

**Expo 2017<sup>1</sup> in Astana Kazakhstan, 15-16 June, 2017**  
**International Seminar on**  
**"Towards Smart Sustainable Cities – Integrated Approaches"**

*Nazarbayev University, Block 1, Senate Hall*  
*53 Kabanbay Batyr Ave, Astana, Republic of Kazakhstan*

**Seminar Topics**

- A - Smart Governance, Policy-Making and Sustainable Development
- B - Smart Energy Systems (divided into: Decentral Energy Systems & Smart Grids, Renewable Solar and Wind Energy Systems in Smart Cities, Energy Storage and other Optimization)
- C - Smart Buildings
- D - Smart Transportation
- E - Smart Environment (special sub-tracks: Smart Water, Waste Management and Others)
- F - Smart Funding-Cooperation

DATE/TIME	SPEAKER	TITLE	ORGANIZATION
<b>DAY I, JUNE 15, 2017</b>			
<b>Senate Hall</b>			
8.30-9.00	<b>Arrival/Handouts distribution</b>	Photo Session from 8.30 Group Photo at 8.50	
<b>9.00 – 9.20</b>	<b>Opening Remarks, Senate Hall</b>		
9.00 - 9.05	Shigeo Katsu, President of NU	Welcoming speech to NU	Nazarbayev University, <i>Kazakhstan</i>
9.05 - 9.10	Ilesanmi Adesida, Provost of NU	Welcoming speech to NU	Nazarbayev University, <i>Kazakhstan</i>
9.10 - 9.14	Philippe Roesle, (General Co-Chair)	Opening Remarks: Swissnex and Motivation of Seminar	Swissnex, <i>Switzerland</i>
9.14 - 9.20	Luis Rojas-Solórzano (General Chair)	Opening of Seminar Technical Tracks, Swissuniversities and Competences	Nazarbayev University, <i>Kazakhstan</i>
	Vicente Carabias, (General Co-Chair)		ZHAW, <i>Switzerland</i>

<sup>1</sup> This International Seminar on "Towards Smart Sustainable Cities – Integrated Approaches" is a continuation of the respective parallel session the day before on 14 June 2017 at the 8th International Forum on Energy for Sustainable Development (<http://energyministerial.kz/>)

<b>Session AM1 Senate Hall</b> <b>9.20 - 10.45</b> <b>Topic A - Smart Governance, Policy-Making and Sustainable Development</b> <b>Chairman: Vicente Carabias</b> <b>Reglament: 15 minutes presentation &amp; 5 minutes Q&amp;A</b>			
9.20 - 9.40 A01	Vicente Carabias	Drivers, barriers and strategy development for smart cities	ZHAW Institute of Sustainable Development, <i>Switzerland</i>
9.40 - 10.00 A02	Natalia Veselitskaya	Smart city strategies for Moscow and Kazan development	Higher School of Economics, Moscow, <i>Russia</i>
10.00 - 10.45 A03	Peter Stücheli-Herlach, Natalie Schwarz  Reiner Keller,  Andrey Filchenko	Communicative prerequisites of policy change and technological innovations towards smart sustainable cities <ul style="list-style-type: none"> <li>○ Brief Introduction: Smart Governance embedded in multilingual discourses (The case of Switzerland)</li> <li>○ The sense of words for sustainable development: the approach of the Sociology of Knowledge</li> <li>○ The challenges of multilingualism for smart innovation: the cases of Russia and Kazakhstan</li> </ul>	ZHAW Applied Linguistics, <i>Switzerland</i>  University of Augsburg, <i>Germany</i>  School of Humanities and Social Sciences, NU, <i>Kazakhstan</i>
<b>10.45 - 11.00 Coffee Break</b>			
<b>Session AM2 Senate Hall</b> <b>11.00 - 13.00</b> <b>Topic B - Smart Energy Systems: Decentral Energy Systems &amp; Smart Grids</b> <b>Chairman: Uwe W. Schulz</b> <b>Reglament: 15 minutes presentation &amp; 5 minutes Q&amp;A</b>			
11.00 - 11.20 B01	Georgios Mavromatidis	A multi-dimensional view on modelling of urban decentralized multi-energy systems	SCCER FEED&D, ETHZ, <i>Switzerland</i>
11.20 - 11.40 B02	Merla Kubli	Transition of regional energy systems: From solar prosumers to flexible prosumers?	ZHAW Institute of Sustainable Development, SCCER CREST, <i>Switzerland</i>
11.40 - 12.00 B03	Nassipkul Dyussebekova	The introduction of decentralized sources into low voltage level of power grid in Germany and Kazakhstan	Kazakh-German University, <i>Kazakhstan</i>
12.00 - 12.20 B04	Roman Rudel	Innovative algorithm based smart grid approach	SUPSI, <i>Switzerland</i>
12.20 - 12.40 B05	Livia Camenisch	Security of electricity supply and the promotion of renewable energy – International legal framework	University of St.Gall, SCCER CREST, <i>Switzerland</i>

12.40 - 13.00 B06	Uwe W Schulz	An entire CO2 Neutral Region?	Lucerne University of Applied Sciences and Arts – School of Engineering and Architecture, Switzerland
<b>13.00 - 14.20 Lunch time</b>			
<b>14.20 - 16.00</b> <b>Session PM1 Senate Hall</b> <b>Topic B - Smart Energy Systems: Energy Storage and other Optimization</b> <b>Chairman: Zhumabay Bakenov</b> <b>Reglament: 15 minutes presentation &amp; 5 minutes Q&amp;A</b>			
14.20 - 14.40 B07	Philippe Forêt	Governing Lithium: A Global Production Network Analysis	School of Humanities and Social Sciences, NU, <i>Kazakhstan</i>
14.40 - 15.00 B08	Alejandro Santis	Prosumers: Facilitated Integration of Renewable Energy Sources through Stationary Battery Systems	BFH-CSEM Energy Storage Research Centre, <i>Switzerland</i>
15.00 - 15.20 B09	Tom Richard	Integrating Combined Heat and Power with thermal energy storage for optimizing building energy efficiency	Institute of Energy and the Environment, Penn State University, <i>USA</i>
15.20 - 15.40 B10	Hanna Sotnikova	PV self-consumption with heat pump systems: Optimizing systems with electrical and thermal storage by use of simulation	ZHAW Institute of Computational Physics, <i>Switzerland</i>
15.40 - 16.00 B11	Zhumabay Bakenov	Rechargeable aqueous Li-ion batteries for stationary application	School of Engineering, NU, <i>Kazakhstan</i>
<b>16.00 - 17.00 Student's Poster competition, The Hall P1, Chairwoman: Almagul Mentbayeva</b>			
<b>16.00 - 17.00 Coffee Break (Kazakh music)</b>			
<b>17.00 - 18.40</b> <b>Session PM2 Senate Hall</b> <b>Topic E - Smart Environment (special sub-track: Smart Water; Waste Management and Others)</b> <b>Chairman: Peter Marty</b> <b>Reglament: 15 minutes presentation &amp; 5 minutes Q&amp;A</b>			
17.00 - 17.20 E01	Farkhat Muratov	Experience in operation of wind-solar power test ground at CER NU	CEAMS, National Laboratory Astana, NU, <i>Kazakhstan</i>
17.20 - 17.40 E02	Aiyngul Kerimray	Bottom-up modeling of residential sector decarbonisation scenarios	School of Engineering, NU, <i>Kazakhstan</i>
17.40 - 18.00 E03	Yerbol Sarbassov	Development of clean coal technology for power sector of Kazakhstan	CEAMS, National Laboratory Astana, NU, <i>Kazakhstan</i>
18.00 - 18.20 E04	Bruno Storni	An integral sustainable drinking water management project	SUPSI, <i>Switzerland</i>

18.20 - 18.40 E05	Zhandos Kerimkulov	Integrated Storm Water Management Planning (ISMP) with High resolution Digital Terrain Model, automated water pumping network for drainage systems	School of Engineering, NU, <i>Kazakhstan</i>
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**DAY II, JUNE 16, 2017**

**9.00 - 10.20**  
**Session AM1 Senate Hall**  
**Topic C - Smart Buildings**  
**Chairman: Mehdi Bagheri**  
**Reglament: 15 minutes presentation & 5 minutes Q&A**

9.00 - 9.20 C01	Jean-Loup Robineau	A multi-period Mixed Integer Linear Programming (MILP) model for investment planning of energy systems in an urban context	SCCER FURIES, EPFL, <i>Switzerland</i>
9.20 - 9.40 C02	Mehdi Bagheri	Smart Building, Concept, Opportunities and Challenges in Kazakhstan	School of Engineering, NU, <i>Kazakhstan</i>
9.40 - 10.00 C03	Roman Rudel	Photovoltaic in urban area: energy for smart cities	SUPSI, <i>Switzerland</i>
10.00 - 10.20 C04	Aigerim Uyzbayeva	Development of energy efficient and smart building at NU	CEAMS, National Laboratory Astana, NU, <i>Kazakhstan</i>

**10.20 – 11.20**  
**Coffee Break & Networking Speed-Dating**  
**Kazakh music and dancing**  
**(Poster session for junior researchers)**

**11.20 – 13.00**  
**Session AM2 Senate Hall**  
**Topic D - Smart Transportation**  
**Chairman: Roman Rudel**  
**Reglament: 15 minutes presentation & 5 minutes Q&A**

11.20 - 11.40 D01	Yelena Yezakovich	City of Almaty Sustainable Transport	UNDP-GEF, <i>Kazakhstan</i>
11.40 - 12.00 D02	Alejandro Santis	Have E-Vehicles finally arrived? Battery assisted vehicles and future developments	BFH-CSEM Energy Storage Research Centre, <i>Switzerland</i>
12.00 - 12.20 D03	Hansjörg Dennig	Bicar-Feasibility study of electro-mobile sharing concept for the last mile	ZHAW Centre for Product and Process Development, <i>Switzerland</i>
12.20 - 12.40 D04	Kairat Aitpayev	Automatic traffic surveillance, from idea to realization	CTO of LLC "Computer Vision Technologies", NU, <i>Kazakhstan</i>
12.40 - 13.00 D05	Roman Rudel	GoEco! Nudging mobility behaviour for smart cities	SUPSI, <i>Switzerland</i>

<b>13.00 - 14.10 Lunch time</b>			
<b>14.10 - 15.50 Session PM1 Senate Hall Topic B - Smart Energy Systems: Renewable Solar and Wind Energy Systems in Smart Cities Chairman: Luis Rojas-Solórzano Reglament: 15 minutes presentation &amp; 5 minutes Q&amp;A</b>			
14.10 - 14.30 B12	Liliana N. Proskuryakova	The role of renewable energy within future energy systems	Higher School of Economics, Moscow, <i>Russia</i>
14.30 - 14.50 B13	Mannix Balanay	Organic Photovoltaics: Future prospects and challenges	School of Science and Technology, NU, <i>Kazakhstan</i>
14.50 - 15.10 B14	René Itten	High efficient 3rd generation multi-junction solar cells using silicon heterojunction and perovskite technology: Life cycle based sustainability impacts	ZHAW Institute of Natural Resource Sciences, <i>Switzerland</i>
15.10 - 15.30 B15	Damir Aidarkhanov	Organic photovoltaics research in solar energy laboratory	CEAMS, National Laboratory Astana, NU, <i>Kazakhstan</i>
15.30 - 15.50 B16	Luis Rojas-Solórzano	Technical and economic assessment of clean energy technologies	School of Engineering, NU, <i>Kazakhstan</i>
<b>15.50 - 16.10 Conference Room</b>			
15.50 - 16.00	Awarding the Best Poster		
16.00 - 16.10	Closing Remarks for General Audience		
<b>17.00 - 18.10 Session PM2 Swiss Pavilion (NOTE: This session is reserved only for Speakers, Chairs and Invited Guests) Round table with Coffee in Swiss Pavilion Topic F – Smart Funding-Cooperation Chairman: Philippe Roesle</b>			
17.00 - 17.10 F01	Sébastien Hug	Introductory Remarks	State Secretariat for Education, Research and Innovation SERI, <i>Switzerland</i>
17.10 - 17.20 F02	TBC	Kazakh-European Cooperation	International cooperation, Science committee, MES RK, <i>Kazakhstan</i> (tbc)
17.20 - 18.00 F03	Matchmaking to enable research partnerships	Five roundtables on: <ul style="list-style-type: none"> <li>- Integrated Smart City approaches</li> <li>- Smart energy systems</li> <li>- Smart environment</li> <li>- Smart transportation</li> <li>- Smart buildings and renewable energy systems</li> </ul>	All
18.00 – 18.10	Philippe Roesle Roundtable chairs	<b>Closing Remarks of Seminar</b>	Swissnex, <i>Switzerland</i>

18.10 - 19.10 Farewell reception at Swiss Pavilion (Only for Speakers, Chairs and Invited Guests)

Participating organisations:

