Bring power to the people
Electricity for life

Delivering reliable electricity supplies to off-grid communities and industries

More than 1.3 billion people living in remote parts of the world either have no access to electricity at all, or have access to limited and / or unreliable electrical sources. As our global population increases and energy-intensive lifestyle accelerates, we become ever more dependent on reliable supplies of electricity to power our lives. Rising to this challenge, governments around the world are investing in infrastructure to help deliver electricity to poorly-connected areas. These are not futuristic possibilities, but field-proven technology solutions available today that have been at work in dozens of installations around the world for the past 15 years.

Microgrids solutions help to deliver reliable electricity supplies to off-grid communities and industries. Microgrids may be smaller than the nationwide power systems we’re used to, but their benefits should not be underestimated. As the name suggests, these low to medium voltage grids, located near the sites they serve, offer an energy solution smaller than that of a traditional grid, but one that provides resilient and cost-effective access to power.

How does a microgrid work?
Microgrids comprise distributed energy resources and loads that can be operated in a controlled, coordinated way. They can be connected to the main power grid or operate in what is known as an ‘islanded’ mode, meaning they can run autonomously from or be completely off-grid. Microgrids

The rise of microgrids
Microgrids have the potential to deliver numerous benefits and a number of factors help offset the cost of a microgrid.

Solar power begins at home
ABB installed installing photovoltaic (PV) power system at its low voltage products factory in Cibitung.

Customer contact center
Do you have an inquiry but do not know where to turn? Our Contact Center team is ready to support you.
optimize the use of location-specific distributed generation to serve local loads, generation at the point of consumption, and also have the capacity to integrate renewable energy.

The beauty of this flexible and innovative power solution, is that it has the ability to isolate itself from the main grid seamlessly when needed, for example when there is a grid power outage due to natural disaster or unreliable source, i.e. a weak grid. Once the outage is over, the microgrid can quickly and smoothly reconnect with the grid.

This is of particular benefit for industrial or commercial customers looking to reduce the risk of costs associated with factory or plant downtime. The reliability of the microgrid as a single source in remote locations or as back up to a conventional grid, means that businesses can reduce electricity costs as well as those resulting from power outages, such as loss in man hours or wasted raw materials.

The microgrid’s future

With ABB’s 25+ years’ experience in microgrids, and a portfolio including control system, energy storage and grid stabilization system, plant electrification and automation, expertise in renewable and conventional power generation - we have a fantastic opportunity to lead the market in this new and exciting area. We’ve already got over 30 installed projects across the globe and are looking to continue our growth in this market – which poses a significant opportunity globally.

Why ABB?

- ABB global support network that can serve almost any project from local offices worldwide
- Extensive experience delivering projects with advanced logistics and strict delivery timelines
- Field-proven solution with more than 80 installations worldwide and decades of operational history
- Proven microgrid solutions that achieve high fuel savings through maximum renewable penetration combined with highest microgrid stability and reliability
- Open, scalable automation solutions with broad application range and maximum project flexibility over the solution’s lifetime.

Marble Bar, Australia

The world’s first high penetration, solar photovoltaic, diesel power stations were commissioned in 2010 in the towns of Marble Bar and Nullagine in Western Australia.

The projects include more than 2,000 solar modules and a solar tracking system that follows the path of the sun throughout the day. When the sun is shining, PowerStore grid-stabilizing technology and the Microgrid Plus power management system both ensure that maximum solar energy (100% peak penetration) goes into the network and significantly reduces diesel generation. When the sun is obscured, PowerStore covers the loss of solar power generation by ramping up the diesel generation to ensure that the network has an uninterrupted energy supply.

The solar energy systems generate over 1 GWh of renewable energy a year, supplying 60 percent of the average daytime energy for both towns, saving 405,000 litres of fuel and 1,100 metric metric tons of greenhouse gas emissions annually.

Capturing solar energy to deliver ‘microgrid’ power to remote towns in Western Australia

Why ABB?

- ABB’s unique microgrid solutions enable very high levels of wind and solar power penetration in isolated diesel-powered grids, reducing CO2 emissions as well as dependency on fossil fuel supplies that not only costly, but also uncertain.
- ABB’s offering includes stabilization as well as automation and intelligent control solutions that manage renewable energy generation in remote or isolated grids, ensuring utility-grade power quality and grid stability.

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The rise of the microgrid

Microgrids are delivering major benefits to utilities and companies across a wide range of applications all over the world.

Microgrids are small, self-sufficient power grids that serve a self-contained, often isolated entity such as an island, a remote rural community, a university campus, military base, industrial site, mine or municipality. The microgrid can draw power from or supply power to the main grid or it can operate in ‘island-mode’.

Remote communities and industrial complexes traditionally rely on diesel-based generation. The emergence of renewable energy sources like wind and solar power has brought opportunities for these users to significantly reduce fuel consumption and CO2 emissions.

Additionally, microgrids can protect consumers from the outages caused by natural disasters like hurricanes and superstorm; they are ideal for rural electrification and access to electricity programs in developing countries; and, the technology needed to make microgrids feasible for everyday use, such as power storage and stabilization, is now available and commercially viable.

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The benefits of the microgrid

Microgrids have the potential to deliver numerous benefits:

- Providing power to remote areas
  There are many parts of the world that cannot be reliably supplied by the existing grid infrastructure. For example, a remote mining operation or an island separated from the mainland may not be able to access the main grid at all.

- Hedging against rising fuel costs
  Remote areas are often characterized by high fuel costs driven by transportation costs. Introducing renewable energy with zero fuel cost can reduce power generation operating costs significantly. This applies to all industries and communities located in remote areas.

- Reliability
  When the main grid loses power, the microgrid can switch to island mode. As long as there is an adequate source of power at the local level (diesel generator, wind turbine, fuel cell, photovoltaic solar power, etc.), the electricity continues to flow in the microgrid while the rest of the community is enveloped in darkness.

- Meeting renewable targets
  Many countries have ambitious renewable energy targets. Microgrids allow utilities and companies to make pragmatic investments in renewable energy. Microgrids are particularly suited for multistage development projects, permitting the easy addition of renewable power generation units as and when they are needed.

- Improving security
  Utilities and governments need to find ways to protect the grid from natural disasters as well as physical sabotage. Any prolonged disruption of power, regardless of the cause, represents a threat to security and economic stability.

- Grid stability
  Technology advancements in grid stabilization and energy storage have addressed the risk to grid stability from high penetration of intermittent renewable energy. By rapidly absorbing power surges from the renewable energy source, or by injecting power to make up for short-term lulls, a stable voltage and frequency can be maintained in both the microgrid and the main grid.
Offsetting costs
Like any capital project, implementing a microgrid involves an investment in infrastructure, including the power sources and the technologies needed to manage and connect the microgrid to the main grid.

The capital outlay required for a microgrid, however, is often much less and payback is significantly faster than other initiatives to improve the availability and reliability of electricity. A number of other factors help offset the cost of a microgrid:

– Greater fuel choice
Solar and wind power are ‘free of charge’ fuels and can significantly reduce operational expenses. While wind turbines and diesel generators are probably the two most common sources of power for established microgrids, natural gas, solar, fuel cells and biomass are all becoming increasingly feasible.

– Lower cost of power losses
As much as 6-10 percent of energy is lost in transmission and distribution. Microgrids are local and the power consumed has less distance to travel to the consumer.

– Additional revenue streams
In some regions, energy markets allow microgrid operators to sell the excess power generated. In addition, the heat generated from the source powering the microgrid can be used to create an additional revenue stream. For example, steam might be used to power up additional generators, or hot water could be used for absorption chilling.

– Flexibility and scalability
Finally, the capital expenditure can be spread over several years: the technology allows for the microgrid to develop in stages, adding more generation as needed over time.

Implementing a microgrid
Setting up a microgrid is much simpler than building a new coal-fired power plant or nuclear power station. Even so, several steps need to be followed during planning and implementation to ensure maximum efficiency and reliability.

1. Conceptualizing
This is perhaps the most important step for any microgrid project. Project leaders need to define and prioritize objectives. They need to ask questions such as:

– What is our main objective and what are our secondary objectives: Increasing renewables? Self-sufficiency during times of power disruption? Decreasing the cost of energy?

– What are our targets? For example, if the main goal is to increase the amount of energy supplied by renewable sources, which sources? By when? By how much?

– What are our budget constraints?

2. Modelling
The goals set in step one will determine what the microgrid needs to succeed. For example, if the primary goal is to decrease reliance on the central grid by adding a solar array or wind turbines, the microgrid will need to address stabilization and possibly storage as well.

At this stage, it is important to involve experts like ABB who have experience in helping organizations meet their goals with microgrid technologies. These experts can help design the microgrid and use sophisticated forecasting tools to determine whether the microgrid, as designed, is likely to hit targets.

Financial modeling is another important part of this step. ABB experts help customers work out the many ‘what if’ scenarios involved, determining the best mix of energy sources and balancing goals against budget and timelines.

3. Deployment
At this stage, all the pieces of the microgrid solution start to come together. However, most microgrid projects are multi-year initiatives and involve the building of some basic infrastructure, such as additional power sources. Working with a company like ABB that provides these solutions and can act as a single point of contact throughout the life cycle of the project can help ensure success.

4. Stabilization
During the 6 nt phase, solutions guaranteeing the highest degree of grid reliability are deployed to integrate renewable energy sources and meet load demands and energy requirements. Learn more about ABB’s portfolio of microgrid technologies: new.abb.com/power-generation/microgrids-solutions

INDONESIA

India consists of more than 17,000 islands that are distributed around the equator. Among these, Java, Bali and Sumatera are the most populated islands and served by extensive electricity system, while the other less populated areas, often remotely located in rural or isolated area, heavily relied on diesel power plant or generator. However, due to the ever increasing oil fuel price and the expensive transportation cost, the diesel power generator is becoming less favorable.

As part of the strategy, Indonesia has set several initiatives:

(1) PLN is converting, where technically and economically feasible and sustainable, its isolated grids from pure diesel-based generation to renewable diesel hybrid systems.

The combination of ABB’s global market presence, its leadership in grid technology and its global service footprint with Samsung SDI’s leading lithium-ion battery technology will enable accelerated growth of the market. It will make microgrid solutions a viable alternative to promote and stabilize with minimum usage of expensive batteries.

(2) Investing in new solar-diesel hybrid systems. The “PV/Diesel Engine Hybrid System” is a system that combines solar power generation and diesel engine power generation. Although the solar power system can reduce CO2 emissions drastically, its power generation fluctuates in proportion to solar irradiation. On the other hand, diesel engine power generation has the advantage of continuous power output. By combining a diesel engine with solar power, utilizing IT technology (software) and inverter, the power output can be levelized and stabilized with minimum usage of expensive batteries.

Indonesia is estimated to have a 67 MW mini hydropower potential as of 2015 and is predicted to increase to double the size by 2020, according to figures from PLN.

Furthermore, wind energy has started to be picked up as an alternative energy source. In Indonesia, the implementation is typically in remote area and they are mostly installed as part of R & D project, in addition to be commercially distributed. For example, small on grid system at Sibayak island (South Sulawesi) and Sangihe island (North Sulawesi) have 540 kW capacity.

Though it is not considered as microgrid, Indonesia has started to build on-shore turbine farm in Bantu, Yogjakarta. This was the first large-scale (50 MW) wind energy implementation in Indonesia, launched by government early of last year.

The development is not without challenge, nevertheless it should be nationally promoted and should indicate a milestone of new energy development in Indonesia.

As PLN is targeting to improve the electrification rate to 96.6% by 2020, and with the huge potential of renewable energy in Indonesia, microgrids will certainly share significant contribution to this goal.

ABB and Samsung SDI join forces to develop microgrids globally

ABB and Samsung SDI, the leading manufacturer of lithium-ion batteries, have signed a Memorandum of Understanding to stand together to promote microgrid solutions globally.

The two companies will establish a global commercial alliance to develop and market modular and scalable microgrid solutions, utilizing lithium-ion batteries for energy storage.

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ABB to install microgrid solution in South Africa integrating multiple energy sources

Zurich, Switzerland, September 3, 2015 – Solar-diesel microgrid with battery-based stabilizer to provide power back-up to ABB premises in Johannesburg

ABB, the leading power and automation technology group, announced today that it will install an integrated solar-diesel microgrid at its Longmeadow premises in Johannesburg, South Africa. The 96,900 square meter facility houses the company’s country headquarters as well as ABB’s Power Systems Technology Group, including solar power generation, storage, and grid stabilizer. The purpose of the microgrid will be to provide reliable power to ABB premises in Johannesburg, including the Power Systems Technology Group, and enable ABB to make use of clean solar energy and provide continuity of supply when power supply is disrupted. The microgrid will include a range of technologies including automation and intelligent control and stabilization systems. They enable very high levels of wind and solar power generation in diesel-powered grids, reducing dependency on fossil fuel supplies and curtailing CO2 emissions.

ABB has a broad range of microgrid solutions including automation and intelligent control and stabilization systems. They enable very high levels of wind and solar power generation in diesel-powered grids, reducing dependency on fossil fuel supplies and curtailing CO2 emissions.

ABB will supply a substation for the Shams Ma’an photovoltaic project, the largest of its kind in Jordan and a significant project in the Middle East. It will help the country reach renewable targets of 10 percent of its energy mix by 2020.

It will use over 680,000 solar panels spread over two million cubic meters, and is set to produce 160 gigawatt-hours/year, equivalent to one percent of Jordan’s power production. The 52.5-megawatt (MW) Shams Ma’an project will be one of the largest photovoltaic facilities in the Middle East when it is completed in 2016. Located in the southern region of the country, the new plant will reduce Jordan’s reliance on imported oil and gas, and is one of the first renewable energy projects and the largest of its kind in Jordan.

As such, the plant will be an important component in the country’s strategic diversification of its generation portfolio, which is intended to boost energy security. Jordan’s annual daily average solar irradiance is among the world’s highest, and the country’s National Energy Strategy includes ambitious targets to increase the contribution of renewable energy sources such as solar to the national energy supply. The share of renewable energy in the total energy mix is anticipated to reach 10 percent by 2020.

First Solar, engineering, procurement and construction (EPC) contractor for the plant, has commissioned ABB to build a substation that will integrate the solar energy into the grid. As part of the project scope, ABB will engineer, manufacture and supply the 33-kilovolt (kV) interconnection facility with the grid in a prefabricated electrical center (PEC). This will include the 33kV gas-insulated switchgear, substations automation, control and protection systems, 33kV capacitor banks and ancillary equipment to ensure proper interfacing with the remote-end utility substation, which was also supplied by ABB last year. In addition, ABB will supply a two-megavolt-ampere reactive (MVAr) static compensator (STATCOM) including coupling transformer. Installing a STATCOM in a grid will increase power transfer capability by enhancing voltage stability and maintaining a smooth voltage profile under different network conditions. The STATCOM also enables improvements in power quality. This will be the first ABB STATCOM to be installed in Jordan.

This is not the only solar power plant in the Middle East in which ABB is contributing its technology to support integration of renewables, in line with the company’s Next Level Strategy. ABB previously won substation orders to integrate its technology to support the recent addition of the 26-MW Al Maktoum solar park phase II into the grid in Dubai, United Arab Emirates. This solar farm is expected to produce 3,000 MW of clean energy when commissioned in 2020 – making it one of the biggest renewable energy projects in the Middle East and North Africa.

ABB will provide modular STATCOM component in the country’s National Energy Strategy, which is intended to boost energy security. Jordan’s annual daily average solar irradiance is among the world’s highest, and the country’s National Energy Strategy includes ambitious targets to increase the contribution of renewable energy sources such as solar to the national energy supply. The share of renewable energy in the total energy mix is anticipated to reach 10 percent by 2020.

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ABB helps integrate solar energy into Jordan’s power grid

Three-thousand meters above sea level, on mountaneous Pergunungan Bin-tang, Oksibil, Papua, Indonesia, ABB’s PCS100 Energy Storage System (ESS) in a solar power plant (the world’s highest) has radically changed community life. The solar power plant operation started in October 2012.

Oksibil is a remote region located in Papua province, Indonesia. The limited infrastructure and mountainous landscape have made the area only accessible by aeroplane. The area has been relying only on a single diesel power plant to generate power. However, it was costly and challenging to ensure the reliable supply of diesel. PT PLN (Persero), a government-owned electricity company, decided to build an off-grid solar power plant. With 1,180 solar modules, the plant has a 300 kW capacity. ABB took pride to support this project by supplying one unit PCS100 ESS, one unit of 500 kVA dry type coupling transformer, one unit AC500 PLC - PM573: complete with HMI display CT430. Ferdinand Sibarani, Sales Engineer of ABB Power Electronics said, “This simple yet reliable system operation has significantly reduced power generation cost by minimizing the solar fuel consumption for diesel generator. ABB delivers high quality power in terms of voltage, frequency, as well as harmonic content”. Additionally, he explained, “The PCS100 ESS has built-in web server so that its performance can be easily monitored using any web browser via LAN (Ethernet) as well as Internet. This feature helps a lot for monitoring”.

Facchin, President, Power Systems division, said: “Alongside traditional and renewable generation, microgrids are increasingly being deployed to provide electricity to remote or isolated areas” said Claudio Facchin, President, Power Systems division. “They can also serve as a flexible backup source for industrial and commercial facilities and help address power disruptions.”

ABB, the leading power and automation technology group, announced today that it will install an integrated solar-diesel microgrid at its Longmeadow premises in Johannesburg, South Africa. The 96,900 square meter facility houses the company’s country headquarters as well as medium voltage switchgear manufacturing and protection panel assembly facilities, with around 1,500 employees. The innovative solution includes a rooftop solar photovoltaic (PV) field and a PowerStoreTM grid stabilizer, that will help to maximize the use of clean solar energy and ensure uninterrupted power supply to keep the lights on and the factories running even in the event of a power outage on the main grid supply.

A 750 kW rooftop PV plant and a 1 MVA/380 kWh battery-based PowerStore will be added to the existing back-up diesel generators. This will enhance the use of renewable energy and provide continuity of supply when power supply is disrupted and during transitions from grid to island operation.
Commitment to clean and sustainable energy
Solar power begins at home

ABB continues to reduce its environmental impact by installing a 8.7 kWP rooftop photovoltaic (PV) power system at its low voltage products factory in Cibitung, West Java. This is part of the efforts in reinforcing ABB’s commitment to clean and sustainable energy.

The 57 module photovoltaic installation was commissioned in September 2015, occupying 65 square meters. The generated green energy will cover the consumption of the office equipment in Cibitung – a site that covers over 20,000 square meters of office and factory space and accommodates approximately 200 employees.

To ensure the high efficiency of this on-grid photovoltaic system, ABB installed a wide range of solar inverters, including PV string inverter TRIO and low-voltage products, which came together to enable consumers optimize their energy consumption and to ensure it is fully coordinated, and compliant, with the local grid.

Aurora Vision
In addition to this, an exhibition inside the factory was established, which allows visitors to directly see the demonstration of ABB monitoring capabilities, using Aurora Vision.

Aurora Vision is a plant management platform that helps installers with easy integration and lets home owners get a real-time view of how much energy has been harvested. This is a cloud-based solution, available through a web browser user interface to your PV plant data, which provides highly interactive, real-time access to key performance and operations metrics to help plant management optimize decisions and accelerate the alignment with business goals.

ABB wins order for variable speed drive system with highest levels of energy efficiency

The drive system has the highest energy efficiency amongst all variable speed drives in the 6MW power range. It is also the first drive system for a grinding application with a permanent magnet motor in this power and torque range.

ABB has won an order from Tianjin Cement Industry Design & Research Institute Co. Ltd, a subsidiary of SINOMA Group, for a highly energy efficient variable speed drive solution for a dual pinion ball mill at the PT Semen Bosowa Maros cement plant in Indonesia. The equipment will be delivered in March 2016 and commissioned in the third quarter of 2016. The order was booked in the third quarter of 2015.

ABB was selected for that project because the end customer had been satisfied with earlier deliveries for the first cement grinding line at the plant, including a gearless mill drive (GMD) and a vertical mill with ABB slip ring motors.

ABB receives award “The Best Manufacturing of Instrument 2015”

ABB has proudly received “The Best Manufacturing of Instrument 2015” from PT Rekayasa Industri for delivering outstanding values to its customers and partners.

The award recognizes the supplier’s dedication to providing superior quality and is only awarded to those who demonstrate such world-class performance on an ongoing basis. ABB was evaluated with increasingly strict criteria for dis-tinctive outstanding supplier quality performance, exceptional services, capacity planning and delivery performance. The award also reflects ABB’s high quality service to the customers.

“One of our main goals is to attain the maximum level of customer satisfaction,” said Karl Holmqvist, Local Division Manager of Process Automation division.

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ABB Indonesia conducts sales and distributors collaboration day and factory visit, enhancing business collaboration and networking

This one-day program provided a good platform to foster closer relationships, increase knowledge on our offerings, feedback gathering and exploring more opportunities in the market.

Around 27 local sales and marketing for LV and MV team of EP division and 39 distributors attended the event. Among them were Alfinson Wijaya Cipta, PT; Cipta Daya Kreasi, PT; Kifa Citra Pratama, PT; Pura Mayungan, PT; Odea Prima Global, PT; Bintang Teknik, PT; Delakti Tatajaya, PT; Eltech Power, PT; Gema Industrial, PT; General Supply & Services Indonesia, PT; Rafindo Tigasakti, PT; Suraynas Elsindo Primatama, PT; Teleindo Citra Sejahtera, PT; Elsindo Citra Sejahtera, PT; and Triyek Solusi Pratama, PT.

The seminar was opened by Rejen Gang, Sales and Marketing Power Grids and Electrification Products Medium Voltage (EPMV) of ABB in Indonesia, which highlighted EPMV’s wide range of offering, its leading position and opportunities of working together. The same was reinforced and encouraged by Roy Kosash, Local Sales and Marketing Manager EP division. The session followed with presentations from Rachmad Nazwaruddin, Sales Manager EPMV - Secondary AIS Switchgear; Kompas Nusantara Panganli, Senior Sales Specialist EPMV – Distribution Automation / Protection Relay; and Mohamad Soleh, Sales Support Manager EPMV. Among the topics covered were medium voltage products product offerings, with application examples. Interactive discussions took place during the presentations, and continued on even during break sessions.

The event gave opportunities to LV sales team and its distributors to get firsthand impression about EPMV offering as well as visit state of art EPMV manufacturing facility in Indonesia. This event and its collaboration will result in better proposition to ABB customers.

Accommodating the spirit from participants, ABB continued the excitement by taking them to visit our MCB factory in Cibutung, West Java. Please see page 10 for detail story.

Fostering customer relationship through various training program

Knowing of a piece of highly technical products or systems work is rewarding in many different ways. You understand your engineers explanation better, you take more interest in innovation and product upgrades, you can be more pro-active when making decisions and you understand why OEM expertise is important for knowing of a piece of highly technical products or systems work is rewarding in many different ways. You understand your engineers explanation better, you take more interest in innovation and product upgrades, you can be more pro-active when making decisions and you understand why OEM expertise is important for operation and maintenance work.

ABB understands this and is constantly offering several training program for its customers. This training is instructor-led course with hands-on exercises and can be tailored to meet specific requirement from customers. The training can be conducted at ABB’s facility, however, we realize that it is not always possible to have your staffs away from site. In this case, training can be arranged to be held at your plant or a local venue by mutual agreement. Please do not hesitate to talk to us about your requirement.

Product training for Indonesia Power and Tjiwi Kimia

What’s Up Down Under 1|14

ABB’s business unit of Power Generation rolled out two sessions of training for its customer, PT. Indonesia Power UBP Surabaya on January 20-22 and January 27-29, 2016. This is the fifth times ABB conducted training for PT. IP Surabaya since 2012. In this occasion, ABB’s team presented a training of how to upgrade Analog Master Module (AMM) and Analog Slave Module (ASM) on Unit 6 (600 MW) PT. IP. A total of eighteen participants from the respective company participated in this training that was held at the Training Room, 15th Floor of ABB’s office in World Trade Center I. The whole series of training is the main part of ABB’s commitment to always support the customers with high quality services and solutions to improve ABB’s system in the projects.

For any business that provides a product or service to customers, the act of finding, targeting and obtaining new customers is always going to be among its top priorities. But what many businesses tend to forget is that once a customer makes the first purchase, there is much more to be done in the customer relationship. Smart businesses know that the first purchase is really just the beginning, and that the real business value lies in retaining that customer. That is where ABB constantly trying to understand the customers’ needs and what we can do to foster lasting customer relationship. ABB and PT. IP Surabaya have been collaborated in several projects since 2012, followed by several trainings specially designed for their engineers regarding maintenance and installation. The mutual relationship continued up to now. In this training, the module covers the installation of BRC410, NIS21, NPM22, MMU21, MPS3, ASI23 and TU in order to replace existing system AMM and ASM system. Furthermore, the participants were also equipped with the training about S+ Operation Maintenance and S+ Composer related to AMM upgrade.

Weldi Wanto, DCS Lead Engineer and also the trainer, said in the occasion, “As a global leader in power and automation technologies, ABB has a deep understanding of the importance of knowledge, technology and innovation. We firmly believe that customer is always number one and this is how we support them, by providing training model which is more interactive, efficient and better meet their needs”.

In the different project for Tjiwi Kimia, Yuhendrazal Fahimi as Project Manager explained that in the near future, ABB will also provide training about Symphony Plus operation and engineering for their customers in Tjiwi Kimia on the upcoming February 29 – March 4, 2016. Symphony Plus is ABB’s flagship automation platform for the power generation and water industries. It is one of the most widely-used DCS in these industries, and one of the most reliable and efficient control automation systems available today. Symphony Plus enables plants and personnel to perform efficiently and balance objectives like asset availability, operational reliability and production efficiency with business goals like asset life extension, carbon reduction and regulatory compliance. S+ Operations is an intuitive, easy-to-use human machine interface (HMI) that leads operators to greater awareness, faster response and better decisions.
Stronger collaboration between ABB’s team and distributors

ABB cable accessories day
Feb 24, 2016

As part of ABB’s high voltage products group, the cable accessories, with a good design and quality, are enjoying an increasing popularity and market share in the industry. Cable accessories are the products that connect cables to electric lines and the relevant power distribution equipment. The function of these products is inseparable in a power transmission network.

For this, ABB will conduct a one day technical seminar as a platform where you can experience the latest innovations on ABB’s offering and solutions, while at the same time discuss with ABB’s experts any issues related to the products.

Date : February 24, 2016
Time : 08:30 - 16:00 WIB
Venue : Sasono Mulyo 3 room
Le Meridien Hotel, Jakarta

For more information and registration, please contact:
(1) Fauzan.Nurnahmad@id.abb.com at +6281384494409 and/or
(2) Ahmad.Sehabudin@id.abb.com at +628111173641
by submitting your name, company and mobile phone, before February 22, 2016.

ABB energy efficiency seminar
March 2, 2016

As a part of ABB’s commitment and support to our valued business partners, Discrete Motion and Automation (DM) Division of ABB in Indonesia will conduct ABB Energy Efficiency Seminar 2016 with the details as follows:

Date : March 2, 2016 (Wed)
Time : 10.00 - 16.00 WIB
Venue : Gerbera Room, Mezzanine Fl., Hotel Mulia Jakarta

In this occasion, ABB will present the latest technology and energy efficiency solutions on industry in F&B, Power, Cement & Mining, and Oil & Gas in a purpose to help the customers squeeze the most value from each unit of energy they use.

In this seminar, ABB will also present a display of our related products and systems, whereby the customers also have the opportunity to interact and discuss directly with ABB’s specialists. This is a great opportunity to find out ABB’s significant application knowledge developed over many years to enhance the productivity and energy efficiency.

For registration, please contact katherina.rumambi@id.abb.com or at 08111190110.

March 22-24, 2016

The world’s eyes are now open to the importance of an ecologically friendly environment that surrounds the industrial sectors. The constant need of clean water in industries like oil & gas, agriculture and food is why water treatment systems is key in production. Improving the quality of water even though it is recycled wastewater is what major industries search for.

This is also one of ABB’s concerns to fulfill the needs of industrial waste management, clean water solutions, biomass and bio-waste advantages for renewable energy. There is always room for new findings and developments in providing water for the world. Thus, ABB will participate at International Waste, Wastewater and Water Expo (IW3EX) 2016 and invite the business partners to join us:

Date : March 23-24, 2016
Time : 08:30 - 16:00 WIB
Venue : Jakarta Convention Center (JCC), Jakarta

For more information and registration, please contact katherina.rumambi@id.abb.com at 08111190110.

ABB MicroSCADA Pro customer day
March 23, 2016

The Release tour focuses on offering tools and means to make your everyday work more comfortable in the field of the substation automation and network control. In this tailored MicroSCADA Pro release training you will learn and interact with our sales manager and technical expert. This is an excellent opportunity to discuss directly with the members of the product team.

During the day you will be able to learn the essential of MicroSCADA Pro based solutions. We will also touch the subjects on how you can easily keep your system up to date and cyber security proof.

Plan your next steps for growth and success with MicroSCADA Pro attending MicroSCADA Pro training in 2016 will enable you to pursue the opportunities ahead. We look forward to meeting you at the MicroSCADA Pro Release Tour 2.0.

For more information and registration, please contact:
(1) Uli.Lilya@id.abb.com atau +6281316555189
(2) Risdi.Arya@id.abb.com atau +6281290332300
by submitting your name, company and mobile phone, before March 18, 2016.
ABB Turbocharger upgrade boosts Return on Investment to 64%

"Benefits of upgrading our products are significant and we have always been confident that improved performance gives true value to our customers", said Oliver Riemschneider, Managing Director, ABB Turbocharging. "The study analysis showing the financial benefits from a customer point of view helps us to even better support our customers, delivering on their needs - all in line with our Next Level strategy."

As well as financial benefits, the study by Forrester Consulting provides information on additional benefits from the turbocharger upgrades. These include lower emissions, extended component lifetime due to lowered thermal stress, as well as longer running hours between overhauls leading to reduced maintenance cost.

"The study was commissioned by ABB and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis. Forrester makes no assumptions as to the potential ROI that other organizations will receive and strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriate-ness of an investment in a turbocharger upgrade."

In the case study, new advanced compressor wheels with a higher efficiency and wider speed margins were fitted to six turbochargers on three engines. The increased efficiency led to fuel savings of 1.6% equating to a reduction of $470,000 in the annual fuel bill. In addition, due to the wider speed margins of the new compressor wheels, it was possible to run the turbochargers at a higher speed, particularly during the hot period of the day. Before the upgrade, the engines could not be run at full load but had to be derated due to very high outside temperatures. After upgrading, the power output could be increased by 2.4% resulting in $537,000 additional revenue per year.

20 years of KNX
A quarter of a century of Intelligent Building

When Thomas Edison invented the long lasting commercial electric light bulb he could not have foreseen a future of fully integrated building control.

"KNX is the leading worldwide standard, with all products ‘speaking the same language’ so that smart homes and buildings with controlled lighting, ventilation, air conditioning, heating, shading, security and more, are now a reality," said Bernhard Dörstel, Global Product Group Manager Building Automation of Low Voltage Products division. "25 years ago increasing energy efficiency through intelligent building control and the development of smart cities was just a distant dream – today the revolution is already well under way."

With buildings, both commercial and residential, using a significant portion of the world’s energy, there is a need for us to do more with less. Thanks to KNX, which this year celebrates a quarter of a century on the market, energy savings for buildings in the region of 30 percent are possible when compared to non-automated conventionally controlled solutions. With the world’s population increasing by 180,000 people a day and carbon emissions soaring, KNX installations provide a popular and ever growing solution. ABB has thousands of KNX references around the world providing unprecedented comfort, safety, versatility and above all energy efficiency and here are just a few examples to show what can be achieved in building automation.

ABB i-bus KNX is the intelligent installation system that meets the highest requirements for applications in modern home and building control and is based on the simple and proven KNX technology (http://www.knx.org), which is accepted as the world’s first open standard for the control of all types of intelligent buildings - industrial, commercial or residential.

ABB celebrates 125 years in Switzerland
Pioneering technology to serve the world

One hundred and twenty-five years ago, Charles Brown and Walter Boveri founded BBC in the Swiss city of Baden in 1891. The electrical engineering pioneers viewed electricity as the pacesetter for a new age. In 1988 BBC merged with the Swedish company ASEA to form ABB.

ANNIVERSARY
This year ABB is celebrating its 125th anniversary in Switzerland. To kick off the anniversary year, a Rhaetian Railways Allegra train will display a timeline of facts and graphics highlighting historic milestones of ABB’s history in Switzerland and throughout the world.

Events and celebrations of the ABB anniversary will be conducted to showcase ABB’s deep bond with Switzerland throughout the year. Among other things, ABB will be a prominent guest at the opening of the new Gotthard Base Tunnel – the longest railway tunnel in the world – at the beginning of June. The new tunnel is equipped with a wide range of ABB technologies that secure the power supply of the infrastructure and the ventilation.

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ABB Turbocharger upgrade boosts Return on Investment to 64%

Independent study shows ABB turbocharger upgrades further improve engine performance and reduce fuel consumption.

ABB announced study results showing a 64% return on investment from turbocharger upgrades. The increased revenue resulting from higher engine output of three engines in a power plant accumulated to approximately $537,000 per year, and in addition, fuel savings of $470,000 per year were realized.

Forrester Consulting conducted a study examining the return on investment (ROI) from upgrading ABB turbochargers for a major power plant operator in the Caribbean. Data gathered and analyzed from turbocharger overhauls leading to reduced maintenance cost. Overall, the engine operation can be better optimized to the specific needs of the operator.

In the case study, new advanced compressor wheels with a higher efficiency and wider speed margins were fitted to six turbochargers on three engines. The increased efficiency led to fuel savings of 1.6% equating to a reduction of $470,000 in the annual fuel bill. In addition, due to the wider speed margins of the new compressor wheels, it was possible to run the turbochargers at a higher speed, particularly during the hot period of the day. Before the upgrade, the engines could not be run at full load but had to be derated due to very high outside temperatures. After upgrading, the power output could be increased by 2.4% resulting in $537,000 additional revenue per year.

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ABB collaborates with Unika Atma Jaya in nurturing future young engineers

The real engineering’s challenge may be integrating solutions into our societies. It leads us to the most urgent question: how to train a new generation of young engineers who will be capable of combining technical excellence with a deeper appreciation of societal needs and values.

ABB in Indonesia represented by Control Technology business unit and Catholic University of Atmajaya (UNIKA Atmajaya) held a meeting to identify ways in which universities and companies can work together to train the next generation of engineers who can help solve the society’s problems. Answering the challenges, ABB in Indonesia conducted a two-day training and workshop about product engineering of Freelance Version 2013 at UNIKA Atmajaya Electrical Engineering Laboratory on January 21 – 22, 2016. Total of 10 – 15 participants attended the training. The participants are mostly bachelor’s degree students of electrical engineering (S1 – Teknik Elektro) at the same university.

The training provided participants the updated information about Freelance Version 2013 that combines the advantages of both worlds – DCS and PLC. It offers the small footprint of a PLC, together with the full functionality of a DCS. The integrated environment simplifies engineering, commissioning, maintenance and fieldbus management. The training is one of ABB’s purposes to nurture young engineers, to give them more opportunities to learn from the experts and equip them with a knowledge about ABB’s system through series of training course. The two-day training and workshop was started in the morning at 9 a.m. to 5 p.m. each day. The training was opened by Sutrisno Sutedjo, ABB’s Manager for Control Technology business unit. It was followed by the presentation from Purwanto, ABB’s Project Engineer Automation talking about the technical and product details.

The collaboration between ABB in Indonesia and the university initially emerged when UNIKA Atmajaya ordered AC700, a controller for Freelance to ABB for their workshop. From this occasion, ABB’s team came with initiative to provide the training about the products in a hope that the students can implement it and familiar with ABB’s system.

Sutrisno conveyed, “Our training seeks to challenge students to explore their potential for achievement by nurturing their critical thinking, increasing scientific literacy, and enabling innovation”. He added that this is a good opportunity for ABB to give back to the community of young engineers. Meanwhile, Purwanto also explained, “The students are still young and fresh. We are honored to contribute more on this program. So, they can implement the skills for practical experience”.

In this occasion, the team of lecturers also conveyed their gratitude to all ABB team that have been involved in this training and workshop. This is only the beginning and both parties hope for more upcoming collaborations that can help young engineers to mold the future.

“Our training seeks to challenge students to explore their potential for achievement, by nurturing their critical thinking, increasing scientific literacy, and enabling innovation”.

ABB Review 4|2015 - Integrating renewables

For over a century, ABB has proudly published a corporate technical journal highlighting the company’s innovations and technological advancements.

Today, the journal is published quarterly and has a print distribution of about 60,000, as well as a rapidly growing electronic and tablet readership. The journal is available in English, French, German and Spanish.

While each issue of ABB Review spans a range of topics even beyond the main theme, our special reports focus on specific businesses and industries. Browse the pages of ABB Review for an in-depth look at the company’s many contributions to power and automation.

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Renewable energy plays a vital role when it comes to balancing the need for more power with minimum environmental impact. Addressing challenges like intermittent supply and often connecting remote locations, ABB has integrated more than 200 gigawatts of hydro, wind and solar power into the grid – enough electricity to serve the needs of nearly 70 million people. We offer a range of products, systems and services for power generation, transmission and distribution to help increase power capacity, enhance grid reliability, improve energy efficiency and lower environmental impact. With a 125 year heritage of technology innovation, ABB continues to shape the grid of the future. For more information please visit us at www.abb.com

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