

International Update

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**** For further information about any article please email: mail@standards.org.au**

International

1. New initiatives on electronic commerce, investment facilitation and MSMEs

Three proponent groups announced new initiatives to advance talks at the WTO on the issues of electronic commerce, investment facilitation and micro, small and medium size enterprises (MSMEs). The announcements were made on 13 December during the final day of the WTO's 11th Ministerial Conference in Buenos Aires.

The proponent groups, each representing many WTO members, and encompassing participants from developed, developing and least-developed countries, unveiled their plans to move forward with discussions in the three areas.

Seventy-one members said they would initiate exploratory work towards future WTO negotiations on trade-related aspects of electronic commerce, with participation open to all WTO members. Proponents said a first meeting will be held in the first quarter of 2018. Together, the group accounts for around 77 per cent of global trade.

The Joint Statement on Electronic Commerce is available [here](#).

On investment facilitation, 70 WTO members, recognizing the links between investment, trade and development, announced plans to pursue structured discussions with the aim of developing a multilateral framework on investment facilitation. The proponents, who account for around 73 per cent of trade and 66 per cent of inward foreign direct investment (FDI), agreed to meet early in 2018 to discuss how to organize outreach activities and structured discussions on this topic. Signatories also encouraged all WTO members to actively participate in this work.

The Joint Ministerial Statement on Investment Facilitation for Development is available [here](#).

On MSMEs, 87 WTO members accounting for around 78 per cent of world exports issued a joint statement declaring their intention to create, multilaterally, an Informal Working Group on MSMEs at the WTO that would be open to all members.

The discussion would address obstacles related to foreign trade operations that represent a significant burden for MSMEs interested in participating in international trade.

The Joint Ministerial Statement: Declaration on the Establishment of a WTO Informal Work Programme for MSMEs is available [here](#).

Source: https://www.wto.org/english/news_e/news17_e/minis_13dec17_e.htm

2. Public and private sector leaders exchange best practices to implement Trade Facilitation Agreement

Public and private sector leaders on 12 December exchanged insights on implementing the WTO's landmark Trade Facilitation Agreement (TFA) to fully reap the benefits of swifter and less costly trade at the border. Speakers at the event, entitled "Trade Facilitation on Track", highlighted the importance of local ownership of reform plans, multi-stakeholder cooperation, and capacity building to successfully implement the Agreement.

"The implementation of the TFA will bring significant benefits to all WTO members, with developing and least-developed members having the most to gain," WTO Deputy Director-General Yi Xiaozhun said at

the event organized by the WTO Trade Facilitation Agreement Facility (TFAF) in cooperation with its partner organizations. The full programme and presentations are available [here](#). DDG Yi continued: *"However, members will only reap these benefits through the full implementation of the Agreement. For this reason, trade facilitation needs to remain a priority for the WTO and all members."*

The TFA entered into force on 22 February 2017 following its ratification by two-thirds of the WTO membership. Since the last meeting of the WTO Trade Facilitation Committee on 3 November, four more members have ratified the Agreement bringing the total to 126 out of 164 members. These four members are Antigua and Barbuda, South Africa, Indonesia and Israel.

The full implementation of the TFA is estimated to reduce global trade costs by an average of 14.3%, with African countries and least-developed countries (LDCs) forecast to enjoy the biggest average reduction in trade costs. Furthermore, the TFA is forecast to add up to 2.7% a year to world export growth and more than 0.5% a year to world GDP growth over the 2015-30 horizon.

"Many members will face challenges in implementing the Agreement. The TFA has recognized this and has built-in provisions," DDG Yi said. The TFA is the first WTO agreement in which these WTO members can determine their own implementation schedules and in which progress in implementation is explicitly linked to technical and financial capacity. In addition, the Agreement states that assistance and support should be provided to help them achieve that capacity. *"The tracks are laid, the train is there and donors are ready with the fuel. All conditions are there to allow members to move forward,"* DDG Yi said.

The other speakers went on to share experiences about implementation of the Agreement in their respective countries. The public and private sectors must work together, speakers said. Furthermore, a change in mindset among authorities towards favouring easier flow of goods across borders and full ownership of reform plans have been vital for ensuring successful implementation, they said. Officials will also need to make room for continued transitions as security technologies and e-commerce demands evolve.

Costa Rica Vice Minister for Foreign Trade, Jhon Fonseca, said that his country's National Trade Facilitation Committee (NTFC), for example, is a public-private team with various technical and policy making expertise. He added that it was important to constantly improve the organization to make sure it adapts to evolving needs.

Patricia Francis, chair of Jamaica's NTFC, said that her government's goal to turn the country into a logistics hub greatly helped to ease the implementation of the TFA as there was already an existing ambition to improve cross border flows. Automating trade procedures was not enough, she said, as there needed to be a behavioural change as well. Daniel Godinho, director for corporate strategy at Brazilian engine manufacturer WEG, shared this sentiment, saying: *"At the end of the day trade facilitation means a change of culture."*

Chris Folayan, co-founder and co-CEO of online platform MallforAfrica, meanwhile noted the changing demands on trade facilitation and logistics posed by online consumers who require fast deliveries and electronic payments.

Additionally, speakers from the Netherlands, Kenya, Zambia and Uganda shared their experiences on the implementation of certain provisions of the Agreement.

Overall, the consensus of the speakers emphasized the need for border collaboration and coordination, political will, making use of technology, the establishment of baselines to measure implementation success, and publication of information in order to enable traders to work with regulatory agencies. Sheri Rosenow, Counsellor for the TFAF, meanwhile shared information on implementation assistance available for developing and LDC members.

TFAF was created at the request of developing and least-developed countries to help ensure that they receive the assistance needed to reap the full benefits of the TFA and to support the ultimate goal of full implementation of the new agreement by all WTO members.

Share

Source: https://www.wto.org/english/news_e/news17_e/fac_12dec17_e.htm

3. CEN and CENELEC Work Programme for 2018 is Available

CEN and CENELEC are happy to inform the Public that the 'CEN and CENELEC Work Programme 2018' is now published.

It presents the accomplishments made by each of the 14 business sectors in 2017. Per sector, the reader will find a list of the technical bodies involved in carrying out the work, the number of standards published by CEN and CENELEC in that sector, the work items that are currently in the work programmes and the standardization requests received from the European Commission and EFTA.

The '[CEN and CENELEC Work Programme 2018](#)' also details the standards and activities that are planned to be developed next year, and links to the relevant elements of the European Commission's 'Annual Work Programme for European Standardization 2018' for each of the business sectors.

Indeed, 2018 promises to be an important year to strengthen the European Standardization System.

CEN and CENELEC wishes to thank all stakeholders in Europe and worldwide for their vision, dedication, enthusiasm and commitment to making European Standards.

Happy reading!

For more information, visit: <https://www.cencenelec.eu/news/articles/Pages/AR-2017-014.aspx>

4. Reinforcing the Links with ENISA on Cybersecurity

CEN and CENELEC are committed to reinforce the standardization voice in the Digital Single market and collect the new best practices that allow manufacturers and service providers to improve the security features of products, systems and services and boost consumer's trust in the digital environment.

CEN and CENELEC have the opportunity to strengthen the cooperation with ENISA (EU agency on Network Infrastructure Security) to evaluate how emerging digital and technology trends could be implemented through standards and to establish better synergies with ENISA's expert network. This is in line with the recently adopted CEN-CENELEC strategy in order to meet industry needs for digital transformation.

Elena Santiago Cid, the Director General of CEN and CENELEC, has been recently appointed as member of the Permanent Stakeholders' Group (PSG) of ENISA. In this position, she will reinforce the standardization voice in the implementation of policies in the Digital Single Market. Her participation in the PSG will give a new impetus to the partnership agreement signed by the three organizations in 2013 and create the proper synergies between the European Standards Organizations (ESOs) and actions set out in the ENISA's Work Programme.

The PSG will meet on a quarterly basis to support and advise ENISA's Director on his daily tasks and to deliver better services to EU policy-makers, and to fulfill the new mandate assigned to ENISA.

CEN and CENELEC will be in a better position to contribute to the effective implementation of the upcoming ENISA Regulation (EU 'CyberAct'), and to ensure that new European standards effectively address interoperability, security and safety issues in all the business sectors, as well as qualifications of ICT practitioners that respond to emerging technology developments.

Through her participation in the PSG, Ms. Santiago will foster synergies between policy objectives and standardization initiatives, in particular on cybersecurity, data privacy, smart meters, smart grids, smart cars and blockchain (DLT).

The ESOs will organize, in partnership with ENISA, an open event on the impact of the Cybersecurity Act for businesses and policy-makers, and on how the European Standardization System can contribute to the EU Framework for ICT certification. The event will be held in Brussels on 13 February 2018.

Source: <https://www.cencenelec.eu/news/articles/Pages/AR-2017-007.aspx>

ISO

1. A New Field of Technical Activity – Occupational Health and Safety Management

ISO has received a New Field of Technical Activity Proposal from the British National Standards Body (BSI) to **Form a new Technical Committee to maintain ISO 45001** (this standards has not yet been published).

The scope of the new committee is proposed to be *Standardization in the field of occupational health and safety management to enable an organization to control its OH&S risks and improve its OH&S performance.*

Further work has been proposed for the committee as follows (in order of priority)

1. (Maintenance of) ISO 45001 Occupational health and safety management systems – requirements with guidance for use
2. ISO 45001 Handbook – Implementation guidance for small businesses
3. Guidance on the management of psychosocial risks in the workplace
4. OH&S management system performance indicators/reporting
5. Occupational health and safety management - Accident and incident investigation

Standards Australia will be consulting with stakeholders for this proposal. For more information on the proposal, or to make a submission, please contact the relevant Stakeholder Engagement Manager, Catherine Dunkerley, catherine.dunkerley@standards.org.au by Friday, 9 February 2018.

2. A New Work Item Proposal – Community Scale Resource Oriented Sanitation Treatment Systems

ISO have received a New Work Item Proposal from the United States national standards body (ANSI) on **Community scale resource oriented sanitation treatment systems.**

The scope of the proposed work is as follows:

The international standard will define requirements and test methods to ensure safety, performance, and sustainability of community-scale resource-oriented fecal sludge treatment units that serve approximately 1,000 to 100,000 people. The standard will apply to treatment units that (a) primarily treat human excreta, (b) are able to operate in nonsewered and off-grid environments, and (c) are prefabricated. The standard will not apply to sanitation treatment units requiring sewer infrastructure or electric grid access. Additionally, treatment units to which the standard will apply exhibit resource recovery capability (e.g., energy, drinking water, fertilizer) and are capable of being energy independent or energy net positive.

The standard is intended to ensure the general performance, safety, and sustainability of such units. The standard will exclude installation, selection and maintenance and operation of such units.

The NWIP proposes the development of a new project committee to manage this work, while liaising with relevant existing committees, including ISO TC 275.

Standards Australia will be consulting with stakeholders for this proposal. For more information on the proposal, or to make a submission, please contact the relevant Stakeholder Engagement Manager, Ron Pulido ron.pulido@standards.org.au by Thursday, 25 January 2018.

3. Approval of new ISO Committees; ISO/TC 313 *Packaging Machinery* and ISO/TC 314 *Ageing Societies*

Following approval by the ISO member bodies, the ISO Technical Management Board has adopted Resolutions 124/2017 and 129/2017 to approve the establishment of two new Technical Committees;

Technical Committee: ISO/TC 313 *Packaging Machinery*

Scope: Standardization of packaging machines with reference to the aspects of terminology, classification, design and safety.

Secretariat: UNI – The Italian National Standards Body

Technical Committee: ISO/TC 314 *Ageing Societies*

Scope: Standardization in the field of ageing societies.

Secretariat: BSI – The British National Standards Body

Australia has nominated to become an Observer Member (O-Member) on each of these committees. Thank you to the stakeholders who contributed to request for expressions of interest to demonstrate Australia's ongoing interest in these standardization fields. For further information about Australia's participation email Lucy Chalmers at lucy.chalmers@standards.org.au.

Further information about the participating members and work program of these committees can be found online through the ISO website;

ISO/TC 313: <https://www.iso.org/committee/6809653.html>

ISO/TC 314: <https://www.iso.org/committee/6810883.html>

4. Vote Starts on Final Draft of ISO 45001 for Occupational Health and Safety

Every day, thousands of lives are lost due to work accidents or fatal diseases linked to work activities. These are deaths that could and should have been prevented, and must be in the future. A new standard in development aims to help organizations do just that, and it has now reached one of the final stages in its development.

ISO 45001, *Occupational health and safety management systems – Requirements with guidance for use*, will help organizations provide a safe and healthy workplace for its workers and other people, prevent deaths, work-related injury and ill health as well as continually improve occupational health and safety (OH&S) performance. It has just reached the Final Draft International Standard (FDIS) stage, meaning interested parties can once more submit feedback on the draft before its final publication expected in March 2018.

Latest estimates from the International Labour Organization (ILO) show that, each day, more than 7 600 people die as a result of work-related activities (that's over 2.78 million a year), and over 370 million accidents occur on the job annually. The burden to employers and employees alike is immense, resulting in losses to the wider economy from early retirements, staff absence and rising insurance premiums.

Applicable in all parts of the world and across all sectors, the future ISO 45001 is intended to reduce this terrible toll. It will be the first global standard of its kind, giving organizations a universally accepted framework for improving employee health and safety, reducing workplace risks and creating healthier, safer working conditions.

The upcoming standard will follow in the footsteps of ISO's other management systems approaches, such as ISO 14001 (environment) and ISO 9001 (quality). It will also take into account other international standards in this area including OHSAS 18001, ILO-OSH guidelines, various national standards and the ILO's international labour standards and conventions.

David Smith, Chair of ISO/PC 283, the project committee developing the standard, said that alignment of ISO 45001 to the suite of ISO management system standards will come as a welcome addition. “*We now have an International Standard for OH&S, aligned with other business standards such as ISO 9001, ISO 14001 and ISO/IEC 27001, that helps organizations manage this key risk as part of their business processes.*”

“*ISO 45001 is a significant improvement on OHSAS 18001, which has established that standardization using the risk-based approach works across the world and business sectors,*” he added. “*Effective application of ISO 45001 will reduce the risk of harm in the workplace.*”

ISO 45001 is being developed by ISO project committee ISO/PC 283, Occupational health and safety management systems. The secretariat is currently held by BSI, the ISO member for the United Kingdom.

Standards Australia is a Participating member of ISO/PC 283 with Australian Mirror Committee SF-001. To find out more about this standard, please contact Stakeholder Engagement Manager Catherine Dunkerley at catherine.dunkerley@standards.org.au

Source: <https://www.iso.org/news/ref2249.html>

5. Unearthing the Potential of Autonomous Mining with ISO 17757

Every year, well over a million people are killed in road traffic accidents. In almost all cases, these deaths occur due to crashes where human error was a significant factor. And while technology has improved the safety of vehicles themselves, the sheer number of people on the roads today means that conventional approaches are being re-examined. How can autonomous vehicle technology help remove human mistakes from the equation?

The benefits of autonomous vehicle technology potentially reach far beyond public roads, to mine sites for example. These are places that few have ever seen, but all of us rely on. To find out more, I spoke to Dan Roley, the past Chair for the ISO technical committee on earth-moving machinery (ISO/TC 127). Benefitting from his many years of experience in both mining machinery and standardization work, I asked him about the specific challenges mine operators face when it comes to safety. “*Mines tend to be in remote areas with difficult environments, so operating machines is challenging,*” he explained. “*With the general mining goal of zero injuries, safety is a number one concern for mine operators.*” Long distances from hospitals and working in shafts that are deep underground can exacerbate the severity of accidents, so, as always, the best approach to safety is avoidance, and that’s where the recently published ISO 17757, Earth-moving machinery and mining — Autonomous and semi-autonomous machine system safety, comes in.

The purpose of ISO 17757 is to provide safety requirements for autonomous machines and semi-autonomous machines used in earth-moving and mining operations, and their autonomous or semi-autonomous machine systems (ASAMS). It specifies safety criteria both for the machines and their associated systems and infrastructure, including hardware and software, and provides guidance on safe use in their defined functional environments during the machine and system life cycle. It also defines terms and definitions related to ASAMS.

It is applicable to autonomous and semi-autonomous versions of the earth-moving machinery (EMM) defined in ISO 6165 and of mobile mining machines used in either surface or underground applications. Its principles and many of its provisions can be applied to other types of autonomous or semi-autonomous machines used on the worksites.

Safety requirements for general mobile EMM and mining machines, as well as operators, trainers or passengers on the machine, are given by other International Standards (e.g. ISO 20474 and the future ISO 19296). ISO 17757 addresses additional hazards specific and relevant to ASAMS when used as intended.

While most of us will never visit a mine, we can only try to imagine the scale. Think of the biggest building project you've ever seen – airport, highway or skyscraper – and multiply it up, by a lot. The sheer size of everything is astounding and that means that the consequences of accidents could be supersized. A loaded dumper truck weighs as much as three hundred cars. It's also two storeys high and costs over one million dollars. To get maximum value out of these amazing machines, they usually operate round the clock. That means a team of drivers who take shifts, but even so it's demanding, tiring work in changeable conditions – the possibilities for human error are high.

Even when error doesn't end in accident, operator ability can have a major impact on machine longevity and productivity. With wear parts such as tyres and brakes costing many times more than their regular roadgoing counterparts, and potentially lower use of fuel and oil, there is an economic argument for autonomy to be made alongside the case for safety. In helping to protect the machine from different styles and abilities of operator, in using detailed feedback from sensors in place of gut feeling, maintenance can be scheduled more predictably with less frequent replacement of parts. When these time and parts savings are combined with those of running round the clock with minimal intervention, the advantages of the autonomous mine are clear.

In many cases, the technology is used to adapt existing vehicles, although some models are planned and built as autonomous versions. In fact, mines in both Australia and Chile have been using degrees of automation for more than a decade. And although it is the big-ticket items performing repetitive work, such as dumper trucks, that are first in line for automation, it's likely that the technology will filter down to cover other machines, as Dan Roley points out. *"What we'll probably see in the future is the technology being more widely used for equipment such as dozers and loaders. It has the potential for us to change the way we think, as earth-moving and mining machines become safer and more efficient."*

ISO 17757 plays a major part in advancing that goal. By setting a common foundation for all manufacturers to follow, the risk of going-it-alone is ditched in favour of a shared solution. The market for heavy equipment benefits from highly specialized manufacturers. But mines are serviced by machinery from drill to smaller construction-sized machines that are manufactured by a dozen different companies. *"To realize the advantages of an integrated, autonomous system, all of these products, designed and produced in different countries, have to be able to work together safely,"* explains Roley.

In an environment where margins can be thin and safety is paramount, the mining industry has been quick to catch on to the benefits of automation. So while it may yet be years before public confidence and technology have sufficiently progressed to make autonomous vehicles a regular sight on our roads, the mining industry is already unearthing new benefits, thanks to nuggets like ISO 17757.

Australia is a Participating Member on ISO/TC 127 with Australian Mirror Committee ME-063.

Source: <https://www.iso.org/news/ref2244.html>

IEC

1. IEC to Host Pilot Regulator Forum in Conjunction with the IEC General Meeting in 2018

The IEC has announced that it will be hosting a pilot Regulator Forum in conjunction with the IEC General Meeting 2018, to be held in Busan, Republic of Korea. The forum intends to enable and promote a dialogue between regulators and policy makers to encourage participation in IEC work and the use of standards at national and international levels.

The theme for the first Forum will be *Renewable Energy*.

The IEC invites up to 3 delegates to attend the Forum from each National Committee. As the forum is designed to encourage exchange between standards experts, industry and regulators, the IEC invites a regulator and two other delegates to attend the forum, preferably with at least one representative from the private sector.

The main **advantages for** promoting national participation in this workshop include the possibility to:

- promote your work and increase direct contact with regulators and public policy makers;
- encourage the use of IEC work by regulators in your country;
- cultivate an environment for discussion between industry, regulators, policy makers and standards;
- developers at both the national and international level;
- increase the number of experts participating in the IEC's work, developing your NC's involvement and contributions;
- enhance national collaboration between the standards and conformity assessment community and the regulators/policy makers in your country and region.

If you are interested in finding out more, please contact Stakeholder Engagement Manager Simona Tomevska, simona.tomevska@standards.org.au for additional information.

2. New edition of ISO/IEC 17025 just published

The most popular International Standard for the competence of testing and calibration laboratories has just been updated, taking into account the latest changes in laboratory environment and work practices.

ISO/IEC 17025:2017, *General requirements for the competence of testing and calibration laboratories*, is the international reference for laboratories carrying out calibration and testing activities around the world.

Producing valid results that are widely trusted is at the heart of laboratory activities. ISO 17025:2017 allows laboratories to implement a sound quality system and demonstrate that they are technically competent and able to produce valid and reliable results.

ISO/IEC 17025 also helps facilitate cooperation between laboratories and other bodies by generating wider acceptance of results between countries. Test reports and certificates can be accepted from one country to another without the need for further testing, which, in turn, improves international trade.

In order to reflect the latest changes in market conditions and technology, the new edition of the Standard encompasses the activities and new ways of working of laboratories today. It covers technical changes, vocabulary and developments in IT techniques and takes into consideration the latest version of ISO 9001 on quality management.

Laboratories already accredited to ISO/IEC 17025:2005, will need to transition their processes to the new version within a three-year period from the publication date of the new Standard.

ISO/IEC 17025:2017 was developed jointly by ISO and the International Electrotechnical Commission (IEC) under the responsibility of the ISO Committee on conformity assessment (CASCO).

Standards Australia are Participating Members on CASCO with Australian National Committee QR-010.

Source: <http://www.iec.ch/newslog/2017/nr2217.htm>

3. LVDC Projects Pave the way for Standardization

A number of low voltage direct current (LVDC) trials are preparing the ground for a wider use of the technology, both in developed and developing countries. LVDC is seen increasingly as a green and efficient method of delivering energy, as well as a way of reaching the millions of people without any access to electricity. It's fully in line with the UN's Sustainable Development Goal 7, of providing universal access to affordable, reliable and modern energy services by 2030.

In direct contrast to the traditional centralized model of electricity distribution via alternating current (AC), LVDC is a distributed way of transmitting and delivering power. Today electricity is generated mostly in large utility plants and then transported through a network of high voltage overhead lines to substations. It is then converted into lower voltages before being distributed to individual households. With LVDC, power is produced very close to where it is consumed.

Using DC systems makes a lot of sense because most of the electrical loads in today's homes and buildings – for instance computers, mobile phones and LED lighting – already consume DC power. In addition, renewable energy sources, such as wind and solar, yield DC current. No need to convert from DC to AC and convert back to DC, sometimes several times, as a top-down AC transmission and distribution set-up requires. This makes DC more energy-efficient and less costly to use.

IEC expertise comes in handy

The environmental gains from using a more energy-efficient system supplied from renewable sources make LVDC a viable alternative for use in developed countries as well as in remote and rural locations where there is little or no access to electricity. *“The potential benefits of LVDC already have been demonstrated by a number of pilot projects and niche studies in developed nations. For example, a pilot data centre run by ABB in Switzerland running on low direct current power has shown a 15% improvement in energy efficiency and 10% savings in capital costs compared to a typical AC set-up. This is interesting because data centres consume so much power,”* comments Dr Abdullah Emhemed from the Institute of Energy and Environment at Strathclyde University in the UK. Dr Emhemed leads the University's international activities on LVDC systems. He is a full member of the IEC's new Systems Committee (SyC) on LVDC and LVDC access.

According to Emhemed, further standardization work is required on *“voltage levels, as well as safety and protection issues”* amongst other things. The IEC is leading efforts to promote the benefits of LVDC and to assist in the specification and ratification of these new Standards. SyC LVDC has begun standardization work through a systems-based approach, identifying gaps where International Standards are needed.

Many of these gaps can be filled by adding provisions about DC into existing Standards. The IEC has also published a number of Standards and Technical Specifications (TS) already relevant to LVDC. They include IEC 62031 on the safety specifications for LED modules for general lighting, published under the remit of IEC Technical Committee (TC) 34: Lamps and related equipment, for instance.

IEC TC 82: Solar photovoltaic systems, provides another example. It has published a number of TSs on rural electrification, the IEC TS 62257 series, which make a huge raft of recommendations for renewable energy and hybrid systems.

Trial and error

Japan is one of the countries in which DC trials have mushroomed. More than ten different projects scattered across the country rely on DC power. They include the hybrid AC/DC Fukuoka Smart House inaugurated in 2012, which utilizes energy supplied from a number of different DC sources. In Europe, one of the most advanced projects is in Finland. LVDC RULES began in October 2015. It is led by the Lappeenranta University of Technology (LUT) and financed by the Finnish Funding Agency for Technology and Innovation (TEKES). The project aims to take the final steps towards the industrial scale application of LVDC in public distribution networks by building on the data gathered from laboratories and research sites and transferring the technology into everyday use in Nordic distribution companies. The data is drawn from trials which started in Finland as early as 2008.

“The LVDC RULES project consortium has put together complete specifications for LVDC equipment optimized for public power distribution, especially in a Nordic environment,” explains Tero Kaipia, one of the researchers from LUT involved in the project. *“The development of the equipment is in good progress and the critical tests have been completed. The construction of the pilot installation into the distribution network will start in 2018. Design methods and practical guidelines have been developed to enable the economic utilization of LVDC networks as part of a larger distribution infrastructure,”* he adds. While this project demonstrates a workable LVDC system, a number of key outstanding challenges have been identified by the researchers involved. Chief among them is the lack of appropriate Standards. *“Standardization at system and equipment level is an essential prerequisite for the wide-scale rollout of LVDC in Finland,”* says Tero Kaipia. *“Without standardization there will be incompatible components and it will be difficult to construct systems using components from different manufacturers. And most of all, the network companies will not buy LVDC systems, if the certified components and standard design guidelines are not available.”*

Indian summer

In India LVDC is seen as one of the solutions for bringing electricity to the millions of homes which still have no or only intermittent access to power, as is the case in many other developing nations. The Indian government’s Ministry of Power and the Rural Electrification Corporation (REC), a public infrastructure finance company in India’s power sector, are piloting a number of projects.

One of these is the Solar-DC initiative led by the Indian Institute of Technology Madras (ITT-M). As a result, an ecosystem for DC appliances and DC microgrid projects is emerging. As part of this global effort, ITT-M has been working in collaboration with Telangana State Southern Power Distribution Company Ltd and REC to bring uninterrupted power to four hamlets in rural Telangana, which had been living without electricity for six to eight hours a day. The technology in this particular case comprises a 125 W solar panel, a 1 kWh battery, an inverterless controller unit and DC loads operating on a 48V DC internal distribution line, installed in each small hamlet.

Other similar trials have also been taking place in the Indian states of Bihar, Assam, Rajasthan, Karnataka, Odisha and the city of Chennai. The Bureau of Indian Standards (BIS), which is the IEC’s Indian NC, has been drafting documents based on these trials aiming to standardize 48V for microgrids.

“India is in the process of finalizing a 48V standard for electricity access suited to local needs. It is my hope that this new standard will be presented soon to the IEC community, as an input for further discussions to formulate a universally accepted IEC Standard for electricity access,” says Vimal Mahendru, member of the IEC Standardization Management Board (SMB) and Chair of the IEC SyC LVDC.

Source: <https://blog.iec.ch/2017/12/lvdc-projects-pave-the-way-for-standardization/>

4. Join the IEC January World Smart City Hangout with Chris Davis

- Join the IEC hangout with Chris Davis (Vice President, Smart Cities Cimcon Lighting Inc.)
- A Smart City Perspective – the Emerging “Internet of Outdoor Things”
- 10 January 2018

Chris Davis (Vice President, Smart Cities Cimcon Lighting Inc.) is a Sales and Marketing industry professional with over 30 years' experience in the clean technology, smart buildings, LED lighting and industrial automation sectors. As Vice President, Smart Cities, Chris is focused on developing CIMCON's Smart City strategy and creating an ecosystem of related partners. In addition, he provides thought leadership through the creation of relevant whitepapers, blogs and conference presentations. Prior to CIMCON, Chris was Vice President, Global Strategic Alliances at Schneider Electric, President and Board Member of Baumüller Inc., and has held Vice President, Managing Director and Board Member positions at the following companies: Dapra Marking Systems, Color Kinetics, and Varta Batteries Pvt. Ltd in Singapore. In addition, Chris served as a Lieutenant in the United States Navy.

Gordon Feller is the Co-Founder of Meeting of the Minds, a global thought leadership network and knowledge sharing platform focused on the future of sustainable cities, innovation, and technology. As a consultant, he advises well-established organizations (non-profits and private companies) and start-ups. He serves on five corporate Boards and four non-profit Boards, as well as one Federal Advisory Committee for the US Secretary of Energy. From 2010- 2016, Feller was the Director of Urban Innovation at Cisco Systems headquarters in Silicon Valley where he served in an executive capacity within the company's programs focused on cities. He has also served as a consultant to Cisco focused on the Internet of Things and Talent. Prior to joining Cisco, Feller was the CEO of Urban Age Institute, an international non-profit research and training organization which began inside the World Bank and spun off in 2001.

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