



## FIRST ANNOUNCEMENT AND CALL FOR ABSTRACTS

### **12<sup>th</sup> International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL'24)**

**Kitakyushu-city (Japan)**

**25 - 27 June 2024.**

The international community of stakeholders dealing with residential energy consumption equipment, metering and lighting (manufacturers, consumers, governments, utilities, international organisations, academia and research) has already gathered eleven times at the **International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL)** (Florence 1997, Naples 2000, Turin 2003, London 2006, Berlin 2009, Copenhagen 2011, Coimbra 2013, Lucerne 2015, Irvine 2017, Jinan 2019, Toulouse 2022).

The previous EEDAL conferences have been very successful in attracting an international audience. EEDAL has established itself as an influential and recognised international event to discuss the progresses achieved and latest developments in energy efficiency technologies, behavioural aspects and policies. EEDAL is the venue to establish new collaborations and synergies and build international partnerships among stakeholders.

Following the success of the previous EEDAL conferences, EEDAL'24 will be organised the by **JYURI (Jyukankyo Research Institute Inc.)** in collaboration with the **University of Kitakushu**, with the administrative support of **KCVA (Kitakyushu Convention & Visitors Association)** and the financial Support of **Kitakyushu-city**, as well as with the technical and scientific support of the **European Commission Joint Research Centre**.

**JYURI (Jyukankyo Research Institute Inc.)** in collaboration with the **University of Kitakushu** are pleased to announce:

### **The 12<sup>th</sup> International Conference on Energy Efficiency in Domestic Appliances and Lighting EEDAL'24**

**25-27 June 2024, Kitakyushu-city (Japan)**

EEDAL'24 will provide a unique forum to discuss and debate the latest developments in energy and environmental impact of households, including appliances, lighting, heating and cooling equipment, electronics, smart meters, policies and programmes. EEDAL will also address non-technical issues such as consumer behaviour, energy access in developing countries and demand response.

The three-day conference will include plenary sessions where key representatives of governments and international organisations, manufacturers, utilities, private sector, ESCOs and service providers, financiers, NGOs, and academia will present the latest advancements in residential energy efficiency. Parallel sessions on specific topics will allow in-depth discussions among participants. The conference will provide opportunities to strengthen existing and promote new initiatives and partnerships.

## Call for Abstracts

To contribute to the success of the EEDAL conference, we **invite you** to participate in the conference and to **submit abstracts** on new technology developments, user behaviour, policies and programmes (including monitoring, evaluation and international collaboration), smart equipment, smart homes and smart metering, demand side flexibility and on-site generation.

All papers shall address new and original developments. For the sessions on technologies, in particular, only papers focusing on new advanced solutions will be considered. In addition, papers shall not be of commercial nature. Suggested topics for papers are listed below; other suitable paper topics that meet the above criteria will also be considered.

### Topics related to Consumer Behaviour, Policies and Programmes:

1. **Lifestyles and Consumer Behaviour:** looking ahead at how demand for new products and services is developing; exploring the scope for changes in consumer behaviour by fostering energy sufficiency and changes in life style. Influence of feedback systems. The role of social norms and nudges towards more sustainable behaviours. Users' acceptance and responses to new technologies, services, designs and energy-saving programmes. Role of public databases, digital product passports and open linked data in better applying behavioural science, and increasing benefits of energy labelling and other policies for consumers.
2. **Global Climate Change Mitigation Policy:** impact and role of residential technologies, programmes and policies in NDCs, green investment scheme (GIS), carbon credits, and recycling revenues of ETSs. Electrification of buildings. Role of the Montreal Protocol's Kigali Amendment in efficient cooling. Electrification and decarbonisation of the residential sector. Risk analysis. Impact of climate on residential energy demand. Residential buildings resilience and adaptation to climate change. Are domestic appliances and lighting "pulling their weight" in the global effort to meet the Paris Climate Agreement targets? Why continue to pursue appliance EE in light of grid decarbonization?
3. **Focus on Developing Countries and Emerging Economies:** different approaches and strategies, policy frameworks, institutional aspects, implementation mechanisms, financing instruments, capacity building needs, establishment of testing labs, new international partnerships. Appliances and Lighting in a Just Energy Transition
4. **Strategies for Increasing Efficiency:** new policy tools, voluntary vs. mandatory approaches, such as building energy codes and building energy and/or environmental rating systems, policy analysis and evaluation, stimulating innovation (nationally and internationally), new programmes and barrier analysis, strategy development, priority setting, monitoring and review.
5. **Standards and Labels** (mandatory, voluntary, endorsement label and quality marks): design of and evaluation of programmes, impact of programmes, engineering and statistical analysis, the importance of compliance and enforcement, searchable databases, implementation of the EU Eco-Design and Energy Labelling Directives, Japan Top Runners, ENERGY STAR. Regional harmonization efforts. Electronic/digital labeling.
6. **Measurement Methods and International Harmonisation:** role of international standardisation bodies, harmonisation of test methods as a means of enhancing trade opportunities, convergence of test methods, new generation of test methods for intelligent appliances and equipment, harmonizing around efficiency "tiers" rather than common specifications.
7. **Market surveillance and enforcement mechanisms:** are products actually performing as advertised or labelled? If not, what are the means for ensuring compliance and the

consequences of non-compliance? This would include not only mandatory programmes like energy standards and building codes, but also compliance with voluntary market transformation programmes such as Energy Star. Use of new tools such as QR Codes and databases to simplify the MVE process.

8. **Market Transformation Programmes:** programme design and implementation, promotion campaigns, advertising campaigns, tools for information and advice for multipliers and end-users, other tools to promote the market transformation, role of public procurement.
9. **Smart Meters, Data Analytics, and End-use Metering** programme design, analysis methods, campaign results, non-intrusive methods, NIALM, advanced meters, informative billing, role of home automation for saving energy. Artificial Intelligence.
10. **Demand Response:** electricity tariffs for the residential sector (e.g. time-of-use, peak time, critical peak pricing, real-time pricing), automated response by “smart devices” (e.g., smart thermostats), direct load control, programme design, programme evaluation, successful examples. Load shifting to increase the integration of renewable energy generation. The requirements and potential of bidding aggregated residential load directly into the wholesale markets. Role of aggregators
11. **Energy Services, Energy Efficiency Funds, Demand Side Management and ESCOs:** provisions of energy services, utilities' obligations, white certificates, DSM programmes, ESCOs' role and potential in the residential sector, dedicated energy efficiency funds and credit lines.
12. **Programme and Policies Monitoring & Evaluation:** methods for the monitoring and evaluation of programmes and policies, indicators, benchmarking, top down and bottom-up methodologies. Evaluation of energy and carbon savings.
13. **Designing for Diversity and Energy Poverty:** Examples of programs or policies that have succeeded in reaching diverse and underserved populations, including lower and middle-income households, non-native language speakers, households with lower educational attainment, or households of diverse race/ethnicities. Energy Poverty.
14. **Sustainability and Non-Energy Benefits and Impacts:** wider sustainability, including water and resources consumption, life cycle analysis and eco-design, sustainability standards, waste implications during and at end of product life, impacts on job creation, fuel poverty, and innovation. Sustainable Development Goals (SDGs) impact. Benefits or potential drawbacks beyond energy savings, such as grid and building reliability and resilience, and new experiences and living conveniences from innovations. Indoor indoor environmental quality (IAQ) and other health impacts.
15. **Financing:** incentives, innovative solutions for financing (on-bill, on-tax, PACE, etc.) efficient residential building, building refurbishment, renewable energy sources, large scale deployment of efficient appliances and equipment.
16. **Home and Residential Building Retrofit Programmes:** selection of efficient equipment in home retrofit programmes (e.g., HVAC, lighting), implementation of retrofit programmes, consumer acceptance, financing, role of installers and manufacturers, One Stop Shops.
17. **Communities, Cities and Aggregation.** Residential energy solutions combining multiple homes, at the community, utility, or city level. Community Choice Aggregation (CCA) and local energy communities.
18. **Impact of Energy Law on Energy Efficiency.** Interpretation of energy legislation, including binding parliamentary acts, regulations, such as EU regulations affecting energy efficiency, energy-related norms and standards and their interpretation in EU, Member States' and other Courts of Law.
19. **Circular Economy and European Green Deal.** The interplay of energy efficiency laws, norms and standards and the emerging law-making on circular economy. The importance of reparability, including the newly proposed EU Directive on common rules promoting the repair of goods. Embodied carbon and toxics/harmful substances.

## Topics Related to Specific Technologies:

1. **Residential Appliances/White Goods** (Refrigeration, Laundry, Dishwashing, Cooking): components' efficiency, R&D and innovation, technologies, test methods, usage patterns, programmes, market trends, the influence of product energy and resource usage feedback systems on behaviour, connected and smart appliances.
2. **Residential HVAC and Water Heaters** (Central Heating Furnaces and Boilers, Heat Pumps, Central and Room Air-conditioners, Fans, Solar heaters), Water Heaters (gas, electric and solar), and Water Circulation Pumps: R&D and innovation, technologies, test methods, programmes, market trends, links to non-domestic markets. Indoor air-quality. Role of evaporative coolers and district cooling/heating.
3. **Indoor Environmental Quality**: Residential air handling units, smart ventilation equipment, Germicidal Ultraviolet Disinfection, filters, air purifiers, sensors/low cost monitoring equipment.
4. **Electronics**: {Televisions, Set Top Boxes, Streaming services, Power Supplies, Telephony, IoT/Home Automation/Home Security}, **Home Office Equipment, Broadband Communication Equipment, and Low Power Modes**: R&D and innovation, technologies, test methods, programmes, market trends, stand-by losses, active and low power mode, technology transfer from non-domestic markets
5. **Residential Lighting** and controls systems (Luminaires, control systems and Light Sources): LEDs, OLEDs, R&D and innovation, technologies, test methods, programmes, market trends, lighting usage, lighting integrated with other building systems, distribution and perception in the residential sector.
6. **Motor Technologies** for appliances (motors for air-conditioners, fans, washing machines, refrigerators, circulation pumps, etc.) and Motor Control Technologies (VSDs, power electronics): R&D, technologies, test methods, programmes, market trends.
7. **Valuing Efficiency as a Distributed Energy Resource and Smart and Clean On-site Power Generation**: micro-generation, fuel cells, renewable energy sources (solar, wind), energy storage (batteries), charging of electric vehicles, electricity distribution issues for the residential sector, efficiency as a resource, smart and flexible appliances.
8. **Net Zero Energy Residential Building and Positive Buildings**: specific HVAC equipment for passive houses (very low energy houses), integration of equipment and appliances with whole building design, passive techniques, high efficiency ventilation, renewable energy sources, thermal energy storage.
9. **Smart Meters, Smart Appliances, Home Automation, Smart Homes, Home Robots and Smart Grids**: smart appliances and equipment, smart meters and communication protocols, home energy management systems, households to be a key part of the smart grids, with storage, on-site generation and demand response/flexibility. Electric vehicles and implications for home energy systems, Domestic networks (security, automation, etc.) and their impact on energy consumption, Internet connected appliances. Low consumption modes and sensors. Robotic appliances such as floor cleaners, mowers, telepresence robots, robotic toys, personal assistant robots.
10. **Off-Grid Appliances and Energy Access**: technologies (e.g. PV, batteries, integrated systems, clean and solar cooking, refrigeration, cooling, etc.), micro-grids, local DC networks and DC appliances.

## Instructions for Authors

EEDAL'24 will be a **hybrid conference** with on-site participants as well as virtual participants.

Accepted papers will be published in the Book of Proceedings or for selected papers in an ISI journal with Impact Factor and indexed in Scopus and Web of Science. Authors can express their preference at the time of submitting the final paper.

Authors interested in submitting papers are requested to send an abstract maximum 500 words in length in one or more of the above topics. The abstract must be in English. Abstracts must be innovative, stimulate discussion and be free of commercialism.

Instructions for Authors for submission procedure:

1. Abstract must be of maximum 500 words and must include Title, Topic (according to the above listed topics), and the abstract content, but no authors' names nor affiliation. Accepted formats for abstract are MS Words and PDF
2. Send the abstract as an attachment by email to [JRC-EEDAL24@ec.europa.eu](mailto:JRC-EEDAL24@ec.europa.eu), <mailto:JRC-EEDAL24@ec.europa.eu>
3. In the email body please includes the following information for all authors: name, family name, affiliation, country and email address. Please clearly indicate who is the corresponding author
4. A confirmation of abstract reception will be sent to you.

### Conference Deadlines

October 15, 2023: Abstracts are due to the conference secretariat (via email)

October 30, 2023: Authors will be notified by email as to whether their abstracts have been accepted or rejected.

December 31, 2023: Authors have to submit draft papers to [JRC-EEDAL24@ec.europa.eu](mailto:JRC-EEDAL24@ec.europa.eu)

February 28, 2024: Authors will receive comments on draft papers by email

April 30, 2024: Final papers must be ready and submitted by email to [JRC-EEDAL24@ec.europa.eu](mailto:JRC-EEDAL24@ec.europa.eu) for inclusion in the conference proceedings.

June 25-27, 2024: EEDAL'24 takes place in Kitakyushu-city (Japan)

### Additional Information:

More information on the location Kitakyushu-city, travel, accommodation and registration fees can be found at:

<http://eedal24.lowcarbodesign.asia/>

and

<https://e3p.jrc.ec.europa.eu/events/12th-international-conference-energy-efficiency-domestic-appliances-and-lighting-eedal-24>

## **EEDAL'24 International Programme Committee**

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2. Alan Meier, Lawrence Berkeley National Laboratory, USA
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11. Eric Bush, Top10 International, Switzerland
12. Eva Geilinger, Swiss Federal Office of Energy SFOE, Switzerland
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