglner, E., Van Vuuren, D.P., van der Wijk, K.I., Luderer, G., Cui, R., Dessens, O., Drouet, L., Emmerling, J., Morris, J.F. Fosse, F., et al. 2021. Integrated assessment model diagnostics: key indicators and model evolution. *Environmental Research Letters*, 16(5), p.054046.
- 23- Chen, X., Yang, F., Zhang, S., Zakeri, B., Chen, X., Liu, C. and Hou, F., 2021. Regional emission pathways, energy transition paths and cost analysis under various effort-sharing approaches for meeting Paris Agreement goals. *Energy*, 232, p.121024.
- 24- Nabavi, S.A., Motlagh, N.H., Zaidan, M.A., Aslani, A. and Zakeri, B., 2021. Deep learning in energy modeling: Application in smart buildings with distributed energy generation. *IEEE Access*, 9, pp.125439-125461.

- 25- Hunt, J.D., **Zakeri, B.**, de Barros, A.G., Leal Filho, W., Marques, A.D., Barbosa, P.S.F., Schneider, P.S. and Farenzena, M., 2021. Buoyancy Energy Storage Technology: An energy storage solution for islands, coastal regions, offshore wind power and hydrogen compression. *Journal of Energy Storage*, 40, p.102746.
- 26- Hunt, J.D., Falchetta, G., Parkinson, S., Vinca, A., **Zakeri, B.**, Byers, E., Jurasz, J., Quaranta, E., Grenier, E., Junior, A.O.P. and Barbosa, P.S.F., 2021. Hydropower and seasonal pumped hydropower storage in the Indus basin: pros and cons. *Journal of Energy Storage*, 41, p.102916.
- 27- Hunt J.D., **Zakeri B.**, Leal Filho W., Schneider P.S., Weber N. de A.B., Vieira L.W., et al., 2021. Swimming pool thermal energy storage, an alternative for distributed cooling energy storage. *Energy Convers Manag*, 230:113796.
- 28- Hunt, J.D., Weber, N.D.A.B., **Zakeri, B.**, Diaby, A.T., Byrne, P., Leal Filho, W. and Schneider, P.S., 2021. Deep seawater cooling and desalination: Combining seawater air conditioning and desalination. *Sustainable Cities and Society*, 74, p.103257.
- 29- Hossein Motlagh, N., Mohammadrezaei, M., Hunt, J. and **Zakeri, B.**, 2020. Internet of Things (IoT) and the energy sector. *Energies*, 13(2), p.494. (Awarded as **Best Review Paper 2020**)
- 30- Hunt J.D., **Zakeri B.**, Falchetta G., Nascimento A., Wada Y. and Riahi K., 2020. Mountain Gravity Energy Storage: A new solution for closing the gap between existing short-and long-term storage technologies. *Energy*, 190, p.116419.
- 31- Hunt, J.D., **Zakeri, B.**, Lopes, R., Barbosa, P.S.F., Nascimento, A., de Castro, N.J., Brandão, R., Schneider, P.S. and Wada, Y., 2020. Existing and new arrangements of pumped-hydro storage plants. *Renew Sustain Energy Rev*, 129, p.109914.
- 32- Hunt, J.D., **Zakeri, B.**, Nascimento, A., Garnier, B., Pereira, M.G., Bellezoni, R.A., de Assis Brasil Weber, N., Schneider, P.S., Machado, P.P.B. and Ramos, D.S., 2020. High velocity seawater air conditioning with thermal energy storage and its operation with intermittent renewable energies. *Energy Efficiency*, 13(8), pp.1825-1840.
- 33- Hunt, J.D., Falchetta, G., **Zakeri, B.**, Nascimento, A., Schneider, P.S., Weber, N.A.B., Mesquita, A.L.A., Barbosa, P.S.F. and de Castro, N.J., 2020. Hydropower impact on the river flow of a humid regional climate. *Climatic Change*, 163(1), pp.379-393.
- 34- **Zakeri, B.**, Price, J., Zeyringer, M., Keppo, I., Mathiesen, B.V. and Syri, S., 2019. The direct interconnection of the UK and Nordic power market–Impact on social welfare and renewable energy integration. *Energy*, 162, pp.1193-1204.
- 35- Helin, K., **Zakeri, B.**, Syri, S., 2018. Is District Heating Combined Heat and Power at Risk in the Nordic Area? An Electricity Market Perspective. *Energies*, 11, 1256.
- 36- Helin, K., Syri, S., **Zakeri, B.**, 2018. Improving district heat sustainability and competitiveness with heat pumps in the future Nordic energy system, *Energy Procedia*, 149, 455-464.
- 37- Jääskeläinen, J., Veijalainen, N., Syri, S., Marttunen, M., **Zakeri, B.**, 2018. Energy security impacts of a severe drought on the future Finnish energy system, *J. Enviro Manage*, 217, 542-554.
- 38- Virasjoki, V., Siddiqui, A.S., **Zakeri, B.**, Salo, A., 2018. Market power with combined heat and power production in the Nordic energy system. *IEEE Tran Pow Sys*, 33(5), 5263-75.
- 39- Helin, K., Käki, A., **Zakeri, B.**, Lahdelma, R., Syri, S., 2017. Economic potential of industrial demand side management in pulp and paper industry, *Energy*, 141, 1681-1694.
- 40- **Zakeri, B.**, Virasjoki, V., Syri, S., Connolly, D., Mathiesen, B.V., Welsch, M., 2016. Impact of Germany's Energy Transition on the Nordic power market – A market-based multi-region energy system model, *Energy*, 115 (3), 1640-1662.
- 41- **Zakeri, B.**, Syri, S., 2015. Electrical energy storage systems: A comparative life cycle cost analysis, *Renew Sustain Energy Rev*, 42, 569–596. (**AaltoENG Best Publication Award**). [SW]
- 42- **Zakeri, B.**, Syri, S., Rinne, S., 2015. Higher renewable energy integration into the existing energy system of Finland – Is there any maximum limit?, *Energy*, 92 (3), PP 244-259.
- 43- **Zakeri, B.**, Rinne, S., Syri, S., 2015. Wind integration into energy systems with a high share of nuclear power – what are the compromises? *Energies*, 8 (4), 2493-2527.
- 44- Semyagina, E., Saari, J., **Zakeri, B.**, Kaikko, J., Vakkilainen, E., 2015. Effect of heat integration method and torrefaction temperature on the performance of an integrated CHP-torrefaction plant, *Appl Energy*, 149, 24-34.
- 45- Darke, W., Brkic, I., **Zakeri, B.**, Rogner, H., Carbon Neutrality in the UNECE region: Technology Interplay, United Nations Economic Commission for Europe (UNECE), Geneva, 2022 ([link](#)).
- 46- **Zakeri, B.**, Paulavets, K., Barreto-Gomez, L., Echeverri L.G., Pachauri, S., Rogelj, J., Creutzig, F., Urge-Vorsatz, D., Victor, D., Boza-Kiss, B. et al., Transformations within reach: Pathways to a sustainable and resilient world - Rethinking energy solutions. IIASA, Laxenburg 2021 ([link](#)).
- 47- Brkic, I., Held, S., Rogner, H., **Zakeri, B.**, Waldhoff, S. Edmonds, J., Kemmen, N., Lehmann, S. Pathways to Sustainable Energy - Accelerating Energy Transition in the UNECE Region. United Nations Economic Commission for Europe (UNECE), Geneva, 2020 ([link](#)).

Policy briefs

Book chapters

- 48- Hunt, J.D., **Zakeri, B.**, Nascimento, A. and Brandão, R., 2022. Pumped hydro storage (PHS). In *Storing Energy* (pp. 37-65). Elsevier.
- 49- **Zakeri B.**, Syri S., Value of energy storage: The required market and policy supports. Book Chapter in: *Delivering Energy Law and Policy in the EU and the US*, Edited by Heffron R.J., Little G.F.M., Edinburgh University Press, PP 664-668, 2016.
- 50- Syri S., **Zakeri B.**, The Finnish energy policy: Fulfilling the EU energy & climate targets with nuclear and renewables. Book Chapter in: *Delivering Energy Law and Policy in the EU and the US*, Edited by Heffron R.J., Little G.F.M., Edinburgh University Press, PP 141-144, 2016.

Selected conference papers

- 51- **Zakeri B.**, Syri S., Wagner F., Economics of energy storage in the German Electricity and Reserve Markets. The 14th International Conference on the European Energy Markets (EEM), Dresden, Germany, 6-9 June, 2017.
- 52- **Zakeri B.**, Syri S., Value of energy storage in the Nordic power market – Benefits from price arbitrage and ancillary services. The 13th International Conference on the European Energy Markets (EEM), Porto, Portugal, 6-10 June, 2016 ([link](#)).
- 53- **Zakeri B.**, Syri S., Intersection of national renewable energy policies in countries with a common power market. The 13th International Conference on the European Energy Markets (EEM), Porto, Portugal, 6-10 June, 2016 ([link](#)).
- 54- Cross S., **Zakeri B.**, Padfield D., Syri S., Is battery energy storage economic in islanded power systems? Focus on the island of Jersey. The Proceedings of the 13th International Conference on the European Energy Markets (EEM2016), Porto, Portugal, 6-10 June, 2016 ([link](#)).
- 55- **Zakeri B.**, Syri S., Rinne S., Maximum feasible renewable energy in Finland and techno-economic implications, the 9th Conference on Sustainable Development of Energy, Water and Environment Systems, Venice-Istanbul, 20-27 Sep 2014 (**won the best paper award**).
- 56- **Zakeri B.**, Vakkilainen E., Kaikko J., Lüthen N., Optimal Design of Boiler Feedwater Pumping System: an Approach to Increase the Energy Efficiency of Steam Power Plants, the 27th International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems (ECOS), Turku, Finland, 15-19 June, 2014.
- 57- **Zakeri B.**, Syri S., Economy of Electricity Storage in the Nordic Electricity Market: The Case for Finland, the 11th International Conference on the European Energy Markets (EEM), Krakow, Poland, 28-30 May, 2014 ([link](#)) (**awarded as one of the three best papers**).