

United for Efficiency is a global effort supporting developing and emerging economies to move their markets to energy-efficient appliances and equipment.

YOUR QUARTERLY CONNECTION TO HIGH-EFFICIENCY PRODUCTS | Vol. 4, Issue 1



NEWSLETTER 2021

Welcome the March 2021 newsletter

The first quarter of 2021 has been a busy one for United for Efficiency (U4E) with significant progress on existing projects and expansion of the portfolio into new areas. This issue of the newsletter provides a digest of major developments and also launches a regular feature which will introduce a different U4E partner in each newsletter.

News



U4E is pleased to announce several new projects commencing in 2021. These include national GCF Readiness Programme-funded projects in [Brazil](#) and [Lao PDR](#) and a multi-country project in [Cuba, El Salvador and Honduras](#). U4E is also supporting eight GCF projects in [Southern African](#) led by [CTCN](#), and are leading on a [GEF](#)-funded project project in [Tunisia](#). Look out for more information on these projects on the website and in future issues of the newsletter as they progress. For more information on GCF support, see the webinar hosted by UNEP and GCF on [Scaling-up GCF Projects on Energy-Efficient and Climate Friendly Cooling](#) in August 2020.

The new [Africa Centre of Excellence for Sustainable Cooling and Cold Chain](#) (ACES) has taken a major step forward in Rwanda with a \$3.5 (£2.4 million) million funding boost. This contribution from the UK Government’s Department for Environment, Food & Rural Affairs (DEFRA) is earmarked for the Centre’s design and technology kit-out, hiring the first-ACES dedicated academics at the University of Rwanda, which hosts of the Centre, and supporting the further development of ACES and associated ‘Living Labs’ which will act as the deployment and implementation arms to showcase the solutions developed at the Centre.



This month, the [Rwanda Environment Management Authority \(REMA\)](#) and U4E launched a [campaign to raise awareness](#) of why and how to opt for more energy-efficient and climate-friendly refrigerators and air conditioners. It primes the market for Rwanda’s new MEPS, labels and financial mechanism – all of which are based on U4E’s [Model Regulations](#). The multi-part campaign includes national radio and TV adverts,

social media and posters, and targets users of cooling appliances in settings such as homes, offices, grocery stores, bars, hotels and supermarkets. The campaign is part of the [Rwanda Cooling Initiative \(R-COOL\)](#), supported by [K-CEP](#).

In December 2020, new [mandatory minimum energy performance standards for energy efficient LED lighting](#) came into force in Pakistan, supported by a 5-star energy labelling scheme. This represents a key milestone in the [Global Environment Facility](#)-funded project, *Delivering the Transition to Energy Efficient Lighting in Residential, Commercial, Industrial, and Outdoor Sectors*, supported by U4E and working closely with Pakistan’s [National Energy Efficiency and Conservation Authority \(NEECA\)](#). The [agreed MEPS](#) exceed the efficacy level of 35% recommended in the [U4E Model Regulation Guidelines](#) for the domestic sector and include additional performance criteria. They also compare favourably with the European Lighting Standards.

FLUX LEVEL	BULB	DOWN LIGHTS
60<-@<600	80 lumens/Watt	70 lumens/Watt
600<-@<1200	90 lumens/Watt	75 lumens/Watt
1200<-@<3300	100 lumens/Watt	80 lumens/Watt



Significant milestones have been achieved in the Dominican Republic and Jamaica under the [Caribbean Cooling Initiative \(C-COOL\)](#). Ambitious actions on energy-efficient and climate-friendly refrigeration and air conditioning have been included in the [updated Nationally Determined Contribution](#) submitted by the [Dominican Republic](#) to UNFCCC at

the end of December 2020, and [Jamaica's National Cooling Strategy](#) looks set to become the second such strategy adopted in the region after submission to Cabinet this month. C-COOL is a [K-CEP](#) funded U4E project with the Governments of the Bahamas, Barbados, Dominican Republic, Jamaica and St Lucia.

U4E is a public-private partnership that works with companies and stakeholders with a specific interest in moving markets to energy-efficient lighting, appliances and equipment. Working with these partners, U4E is able to develop resources and tools that meet the needs of developing countries and emerging economies and reflect a consensus on best practice. During the first quarter of 2021, U4E hosted virtual strategy meetings for the lighting, cooling and equipment stakeholder groups. These meetings provided an overview of current projects and plans for the future and an opportunity for partners to provide feedback through open floor discussions. See our [website](#) for more information.

Manufacturers and Industry Associations



Technical Organizations and Initiatives



Funders and Financiers



New Resources & Tool

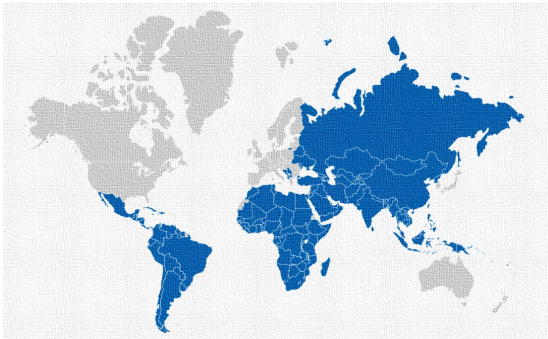


In January 2021, U4E published three new guides — [Protocols to Conduct Market and Impact Assessments](#), [Energy Labelling Guidance for Lighting and Appliances](#) and [Ensuring Compliance with MEPS and Energy Labels](#). These guides complement the existing policy guides and, while the examples are

largely on cooling products, the contents are equally applicable to other products.

In February 2021, U4E published updated model regulation guidelines for

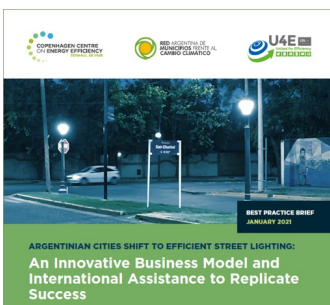
general service lighting and new model regulation guidelines for linear lighting. These [guidelines](#) provide a tool to help policymakers and regulatory authorities develop a legislative framework to promote energy-efficient lamps. A supporting document provides context on the rationale underpinning the guidelines and includes a brief explanation of the scope, product categories, and market and policy trends in energy-efficient lighting which have undergone a revolution in recent years with the advent of LED technologies.



The [U4E Country Savings Assessments](#) show the potential financial, environmental, energy, and societal benefits that are possible with a transition to energy-efficient lighting, refrigerators, room air conditioners, electric motors and distribution transformers. Updates of these assessments for over 150 developing

countries and emerging economies were added to the U4E website in December 2020.

The development of MEPS and a labelling programme under the [GEF](#)-funded project, *Delivering the Transition to Energy Efficient Lighting in Residential, Commercial, Industrial, and Outdoor Sectors in Pakistan*, is described in a new U4E [case study](#). The project, through the U4E team of experts, provided technical assistance to the National Energy Efficiency and Conservation Authority (NEECA) in the promotion, demonstration, deployment, and transfer of innovative high efficiency and usage-controlling lighting technologies.



1. Street lighting: huge opportunity, multiple benefits, but challenging in practice
Electric street lighting has been a feature of urban environments since the end of the nineteenth century and is more visible than in the modern city. As investment and growth and population expand the demand for lighting increases and the street lighting market is projected to grow. Street lighting is a key to the backbone of well-being of cities. It is essential for safety and a necessary service. It is essential to the provision of the ability to connect cities (C2E2) from security, identification for other services such as electric vehicles.

Meanwhile, there were around 200 million street lighting poles in 2015, and street lighting consumption is 40% of municipal electricity (MCE). Available lighting solutions such as the switch to more intelligent, energy efficient lighting systems (C2E2) can help development and energy conservation achieve annual electricity savings of 40% to 50% and be a catalyst to efficient use of power using C2E2 conversion integration. Moreover, LED poles have more useful features to energy saving. For instance, the price of LED lighting on the US market has fallen 50%, from 17 000 \$/kilowatt in 2010 to 8 700 \$/kilowatt.

7. [https://www.c2e2.org/energy-efficiency-lighting/brief/01-01-2020-004](#)
8. [https://www.c2e2.org/energy-efficiency-lighting/brief/01-01-2020-004](#)
9. [https://www.c2e2.org/energy-efficiency-lighting/brief/01-01-2020-004](#)

Although the Autonomous City of Buenos Aires completed its transformation of street lighting to LEDs in 2019, the majority of smaller cities across the country still mainly rely on old and expensive lighting technologies, such as mercury vapor, high-pressure sodium, compact fluorescent or metal halide lighting, as their primary lighting sources. To address common challenges in accessing funding for retrofitting street lighting, a group of small and medium-size cities came together in their search for a solution. A new [Copenhagen Centre on Energy Efficiency \(C2E2\)](#) and U4E

case study, [Argentinian Cities Shift to Efficient Street Lighting: An Innovative Business Model and International Assistance to Replicate Success](#), describes the background to this project, the underpinning research and coordination, and the tools available to assist municipalities implement their own solutions.

January 2021 saw the publication of the U4E endorsed brief from [C2E2, Innovative Data-Centre Cooling Technologies in China – Liquid Cooling Solution](#), which discusses liquid cooling as an innovative energy-efficient solution to dissipate heat caused by the increased power consumption of IT equipment in data centres. This is the fourth in this U4E endorsed series, the others in the series being, [Environmental Sustainability of Data Centres: A Need for a Multi-Impact and Life Cycle Approach](#), [Data Centres: Digitalisation Powerhouse and Energy Efficiency Potential](#) and [Reducing the Energy Use of Video Gaming: Energy Efficiency and Gamification](#).



Partner Spotlight



The ASEAN Centre for Energy (ACE) is an independent intergovernmental organisation within the Association of Southeast Asian Nations' (ASEAN) structure that represents the 10 ASEAN Member States' (AMS) interests in the energy sector. Its aim is to accelerate the integration of energy strategies within ASEAN by providing relevant information and expertise to ensure the necessary energy policies and programmes are in harmony with the economic growth and the environmental sustainability of the region. U4E has been working in partnership with ACE for more than a decade to coordinate, and maximise the effectiveness of, its activities in the region. ACE is an integral part of the ongoing [ASEAN regional project](#), including on development of a regional product database and lighting/cooling standard harmonisation.

UPCOMING EVENTS

30 MARCH 2021

[IEA 6th Annual Global Conference on Energy Efficiency: Energy Efficiency Powering Climate Action](#)

5 APRIL 2021

[Realizing the Shift of ASEAN's Markets to Energy-Efficient and Climate Friendly Appliances](#)

29 APRIL 2021

Global Cooling Prize's virtual Grand Award Ceremony

For further details on any of these events, please email us at unep-u4e@un.org.



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STAY CONNECTED

