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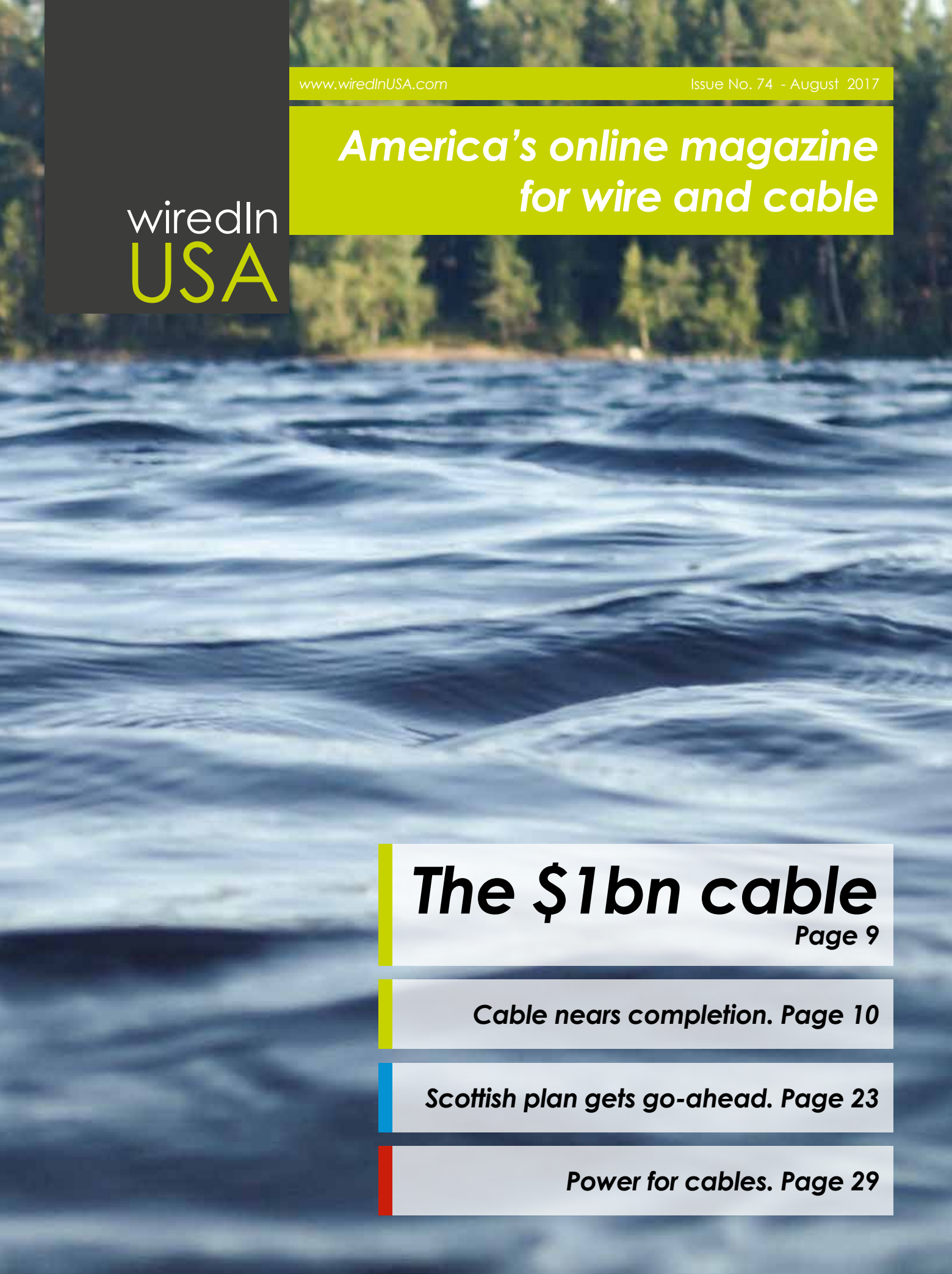
America's online magazine for wire and cable



The $1bn cable
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EDITOR

A high voltage power line running under Lake Erie has won approval from Canada's National Energy Board after two years of review.

The $1bn, 117km-long cable is being built by Michigan-based ITC between Nanticoke on southwestern Ontario's Lake Erie shore across the lake to Erie, Pennsylvania, and will be ready for commercial use in 2021, when it will carry power between Ontario and 13 USA states. For the full story, turn to page 9.

The final splice has been completed on the only direct POP to POP submarine cable system between São Paulo, Brazil, and New York. Seabras-1 is due to become operational this month and is owned by Seabras Group, operating from offices in the US and Brazil. See page 10 for the full details.

A 44-day strike at Chile's Escondida – the world's largest copper mine – has hit production, which dropped 63 percent in the first quarter of the year.

The full story, on page 11, gives details of how copper production fell from 265,597 tonnes in 2016 to 97,103 tonnes for the same period this year.

David Bell
Editor

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MAKING THE
NEWS

The $1bn cable

A $1 billion, high voltage power line running under Lake Erie has won approval from Canada's National Energy Board (NEB) after nearly two years of review.

Michigan-based ITC is to build a 117km, two-way transmission line between Nanticoke, on southwestern Ontario's Lake Erie shore, across the lake to Erie, Pennsylvania. "We've cleared the hurdles on the major milestones," said Terry Harvill, president of ITC Grid Development. "The NEB approval was a big one. That really gave us confidence in the project moving forward."

When the line is complete and ready for commercial use, estimated for 2021, it will carry power between Ontario and 13 US states.

The Ontario Society of Professional Engineers recently reported that during 2016 Ontario wasted enough green energy — power that was generated, but dumped — to power 760,000 homes for a year.

The Lake Erie Connector project will make it easier for Ontario to sell its surplus electricity which, Harvill explained, could be used to help reduce the soaring cost of power in the province. The proposed line also gives Ontario's independent electricity system operator the option to import electricity when needed.

The 6" (15cm) cable will be made in Finland and shipped across the Atlantic to its final destination, a process that could take as long as a year.

The final splice is now complete

Cable nears completion

Seaborn Networks has completed the final splice for Seabras-1, the only direct POP to POP submarine cable system between São Paulo (Brazil) and New York. This is a significant milestone as Seaborn prepares Seabras-1 to become operational in August 2017.

Seabras-1 is owned by Seabras Group. Seaborn operates and maintains Seabras-1 from its offices in the United States and Brazil, including Seaborn's own network operations centers in New Jersey and Massachusetts.

Copper output cut

Output at Chile's Escondida, the world's largest copper mine, has been damaged by the longest mining strike in the country's history.

Production dropped 63 percent in the first quarter of 2017, compared to the same period last year.

The 44-day strike kept production to just 97,103 tonnes of copper in the first three months of the year, down from 265,597 tonnes in 2016.

Escondida accounts for almost five percent of global copper production. In 2016, output reached 1.1 million tonnes.

Before the strike, the company had anticipated that the mine would produce 1.07 million tonnes in the first six months of 2017.

Power improvements

Appalachian Power is in the process of an estimated $80 million transmission line upgrade, scheduled for completion by late 2018.

Appalachian Power spokesman John Shepelwich said the Bland Area Improvements Project runs from Mercer County, West Virginia to Wythe County, Virginia.

"The project begins at the Progress Park substation near the 77/81 interchange in Wythe County," he said. "It essentially runs north, following 77 most of the way through Bland County and then about one mile into Mercer County and ending at the South Bluefield substation."

Mr Shepelwich commented that the project is going well. "We started work in late 2016," he said. "Contractors have been working on access roads in some locations and that is continuing between Town Creek and South Bluefield substations at about 70 percent complete."

Shepelwich said the goal of the project is to replace, rebuild, retire or reroute the old 69kV line that originally ran from the South Bluefield substation near the Mercer Bland County line running south to the Wythe substation, adding: "We are still on track to have the whole project completed by the end of 2018."

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Image: Advanced Digital Cable Inc

Facilities expansion

Advanced Digital Cable Inc (ADC) is to expand its wire and cable production facility in Blairsville, Georgia.

The company currently employs 70 people at the facility, and plans to invest $15 million to almost double the factory size and staff.

"This expansion will enable ADC to better serve our customer base by giving us the capacity to increase the volume of our current product lines made in Blairsville," said ADC president Steve Payne.

The company began making coaxial cable for the digital cable market in 1997. ADC has manufacturing facilities in Blairsville and Hayesville, which also accommodates its corporate headquarters.

Hygiene all tied up

Thomas and Betts, a member of the ABB Group, has developed bacteria-resistant Ty-Fast Ag+ cable ties that inhibit microbial growth and help to reduce infection rates and the spread of bacteria.

Molded from an FDA-compliant nylon resin, blended with an EPA-registered antimicrobial silver ion additive, patent pending Ty-Fast Ag+ cable ties prevent the growth of bacteria, fungi and mold on the cable tie surfaces.

Third-party testing has indicated that the cable ties reduce common surface bacteria by over 99 percent.

Tests were compliant with ISO 22196, measurement of antibacterial activity on plastic surfaces, and measured the additive's effect on Escherichia coli (E coli) and Staphylococcus aureus (S aureus) bacteria specimens.

"Industries that are contamination sensitive, such as health care, food processing and preparation, pharmaceuticals, and medical device manufacturing, face the challenge of maintaining a clean environment in the presence of heat, moisture and organic materials," said Andrew Batterman, global product line manager, installation products, at ABB Electrification Products.

"When using cable ties in these applications, their notches and grooves provide a hospitable environment for bacteria and other microbes.

"We developed Ty-Fast Ag+ bacteria-resistant cable ties to provide a cable-bundling solution that resists microbial contamination."

Under normal use conditions, the antimicrobial efficacy of Ty-Fast Ag+ cable ties lasts a minimum of two years from manufacture.

Helping reduce infection rates

Extra storage

Siemens and AES Corp have formed a new energy storage technology and services company under the name Fluence. The joint venture combines AES's ten years of experience in deploying energy storage in seven countries, with Siemens' energy technology and global presence. Fluence will combine the AES Advancion and Siemens Siestorage energy storage platforms.

Siemens and AES will have joint control of the company with each holding a 50 percent stake. Fluence's headquarters will be in Washington, DC, with additional offices located in Erlangen, Germany, and other cities worldwide. The transaction is expected to close in the fourth quarter of 2017 subject to regulatory and other approvals.

Fluence will operate independently of its parent companies which, together, have deployed or have been awarded 48 projects totalling 463MW of battery-based energy storage across 13 countries, including what is currently the world's largest lithium-ion battery-based energy storage project, near San Diego, California.

Business analyst IHS Markit predicts the grid-connected energy storage sector will expand from a total installed capacity of 3GW at the end of 2016, to 28GW by 2022.

Cable co's strategic review

The board of directors at General Cable Corporation has initiated a review of strategic alternatives to maximize shareholder value. The options may include the sale of the company.

John E Welsh III, non-executive chairman of the board, commented: "After careful consideration, our board has determined to undertake a review of strategic alternatives with the goal of maximizing shareholder value. While the management team has made excellent progress in the execution of our strategic roadmap, to transform the company into a more focused, efficient and innovative organization, we expect the industry to consolidate over time and believe the review at this time is in the best interests of shareholders."

Michael T McDonnell, president and chief executive officer, said: "I am proud of the efforts of our people to transform our business over the last two years, including rationalizing the asset base and refocusing on core businesses, streamlining our supply chain, and accelerating profitable growth in key segments.

"While we are benefiting from these significant operational and financial performance improvements, current dynamics in our industry are masking those accomplishments, and we expect that trend to continue through the second half of 2017 and into 2018. As the board conducts its review, we remain committed to executing our plan, to competing, and to continuing to deliver innovative wire and cable solutions that exceed customer expectations."

Adding to the power mix

Omaha Public Power District (OPPD) has announced that a subsidiary of NextEra Energy Resources will construct the 160MW Sholes Wind Energy Center in Wayne County, Nebraska. Construction is set to begin in March 2019, with operation scheduled to begin in the following December.

OPPD will purchase 100 percent of the energy produced through a 20-year power purchase agreement.

When finished, Sholes will allow OPPD to provide 40 percent of its power mix from renewable energy sources. The company plans to increase that to 51 percent by 2020.

"It is a great time to buy wind; the prices are very competitive," said Jon Hansen, vice president of energy production and marketing.

Later this year, the company plans to announce another joint wind development with Facebook. Facebook is building a data center in Sarpy County, Nebraska, and plans to procure 100 percent renewable energy for the facility.

Cable acquisition

CommScope president and chief executive officer Eddie Edwards

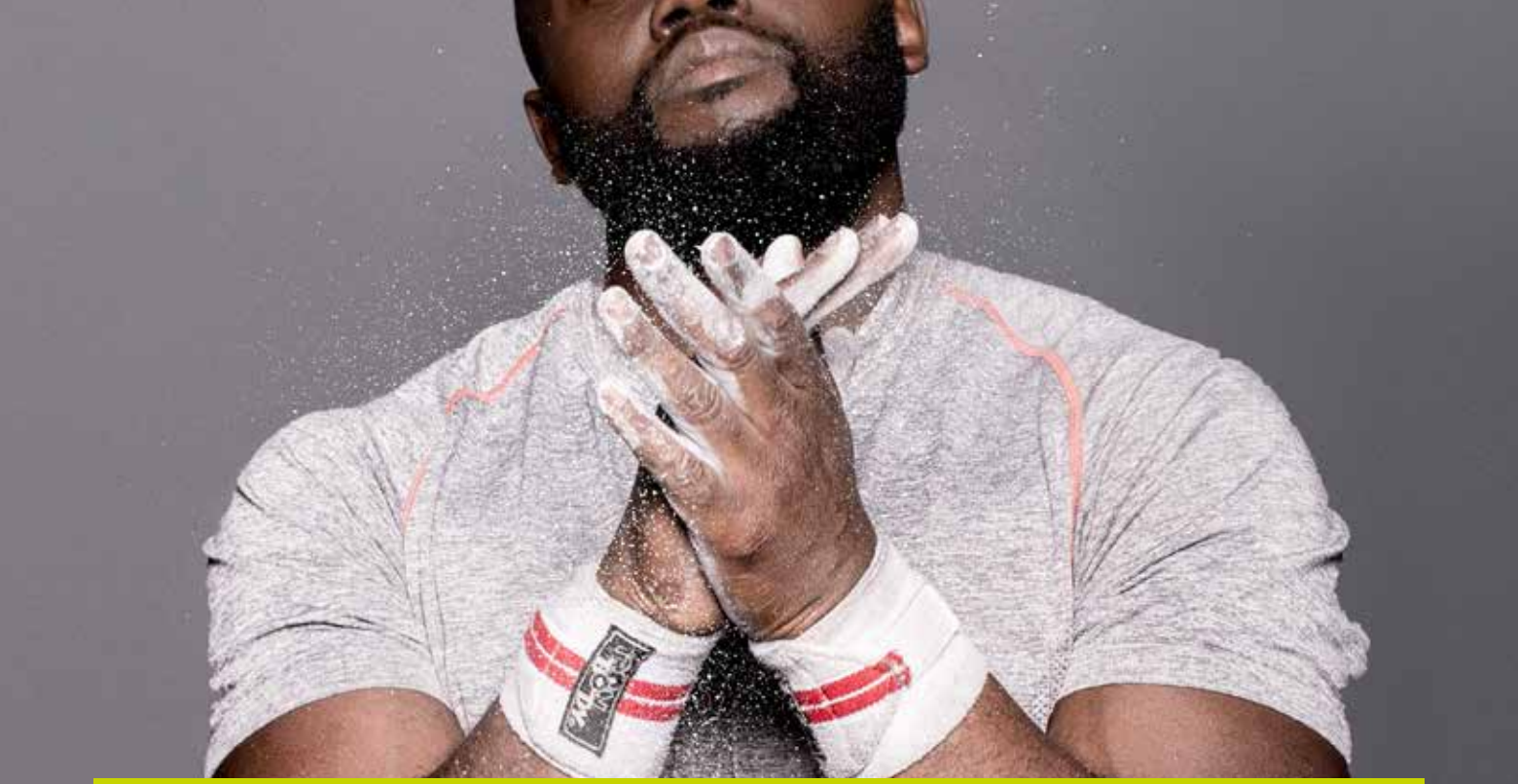
Subject to customary closing conditions, CommScope is to acquire Cable Exchange, a manufacturer of fiber optic and copper cables, trunks and related products for high capacity data centers and business enterprise applications. The US company, founded in 1986, has two manufacturing centers.

The acquisition is planned to broaden CommScope's capabilities in supporting high capacity, multi-tenant and hyperscale data centers.

As more user-driven information and commerce flows through networks, operators are quickly deploying larger and more complex data centers to support growth in traffic and transactions.

CommScope's president and chief executive officer, Eddie Edwards, described Cable Exchange as: "a trusted and respected provider of critical network infrastructure with strong customer relationships." He continued: "While the overall business environment remains challenging, we believe Cable Exchange's leadership in the attractive quick-turn industry will complement our efforts in addressing this important market opportunity."

The leadership team and employees of Cable Exchange will join CommScope on completion of the transaction. Cable Exchange will operate as a separate business within CommScope's connectivity solutions segment.



Avoiding talc

For motion applications that require flexible and lightweight cable designs, Cicoil offers flexible flat cables as an alternative to round PVC cables containing talc.

Talc contains toxins and irritants that contaminate sensitive environments, and can be difficult to work with during the cable termination process.

Many round cables manufactured with PVC materials require the use of talc as an internal lubricant, to prevent inner wires from sticking together during flexing applications. Unlike these cables, Cicoil's flat cables are PVC-free and do not contain talc, fillers, tapes or any potentially hazardous materials.

Flat cables also have greater surface-to-volume ratio than talc-filled round cables, making them more efficient at dissipating heat. This allows a higher current level for a given temperature rise and conductor cross-section. The rectangular cross-section also allows multiple flat cables to stack, or layer, with almost no wasted space between cables, providing maximum conductor density for a given volume.

The talc-free cables' halogen-free outer jacket is self-healing from small punctures and will not wear, crack or deform, even after long-term exposure to vibration, sunlight, temperature extremes, mechanical stress and many chemicals.

The cheque presentation from Allied Wire and Cable

Another helping hand

Allied Wire and Cable has donated $10,000 to the Philadelphia, Northern Delaware and Susquehanna Valley office of Make-A-Wish® Foundation, with an additional $4,000 donated through raffle prizes and customer donations.

The recent charity event honored four-year old Tommy Patterson, who has a cardiac condition. Tommy was granted a wish when he was three. After two years of hospital stays and open heart surgery, Tommy's wish was fulfilled when he and his family went to Disney World. Tommy's father, Will, said: "If I had one wish, it would be to let everyone experience the joy and gratitude I was able to experience by being the father of a son who had his wish come true."

Two Philadelphia Eagles cheerleaders were in attendance and presented Tommy with a gift on behalf of Allied. Allied is proud to support the Make-A-Wish organization, bringing life-affirming experiences to children in need and to their families.

EUROPE

NEWS

Scottish plan gets go-ahead

Mainstream Renewable Power has welcomed a decision by the court of session that clears the way to proceed with the 450MW Neart na Gaoithe (NnG) offshore wind farm.

The judicial review of a previous planning decision was brought by the RSPB (Royal Society for the Protection of Birds).

Andy Kinsella, COO at Mainstream Renewable Power, commented: "After more than two years and two court hearings, we hope that the RSPB acknowledges a fair hearing and allows us to get on with delivering the very significant benefits this project brings to the Scottish economy and its environment.

"We are delighted with the decision and look forward to working constructively with the RSPB to take the wind farm into construction next year.

"This project was consented by Scottish ministers in October 2014 on the advice of Scottish Natural Heritage and Marine Scotland. We have been rigorous throughout the project to work with partners and supply chain businesses to find the best possible way to deliver the project and we are looking forward to seeing NnG up and running.

"We have taken advantage of significant advances in the technology to be used, allowing the number of turbines to be reduced from the 125 in the original consent application in 2012, to a maximum of 64."

Work on the project is expected to begin in 2018.

Looking to a sustainable partnership

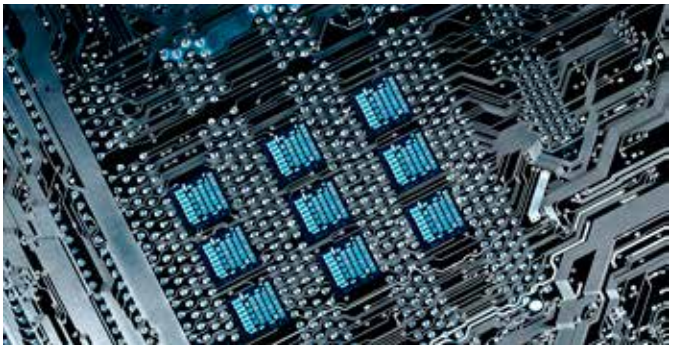
Image: www.prysmiangroup.com

Prysmian Group and the youth-led peace organization AIESEC have announced a global partnership to support "Youth for Global Goals", AIESEC's initiative developed in collaboration with the UN.

Through the partnership, Prysmian Group will encourage employees and AIESEC's members to carry out worldwide projects related to social and sustainability issues. Through its local affiliates the group will join student exchange projects, sponsoring students from all over the world in order to develop and enhance leadership skills in global youth. Prysmian will also involve any employees aged under 30 in the global volunteer project to carry out international projects related to the group's sustainability vision.

The collaboration with AIESEC is strictly connected with the Prysmian Group's sustainability strategy, based on the UN Sustainable Development Goals.

Hyperscale data demands



By 2020 there could be over 20 billion connected things in the world, generating over 3 billion terabytes of data traffic. To better understand the scale of the challenge, the amount of predicted data flow per year will be equal to 108 million years of high definition video. To help hyperscale data center operators keep pace with the technology, Nexans has launched Nexans Data Center Solutions (NDS) – a new business unit to provide scalable and resilient cables and connectivity products.

NDS will offer Nexans' clients a portfolio of physical layer infrastructure products, from data cabling, connectivity and pre-terminated assemblies, to transceivers and fiber containment systems.

Nexans aims to support hyperscale data center operators in up-scaling capacity when, and where, needed, as well as providing advice on any physical-layer-related network challenges and industrializing new concepts and approaches.

Offshore technology

Siemens has received a further order from the German-Dutch grid operator TenneT TSO, to supply a grid connection for offshore wind power plants in the North Sea. The company will supply the entire technology for HVDC transmission for the DolWin6 grid connection, and will use DC CS (direct current compact switchgear) for the first time. The new gas-insulated switchgear for 320kV needs up to 95 percent less space than current air-insulated solutions. Used on an offshore platform, the size of the platform can thus be reduced.

The Spanish partner, Dragados Offshore, is a general contractor in the energy sector and is responsible for construction and offshore installation of the associated platform. French supplier Nexans will supply the direct current cables.

Commercial commissioning is scheduled for 2023.

Automotive power

Porsche has opened its new technology center in Berlin-Adlershof

Porsche has opened its new technology center in Berlin-Adlershof. The new site features a 25m solar pylon to generate up to 30,000kWh of electricity annually — meeting the entire annual demand of the new center. The pylon comprises 7,776 solar cells, representing a total surface area of around 270m^2. Liquid-cooled, 800V 350kW fast-charging is also installed on the premises.

Parallel to the Berlin-Adlershof site, the existing Berlin-Potsdam Porsche center has been modernized and extended.

A charging station for testing charging technology is currently under construction at the US Porsche headquarters in Atlanta. The development partner for the new charging technology is Porsche Engineering Group GmbH, headquartered in Weissach.

The Porsche model Mission E, due on the market by the end of the decade, is expected to be the first production vehicle with 800V technology.

New center for operations

The opening of the new European service center in Newcastle. Photograph courtesy of Aspectus PR

JDR has opened its European service center in Newcastle upon Tyne, UK. The opening was marked by an official ceremony led by Nick Brown, MP for Newcastle upon Tyne East, followed by a tour of the new 4,000m^2 facility.

The center includes a workshop, warehouse, visitor center and offices, and will serve as the central base for JDR's European service operations and the company's sales and marketing functions. The location was selected for its proximity to North Sea and European projects, and to JDR's manufacturing facility in Hartlepool.

JDR's COO, Richard Turner, said: "With this new center we can now offer our clients a wider range of services and…technical support for onshore and offshore activities. Ultimately, this allows us to grow as a company."

Cross-Channel cooperation

The UK's National Grid and its French counterpart RTE (Réseau de Transport d'Electricité) have jointly awarded an order to ABB to supply HVDC technology to help interconnect the electricity networks of France and the UK.

The 240km link will run between Chilling, on the south coast of England, across the English Channel to Tourbe in northern France. ABB will provide the two HVDC Light converter stations that will convert alternating current from the grid into direct current, for transmission across the Channel, and then back to alternating current.

The advantage of HVDC is that it enables efficient and reliable transmission of large amounts of electricity over long distances with minimum losses. Using voltage source conversion technology, ABB's HVDC Light technology can regulate grid fluctuations and power restoration in the event of an outage.

From collaboration to acquisition

JDR Cable Systems (Holdings) Ltd is to be acquired by Tele-Fonika Kable (TFKable) subject to regulatory approval. JDR and TFKable have a long history of collaboration, with TFKable providing water blocked power cores for JDR's cable and umbilical systems.

Monika Cupiał-Zgryzek, CEO of TFKable, commented: "TFKable is a strategic investor with long-term vision for JDR, sufficient resources to support its continued growth, and vast knowledge of the market. We highly appreciate JDR's experienced people, recognized brand name, technological competence, and a successful track record with regards to numerous innovative products.

"TFKable is planning to maintain JDR's operations in current locations, providing new opportunities for the local employees and business partners, and offering our customers innovative solutions."

Australian cable gets an upgrade

The site of the new cable in Australia.
Photograph courtesy of Fugro

Fugro will design, supply and install a new subsea power cable for SA Power Networks in Australia. The cable will connect Kangaroo Island to the distribution network on the Fleurieu Peninsula, south of Adelaide.

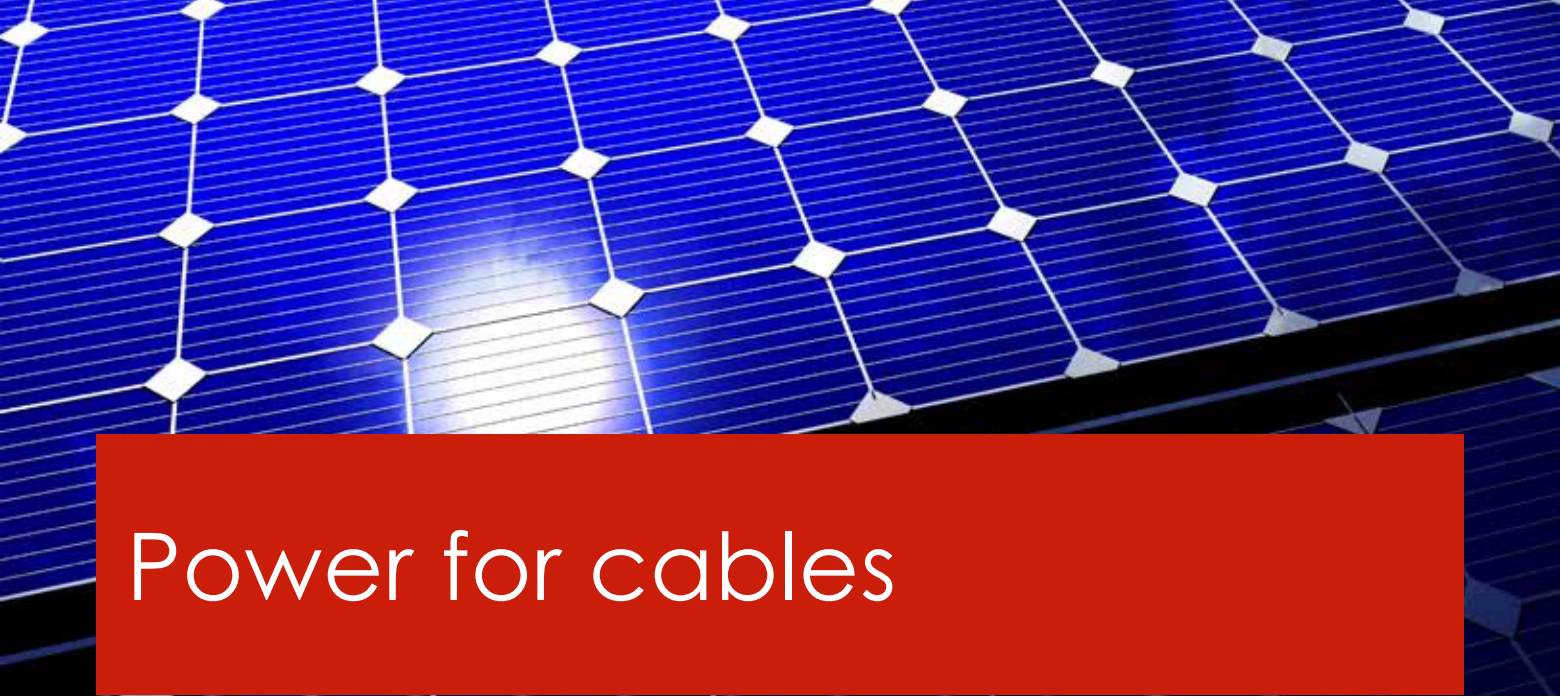
The new 20,000kVA/33,000V cable will replace the existing 10,000kVA/33,000v undersea cable, which is nearing the end of its life. The cable is a continuous 15km length, weighs 600 tonnes, and connects Kangaroo Island to the distribution network on the southern Fleurieu.

Fugro will design and supply the power cable and will use its multi-role support vessel, *REM Etive*, to install it.

Kangaroo Island is the third largest island off the coast of Australia, situated 15km off the tip of Fleurieu Peninsula in South Australia, with a population of about 4,500 people.

ASIA & AFRICA

NEWS



Power for cables

Nexans has inaugurated a new 600kW peak solar power system at its Liban Cables Nahr Ibrahim industrial facility north of Beirut, Lebanon.

The project, co-funded by Liban Cables and the Global Environment Facility (GEF), will allow Liban Cables to reduce greenhouse gas emissions by 750 tons per year by replacing one of its diesel generators with solar energy.

"Energy transition is in the core of Nexans' activity, but it is also deep-rooted in the company's culture," said Benjamin Fitoussi, Nexans senior EVP MERA and industry solutions and projects business group.

"Not only are we actively engaged in assisting our clients in their sustainable development projects, but we also contribute to a greener environment through the implementation of our own CSR policy.

"Liban Cables has been historically an exemplary facility in terms of environmental protection, but the solar power project is bringing this engagement to a new level."

With around 300 sunny days in a year and over eight hours of daily sunshine in Lebanon, solar energy presents a clean alternative that can reduce the need for diesel self-generation and lower the national utility electricity bill.

The 1,900 photovoltaic panels installed at Liban Cables will generate over 938MW hours per year, covering over eight percent of the electricity needed by the plant to produce its range of building, industry and infrastructure cables.

Solar panels will provide a clean alternative in Lebanon, with some eight hours a day of sunshine

JV takeover

Following an agreement between Nexans and Viscas, joint-shareholders of Nippon High Voltage Cable Corporation (NVC), the joint venture is now a 100 percent Nexans company.

"Created in 2006, the objective of this JV was to support the development of the group's sales by adding capacity in oil-filled and mass impregnated paper cables," explained Vincent Dessale, executive vice president, submarine high voltage cables. "Over the period it has already delivered major projects: Hainan I, Cometa, Strait of Belle Isle (SOBI) and Maritime Link."

"The full control of this manufacturing asset will further support Nexans' development in addressing the promising perspectives and growing energy submarine market," added Dirk Steinbrink, senior executive vice president, high voltage and underwater cable business group.

Recalled and recycled

Samsung Electronics Co Ltd has revealed plans to recover 157 tonnes of rare metals from its recalled Galaxy Note 7 smartphones, in a bid to minimize the environmental impact of the fire-prone devices.

Samsung plans to reuse components such as camera modules, chips and displays as replacement parts on devices sent in for repairs, and will recover metals such as cobalt, copper, gold and silver from components that cannot be reused.

The failure of the Note 7 devices last year cost Samsung $5.4 billion in operating profit, while environmental activists such as Greenpeace called for the company to recycle or recover the rare materials contained in the devices.

Saudi power plan

Saudi Arabia's energy ministry has asked companies to qualify to bid for its first utility-scale wind power project. Located at Dumat al-Jandal, in the north of the kingdom, the project will have an annual capacity of 400MW.

Requests to qualify for the project will close on 10th August, with proposals received from 29th August. Bidding closes in January 2018.

Dumat al-Jandal and a 300MW solar PV plant at Sakaka, bids for which are due to close in September, are part of the first round of Saudi Arabia's renewable energy plan.

Winning bidders will build and operate the power plants in partnership with the government: the Dumat al-Jandal project will be backed by a 20-year power purchase agreement, and Sakaka by a 25-year agreement.

Saudi Arabia aims to generate 9.5GW of electricity from renewable energy annually by 2023.

A first for the Solomons

Huawei Marine has signed a contract with the Solomon Island Submarine Cable Company (SISCC) to construct the Solomon Islands' first submarine cable. The signing ceremony in Honiara was attended by prime minister Manasseh Sogavare; Snyder Rini, minister of finance and treasury; Peter Shanel, minister of communications and aviation; Keir Preedy CEO of SISCC; and Wei Chengmin, president of Huawei's South Pacific region.

Huawei Marine, in conjunction with its parent company Huawei Technologies, will design and construct a network incorporating 4,000km of submarine cable, with a total capacity of 2.5TB, that will link Sydney to the Solomons' capital Honiara.

"We've been planning this submarine cable for nearly seven years," said Keir Preedy, "I believe the completion of this cable will solve [the] problems we are facing now — insufficient bandwidth, high cost, and unstable services."

Delayed link may be nearing completion

A power transmission line to link a large-scale wind farm with Kenya's national grid could be completed in the next three months, the Kenyan government has said.

Kenyan energy and petroleum cabinet secretary Charles Keter said in June that the government was working with local subcontractors to complete the 428km, 400kV power line, which has been delayed by negotiations with landowners over compensation.

The transmission project will connect the Lake Turkana wind power project, running from Loiyangalani in the north to Suswa in the center. The 310MW wind farm was completed in June 2017, but turbine supplier Vestas said recently that the power line will delay operations until 2018.

Local media reported in March that the government had taken over the procurement process from the main contractor, Isolux Corsan. Keter told reporters that liquidity challenges at the Spanish firm had affected the delivery of the project, which had been scheduled for completion in 2016.

Wind power development

Wind power generation capacity in Pakistan is increasing rapidly. To date, 13 projects with a cumulative capacity of 650MW are installed and commissioned, with 25 projects with a cumulative capacity of around 1,400MW in various stages of implementation.

Pakistan is developing wind power plants in Jhimpir, Gharo, Keti Bandar and Bin Qasim in Sindh. The alternative energy development board of Pakistan has identified two wind corridors (Jhimpir and Gharo) in the province of Sindh with a total estimated potential of over 50,000MW.

The National Electric Power Regulatory Authority (NEPRA) has granted a further generation license to Iran-Pak Wind Power (pvt) Ltd (IPWPPL) for a wind farm with an installed capacity of 49.50MW, located at Tapo Junqshahi, District Thatta, Sindh. Main sponsors of the project include SUNIR (Iran Power and Water Equipment and Services Export Company) of the Islamic Republic of Iran, while minor sponsors include the Planet Group and the Tufail Group of Pakistan.

Sydney's tunnel vision

Prysmian Australia has the contract to deliver 1,100km of MV, LV, control, communications and fiber optic cables for a New South Wales road tunnel project. The contract, secured by CPB Samsung John Holland JV (CSJ) is valued at approximately $11 million and the work will take place between October 2017 and July 2018.

The contract concerns the first tunnel section of WestConnex, an integrated transport plan for the city of Sydney.

Under the contract, 50 percent of the total supply will be manufactured in Prysmian's Liverpool, New South Wales, plant. For the remaining 50 percent Prysmian will liaise with its affiliate factories in China, Spain and Germany. The operation will be controlled from the Liverpool plant, located only 22km from the customer site in Sydney.

Floating farm ready for fixing

Image: www.masdar.ae

Abu Dhabi-based Masdar has announced "a milestone" in the development of the world's first commercial-scale floating wind farm, to be sited off the coast of Aberdeenshire, Scotland. All five wind turbines, each with a capacity of 6MW, have been secured onto a floating substructure in Stord, Norway, ready to be towed into position 25km out to sea and anchored to the seabed.

The Hywind Scotland wind farm, a $271 million project unveiled in late 2015, is a partnership between energy company Statoil and Abu Dhabi's renewable energy company Masdar. Statoil owns 75 percent: Masdar's acquisition of a 25 percent stake in the project was announced during Abu Dhabi Sustainability Week in January.

The 30MW wind farm will occupy 4km^2 of the North Sea, which records average wind speeds of 10m per second.

Products, Machines & Technology

Assembly for harsh environments

Tensility has launched a new SAE cable assembly line to provide a practical and durable solution for harsh operating conditions. The products are made for the transfer of DC power in the automotive, agricultural, industrial, and military industries.

Fitted with smaller overmolds, the cable assemblies are designed to be used in small spaces, but can also mate seamlessly with older SAE models. The connectors and cables have an operating temperature rated to 105°C and have a dust-proof, durable cap for safety.

SAE cable assemblies are available in a variety of configurations including SAE to SAE, SAE to alligator clips, SAE to opposite charge SAE, SAE to multiple SAEs, SAE to DC jack, and SAE to DC plug. Cable lengths vary from 305mm to 915mm and all have a voltage rating of 48V. The dc connectors have spring contact, custom insulation, and are nickel plated. The PVC-jacketed wire in this series has a VW-1 fire safety rating.

Getting connected

Stewart Connector, a Bel group company, has launched its SealJack Cable Applied connector series, designed to provide reliability and functionality for ethernet connections in harsh environment applications. SealJack can support connectivity for devices within the Internet of Things, where reliability and functionality are necessary as ethernet applications move from the office to harsher environments.

The IP67-rated cable assemblies are pre-assembled and can be customized with IP67 and RJ45 ends using Cat5e or Cat6 shielded or unshielded cable, according to requirements.

Stewart's modular plugs use a load bar and wire aligner for consistent and reliable connections with the cable, while a robust IP67 shell ensures environmental factors will not interfere with either data or power over ethernet (POE) transmission. The modular jacks use fast and convenient punch down IDC termination for continuous connection. Where field termination is required, Stewart Connector offers an IP67 rated plug kit.

Get it straight

Sjogren Industries has launched its Pivot Bar (PB) series of wire straighteners.

The modular PB series is designed to maximize production efficiency while minimizing space and set up time and eliminating the need for complicated and costly base plates for mounting. The PB series is supplied with grooved rolls and precision ball bearings and available with digital readout adjustment capability.

The PB wire straighteners are among several new products launched during 2017 as Sjogren continues to introduce enhancements in wire straightening assemblies and components. The company

has already introduced the static dancer roller (SDR) to the market.

The static dancer roller replaces the conventional dancer roller, or tuner roller, on wire drawing machines.

SDR is said to extend machine life, increase productivity, and reduce maintenance costs while improving wire quality.

▲ *The Pivot Bar (PB) series of wire straighteners from Sjogren*

Hardy industrial jacket

The specially developed jacket that covers a new extreme ethernet cable from Quabbin has been designed to withstand many industrial hazards.

The DataMax cable jacket is pressure extruded over the cable core, fixing the conductor pairs in place.

This type of jacket construction provides very stable electrical performance, even when impacted, bent, or repeatedly flexed.

Continuous flexing cables are designed to be exposed to constant flexing during their operation, while flexible cables are designed to be bent and routed in an installation but remain static during operation.

DataMax flexing cables are designed and tested for continuous flexing in industrial ethernet applications including EtherNet/IP systems in compliance with TIA 568-C.2 Category 5e (Cat5e) and TIA 1005.

Quabbin's Cat5e flexing cables are available in 24 AWG, two or four twisted pairs with color coded high density polyethylene insulation, and with unshielded or overall braid and foil shields.

The FR-TPE jacket has excellent chemical, moisture and flame resistance, and exceptional low temperature flexibility. The cables are type CMX outdoor – CM and AWM style 2463 UL classified.

No bolts for safety

The Ellis No Bolts cleat is the first cable cleat to be granted PADS approval by Network Rail.

The all-polymeric stackable product, designed and manufactured by Ellis, was developed following an enquiry from Network Rail concerning a maintenance problem that raised health and safety issues. The cleat was launched in summer 2016, and was named innovative industrial product of the year at the 2016 Electrical Industry Awards.

Phil Goddard, Ellis's technical development manager, said: "Not only does the [No Bolts cleat] meet a specific customer requirement, it also tackles and addresses an installation and maintenance issue that

affects electrical installations across the world."

The problem, outlined by Network Rail, was that live cables were having to be removed from cleats, work carried on around them, and then somehow placed back between tightly spaced upright studs at regular intervals along the entire run.

Ellis addressed the issue by designing a cleat that could be stacked and fixed with nothing more complicated than a quarter-turn fixing lock.

▲ *The Ellis No Bolts cleat – the first cable cleat to be granted PADS approval by Network Rail*

This means additional cable runs can be added quickly and easily, without any need to tamper with existing ones.

The rapid-fit nature of the product is further enhanced by the replacement of fixing nuts with a push-fit locking mechanism that securely fastens the lower and top section of the clamp.

As well as attaining PADS approval, the Ellis No Bolts cleat uses a form of nylon specifically formulated to meet the London Underground 1-085 approved material standard.

Flat wires

Fine flat wire, a recent addition to Essex Suzhou's copper magnet wire product range, provides automotive customers with a key magnet wire solution for electric vehicle traction motors.

The new wire was showcased at July's 2017 China International New Energy Vehicle Electric Control Exhibition in Shanghai.

Josh Fennig, vice-president of Essex Magnet Wire (Suzhou) Ltd, said: "With the addition of flat wire, Essex Suzhou is prepared to help China's electric vehicle manufacturers ramp-up quickly with the full complement of round and rectangular copper magnet wire they need."

▲ *Fine flat wire, a recent addition to Essex Suzhou's copper magnet wire product range*

EDITORIAL

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