

## About GE

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GE (NYSE: GE) is the world's Digital Industrial Company, transforming industry with software-defined machines and solutions that are connected, responsive and predictive. GE is organized around a global exchange of knowledge, the "GE Store," through which each business shares and accesses the same technology, markets, structure and intellect. Each invention further fuels innovation and application across our industrial sectors. With people, services, technology and scale, GE delivers better outcomes for customers by speaking the language of industry.

## GE in Indonesia

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GE is a partner for a better Indonesia. We are committed to bring the latest technology and most suited solutions to help Indonesia overcome its infrastructure challenges with investments up to \$1 billion in Power, Oil & Gas, and Healthcare sectors.

## At a Glance

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### Historical Footprint

GE 1940; Alstom 1966

### Number of Employees

1,300+

### Major Locations

**GE HQ:** Jakarta

**GE Balikpapan Office**

### 5 Manufacturing Sites:

- Turbine service facility in Bandung
- Sub-sea oil & Gas equipment manufacturing in Batam, (Baker Hughes, a GE company)
- Healthcare representative office in Surabaya
- Transformer and Air Insulated Switchgear equipment manufacturing in Jakarta (PT UNINDO, - Alstom legacy)
- Boiler manufacturing and service facility in Surabaya (Alstom legacy)

## GE works on things that matter to Indonesia

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### GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. As a technology leader and local partner, GE Healthcare is committed to help Indonesia build a sustainable healthcare system, working alongside the country's public and private sectors.

- Today, Indonesia accounts for 30% of GE Healthcare's business in Southeast Asia, the largest business in the region with the greatest opportunities for innovative healthcare solutions. We have organized more than 75 healthcare education events through ASEAN Healthcare Learning Institute (AHLI), and have trained more than 2,000 healthcare providers to date.
- In 2012, GE Healthcare launched the Vscan 1.3 in Indonesia, a handheld, pocket-sized screening device with ultrasound technologies, adapted locally with a user interface in Bahasa, Indonesia for use by medical general practitioners (GPs).
- In 2015, GE Healthcare made a major investment in Indonesia to grow the size of our team locally. Today, our Indonesia team accounts for about 130 of our 900 staff in ASEAN. In addition to Jakarta, GE has employees based in Surabaya, Medan Semarang and Jogjakarta.
- More than **25,000** GE Healthcare equipment are installed in hospitals across Indonesia, from Aceh to Nabire.
- For every minute:

- 15 women in Indonesia are scanned with high-quality ultrasound devices from GE Healthcare
- 5 patients receive anesthetic treatment using GE's anesthetic equipment in surgeries
- 70 patients have done early diagnostic of cardiac diseases using ECG equipment from GE
- 1 patient is scanned using GE's CT Scan equipment

## GE Aviation

GE Aviation is a world-leading provider of commercial, military and business and general aviation jet and turboprop engines and components as well as avionics, electrical power and mechanical systems for aircraft with a global service network to support these offerings.

- In Indonesia, GE has installed over 600 highly efficient jet engines on Garuda Indonesia and Lion Air, which means that every 68 seconds, a plane powered by GE engine takes off from Indonesia, transporting 44 million passengers a year from Soekarno-Hatta International airport in Jakarta.
- In 2016, Transportation Partners, the leasing arm of Lion Group, announced an order for 348 LEAP-1A engines from CFM International to power 174 firm Airbus A320neo aircraft.
- In 2015, Garuda Indonesia and CFM International reaffirmed the expansion of their long-term partnership in which Garuda has committed to purchase 50 units of Boeing 737 Max 8 aircraft powered by CFM LEAP 1B engines.
- In 2013, GE collaborated with Garuda Indonesia's subsidiary, GMF Aeroasia, to develop CFM56-7B engine test cell to help Garuda Indonesia and its subsidiary GMF AeroAsia anticipate the maintenance needs of its growing fleet of B737-800 and allows GMF to have full overhaul capabilities for these airplanes.

## GE Transportation

GE Transportation is a global digital industrial leader and supplier to the rail, mining, marine, stationary power and drilling industries. Our solutions help customers deliver goods and services with greater speed and greater savings using our advanced manufacturing techniques, industry expertise and connected machines.

- GE has been supporting Indonesia's railway since 1953 when Indonesian rail bought its first GE locomotive. To date, over 350 GE locomotives are running in Indonesia, transporting 200 million people annually.
- GE collaborated with PT KAI to develop its locomotive service center, Balai Yasa Yogya, to be a center of excellence for Indonesia and ASEAN. This is a key initiative, our investment in transportation and contribution to local job creation.
- Our focus in GE Transportation is to work together with PT INKA (Trains Manufacturing state-owned enterprise) to develop Global Lightweight Locomotives in Indonesia for Asian market. In addition, we are supporting Indonesia's railway sector with our signaling technology.
- In June 2016, GE and PT KAI signed a Letter of Intent for a multi-year maintenance service agreement for additional 100 CC206 diesel-electric locomotives, the latest addition to PT KAI's fleet of existing diesel-electric locomotives. In total, all 150 new fleet of PT KAI's CC206 locomotives are covered under this multi-year maintenance services agreement. GE has worked with PT KAI for more than 60 years, bringing 350 locomotives to the country.
- In October 2016, GE Transportation has announced commitment to support PT KAI's digital transformation.

## GE Power

GE Power is a world leader in power generation with deep domain expertise to help customers deliver electricity from a wide spectrum of fuel sources. GE Power is transforming the electricity industry with the digital power plant, the world's largest and most efficient gas turbine, full balance of plant, upgrade and service solutions, as well as our data-leveraging software. Our innovative technologies and digital offerings help make power more affordable, reliable, accessible and sustainable.

- Indonesia Power (IP), a wholly owned subsidiary of PT. PLN (Persero) ("PLN"), awarded General Electric (GE), Marubeni Corporation ("Marubeni") and PT. Hutama Karya ("HK") consortium an EPC (Engineering, Procurement and Construction) contract for the **Tambak Lorok Combined Cycle**

**Power Plant Block 3 Project.** The power plant, which will commence operation in mid 2020, is expected to add approximately 780 MW of electricity to the Indonesia grid. **Tambak Lorok will be the largest power project developed in IP's history and one of the first in the region to use GE's latest HA gas turbine technology.**

- GE Power's 9HA technology was selected as the technology to power **Jawa 1 1,760MW** gas power plant in Indonesia. Jawa 1 power plant is the biggest gas combined cycle single block configuration in Southeast Asia.
- GE's Power Services will also provide a multi-year service agreement for Jawa 1 power plant, which includes APM digital solutions, commissioning and installation, parts, field and repair services for 25 years.
- GE signed a multi-year agreement with PT Pembangkitan Jawa Bali (PJB), the largest subsidiary of Indonesia's national power utility PT PLN, to design two Remote Engineering, Monitoring, Diagnostics and Optimization Centers (REMDOC) in Surabaya. The center will connect GE's Asset Performance Management (APM), Operations Optimization (OO), Advanced Control Solutions and Baseline Security Center software applications across 21 sites with 10.7GW capacity.
- GE's Power Conversion technology was selected to power 50MWp Melaya Solar Power plant in Bali.
- GE delivered 500 MW of mobile power plant using 20 units of TM2500 aeroderivative gas turbines in eight different locations for PT PLN Batam, a subsidiary of PT PLN Persero, Indonesia's state-owned utility company.
- This 500 MW mobile power plant project is a flagship GE Store project as GE's offerings in this project includes technologies from GE Power, GE Energy Connection and GE Water. GE also facilitated financing from Hungarian and Canadian Exim banks.
- The 8 mobile power plants provide the much-needed electricity to power 4 million Indonesian homes with 50% fewer emissions; and create jobs to 2,300 Indonesians on the ground. All 8 power plants were inaugurated by the President Joko Widodo on March 18, 2017.
- 8 locations of 500 MW Phase I:

Site Name	Capacity	Operation Date
<b>Jeranjang, Lombok</b>	<b>2 x 25</b>	<b>27 July 2016</b>
<b>Air Anyir, Bangka</b>	<b>2 x 25</b>	<b>13 September 2016</b>
<b>Tarahan, Lampung</b>	<b>4 x 25</b>	<b>29 September 2016</b>
<b>Balai Pungut, Riau</b>	<b>3 x 25</b>	<b>13 November 2016</b>
<b>Gunung Sitoli, Nias</b>	<b>1 x 25</b>	<b>31 October 2016</b>
<b>Suge, Belitung</b>	<b>1 x 25</b>	<b>22 November 2016</b>
<b>Parit Baru, Pontianak</b>	<b>4 x 25</b>	<b>8 November 2016</b>
<b>Paya Pasir, Medan</b>	<b>3x25</b>	<b>9 December 2016</b>

- State electricity company PT PLN recently inaugurated a 100 MW gas-fired power plant in Gorontalo, Sulawesi Island to address power shortages in Indonesia. The power plant which consists of four units of GE's TM2500 gas turbines, each with a capacity of 25 MW.
- GE announced the signing of four infrastructure projects valued at over \$1 billion. Three of the projects will be in the power sector and contribute an estimated 3 GW in capacity towards the country's plan to provide more than 35 GW of additional power by 2019.
- GE inherited two manufacturing facilities from Alstom integration:
  - UNINDO plant in Jakarta is a joint venture between GE and PLN, established back in 1969 with a composition of GE (67.65%) and PT PLN (32.35%), producing High Voltage Transformer and Air Insulated Switchgear equipment. UNINDO covers domestic and international markets for utility and industrials such as PLN, IPP, Pulp & Paper, Mining, O&G, etc.

- Alstom Power Energy Systems Indonesia (APESI), established in 1986, is a joint venture between GE (86.67%), PT PAL (12.63%), and PT Barata (0.70%). The plant located in Surabaya, East Java, has the capabilities to offer engineering, procurement, project management, manufacturing and services for boilers and HRSGs. APESI has catered domestic and international markets for utility and industries such as PLN, IPP, Mining, Oil and Gas, Pulp & Paper, Cement, Industrial Estates, etc.
- GE is a major player in power generation in Indonesia. GE's Gas and Steam turbines, and Aero-derivative Gas Turbines have generated more than 10 GW of electricity, **which is equal to 26% of the total electricity installed based in Indonesia**. Our customers in Power Generation include Indonesia state-owned power distributor, PLN, and Independent Power Producers, such as Medco Power and Cikarang Listrindo.
- GE has currently installed more than 700 units of gas engines, combining Jenbacher and Waukesha engines, which are in operation utilizing natural and non-natural gas fuels, and generating 500 MW of electricity in Indonesia.
- GE's Ecomagination products that have been installed in Indonesia include: Heavy Duty Gas Turbines and Aero-derivative Gas Turbines. This investment yields to advanced and more efficient gas turbines. Being the only gas turbine manufacturer that has both heavy duty gas turbine and aero-derivative gas turbine, GE is at the forefront of combining both technologies to arrive with the best and most efficient machine. Our latest technology in power generation installed in Indonesia include: Aero-derivative Gas Turbines (LM6000-PG, TM2500), Fr6FA, and 9HA high efficiency gas turbines.
- In 2017, GE Power has expanded its services by integrating its energy connections business which offers a full range of electrical capabilities in power distribution and conversion equipment.

## GE Renewable Energy

GE Renewable has one of the broadest and deepest renewables portfolios in the industry, with one of the world's largest installed bases of renewable power generation. From single components to turnkey projects, GE is deploying its century worth of experience in renewable power generation to help customers improve the performance of their assets over their entire lifecycle. GE is also leading the digital industrial revolution in renewable energy by utilizing big data and analytics to improve performance and create new value for our customers. With global scale and local capability, GE can deliver for customers anywhere in the world. Largest renewable energy installed base globally, with more than 370 GW.

- GE's wind turbine was selected to power 70MW Tanah Laut Wind power plant in Kalimantan.
- GE's Power Conversion technology was selected to power 50MWp Melaya solar power plant in Bali.
- In Indonesia, GE installed the largest hydro turbine for Jatiluhur hydro power plant in West Java.
- GE's Lahendong geothermal power plant in North Sulawesi has been operating for more than 20 years, bringing clean, reliable and sustainable power to the people of North Sulawesi with minimum downtime.

## Baker Hughes, a GE company

BHGE positions itself as one of the world's leading equipment and oil field services providers in the oil and gas space. With unique capabilities across the entire value chain - from oil and gas drilling equipment and subsea systems, to turbomachinery solutions and downstream processing.

- GE completed its buyout of Baker Hughes Inc. in July 2017, merging it with its own oil and gas equipment and services operations to create the world's second-largest oilfield service provider by revenue. The new company, Baker Hughes, a GE company, has begun trading in July on the New York Stock Exchange under the stock ticker "BHGE."
- In 2016, GE Oil & Gas has been awarded a contract to supply gas turbine-driven compressors for a third natural gas liquefaction train for the Tangguh expansion having provided the original equipment for Trains 1 and 2 when the plant was first established. The Tangguh facility in the Papua Barat Province of Indonesia is being expanded to increase Liquefied Natural Gas (LNG) production by a further 3.8 million tons per annum (mtpa), bringing the total plant capacity to 11.4

mtpa. Indonesia is one of the leading suppliers of LNG in the region and one of the fastest growing economies in the world.

- In 2015, GE Oil & Gas signed a groundbreaking Contractual Service Agreement with PT Donggi-Senoro LNG worth EUR 102 million. The agreement covers an 18-year contract on GE's maintenance services provision for Donggi-Senoro's export facility.
- In 2013, GE announced the largest expansion of its Batam manufacturing facility to date, with the construction of a high bay for a new line of subsea wellhead equipment that will further increase local content. The production of vertical subsea trees in Batam is a first for GE in Asia Pacific. Over \$15 million has been invested for the plant expansion, not only in physical assets and equipment, but also in building local capability through the transfer of knowledge and expertise from our global sites to the Batam team. The expansion created up to 183 new jobs in which 90% are local employees. This investment underscores GE's commitment to increase local content of GE technology and solutions in Indonesia.

## We value partnerships

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### Partner for Talent and Leadership Development:

- In 2015, GE announced its plan to invest up to \$1 billion in the power, oil and gas, and healthcare sectors to support Indonesia's accelerated economic growth. This commitment will result in the creation of over 6,000 jobs, technology transfer, training of over 1,000 people a year, and the expansion of local supply chains as GE's business grows.
- GE cooperates with government, customers, universities, and NGO as part of its commitment to develop Indonesia's local talent. Every year, more than 200 Indonesia's local talent trained by GE through customer engagement programs, best practice sharing, and campus activities. In July 2013, GE signed an executive university partnership with Institute Technology Bandung (ITB), to provide leadership development mentoring programs for the university students, graduate talent recruitment, and conduct technology research.
- At present, GE has an ongoing learning program with key customers. In February 2013, we signed the MOU with Garuda Indonesia, Pertamina, and PLN to develop a Learning and Technology Center. This center will serve as a center for leadership and engineering and localization of GE's applied technology. Currently, we have the GE-Garuda Leadership Institute, GE-Pertamina Oil & Gas University, GE-KAI Leadership Development, and GE-PLN Leadership Development. The new center will centralize all these learning activities that we have with our partners, and extend the programs and facilities to our other partners and customers.
- In Indonesia alone, GE Healthcare has organized more than 75 healthcare education events through AHLI, training more 2000 healthcare providers through AHLI's events to-date.
- GE Healthcare has also partnered with a number of organizations in Indonesia to drive continuous education for healthcare providers including:
  - **POGI** (Indonesia OB/GYN Association) to initiate the first ultrasound certified competency training
  - **PDSRI** (Indonesia Radiology Association): To date, more than 400 radiologists have been trained by PDSRI's panel of renowned KOLs, and through GE's network (i.e. COR Singapore & NNI Singapore).
  - **PERKI** (Indonesian Heart Association):
  - **PARI** (Radiographer Association):
- Every year, GE invests over 7,300 hours of training for its 900 employees, from management and business leaders to engineers at our manufacturing facilities.

### Global Innovation Ecosystem:

- In a country with 250 million people and more than 17,000 islands, electricity, transportation, healthcare are crucial to the economic growth. GE's innovation in Gas and Steam turbines, and Gas engines have powered more than 20% of the total power plants in the country
- More than 650 of our highly efficient jet engines are installed on Garuda Indonesia's and Lion Air's fleets, two of the biggest airlines in the country, connecting the islands and contributing to trade and tourism in Indonesia.

- This fleet of aircraft translates into this factoid - every 68 seconds, a GE powered airplane takes off from Indonesia.
- We have been supporting Indonesia's railway since 1953. Now more than 350 GE locomotives transport 220 million people annually.
- In the Indonesian archipelago, bringing healthcare to remote areas can be a challenge. GE introduced a portable ultrasound device (Vscan Access), adapted locally with a user interface in Bahasa Indonesia for use by medical general practitioners in remote areas of the country. This ultra sound equipment enables medical practitioners in remote areas to quickly detect abnormalities and refer patients to nearest hospitals in case of emergency, which can help in reducing maternal and infant mortality rates in the country. A pilot program study that was conducted in 2011 showed that the clinics that are equipped with V Scan have twice as many deliveries at the clinics and 40% reduction in high risk home births. Note: These results have not been released, pending MOH approval.

#### **Supplier Ecosystem and SME development:**

- GE and Barata Indonesia signed a Memorandum of Understanding (MOU) to collaborate on manufacturing parts and provide services for GE's aero derivatives, heavy duty gas turbines, boilers for coal-fired power plants, and renewable energy solutions.
- Our Batam manufacturing facility produces subsea wellheads, surface wellheads, vertical christmas trees, tubular products and connectors that are used in oil and gas exploration and production. 92% of the equipment manufactured are exported to customers in the Middle East, Russia, China, Europe, Australia, Japan, and ASEAN.
- The Turbine Services facility in Bandung is recognized globally as a COE Global Repair shop for stationary parts of B/E class gas turbines. 80% of the components that are repaired in the facility are from customers outside of Indonesia (from Europe, Africa, Middle East, Asia and Australia) and 80% of consumable parts used for repairing the turbines are sourced from more than 100 local suppliers.
- As all technicians and engineers working in Batam, Surabaya and Bandung plants are Indonesians, this means that more than 1,300 Indonesians are employed, either directly by GE or by its vendors, as part of the international supply chain.

## **We invest in people**

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**Employee Training:** Globally, GE invests \$1 billion each year on training and education, making us the world's best company for leaders in 2015. GE offers numerous development, training and leadership programs to its employees across the region. These opportunities include our Commercial Leadership Program, Financial Management Program, GE Engineering Management Program, internships for undergraduate and graduate students, and technical and soft skill training for businesses personnel.

**GE Volunteers:** In 2014, we rallied more than 2,000 volunteers comprising GE employees and families, as well as customers and partners, to contribute more than 16,000 volunteer hours. Each year, GE employees and customers contribute their time and efforts in various community services initiatives such as improving the quality and access to healthcare in rural areas through one of MDG's program, Pencerah Nusantara, by mobilizing 64 healthcare professionals to 14 remote locations in Indonesia, providing quality healthcare for over 264,000 people; supporting Jhpiego's EMAS program in developing and promoting the use of mobile technology for postpartum and postnatal care for new mothers; rebuilding parts of Aceh and Yogyakarta after natural disasters in partnership with Habitat for Humanity Indonesia; and donating lighting design, lamps and equipment to the 12<sup>th</sup> century Borobudur and Prambanan temples, as an initiative to conserve and enhance the beauty of one of UNESCO's world Heritage Sites.

GE Indonesia has received several awards for its contribution for the local community. Among these are: "MURI" Indonesia record for the highest number of women examined in a one-day pregnancy and maternal health drive in Palembang; the "Millennium Development Award, Indonesia" awarded twice (first in 2008 for the financial literacy program aiding disadvantaged women and second in 2012 for clean-water piping project for Yogyakarta villages post-Merapi volcanic eruption).

GE also partners with customers in various citizenship activities. In 2012, GE partnered with Garuda Indonesia to renovate an early education facility in Lombok Island in eastern Indonesia. This project won the GE Volunteers Impact Award in 2013.

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