

MEDCOENERGI 



**THE  
ENERGY COMPANY  
OF CHOICE**

“We have reorganized our operations based on E&P phases of work from exploration to development to production, enabling us to devote the right expertise and resources on the right phases of work, leading to better operational execution and control.”

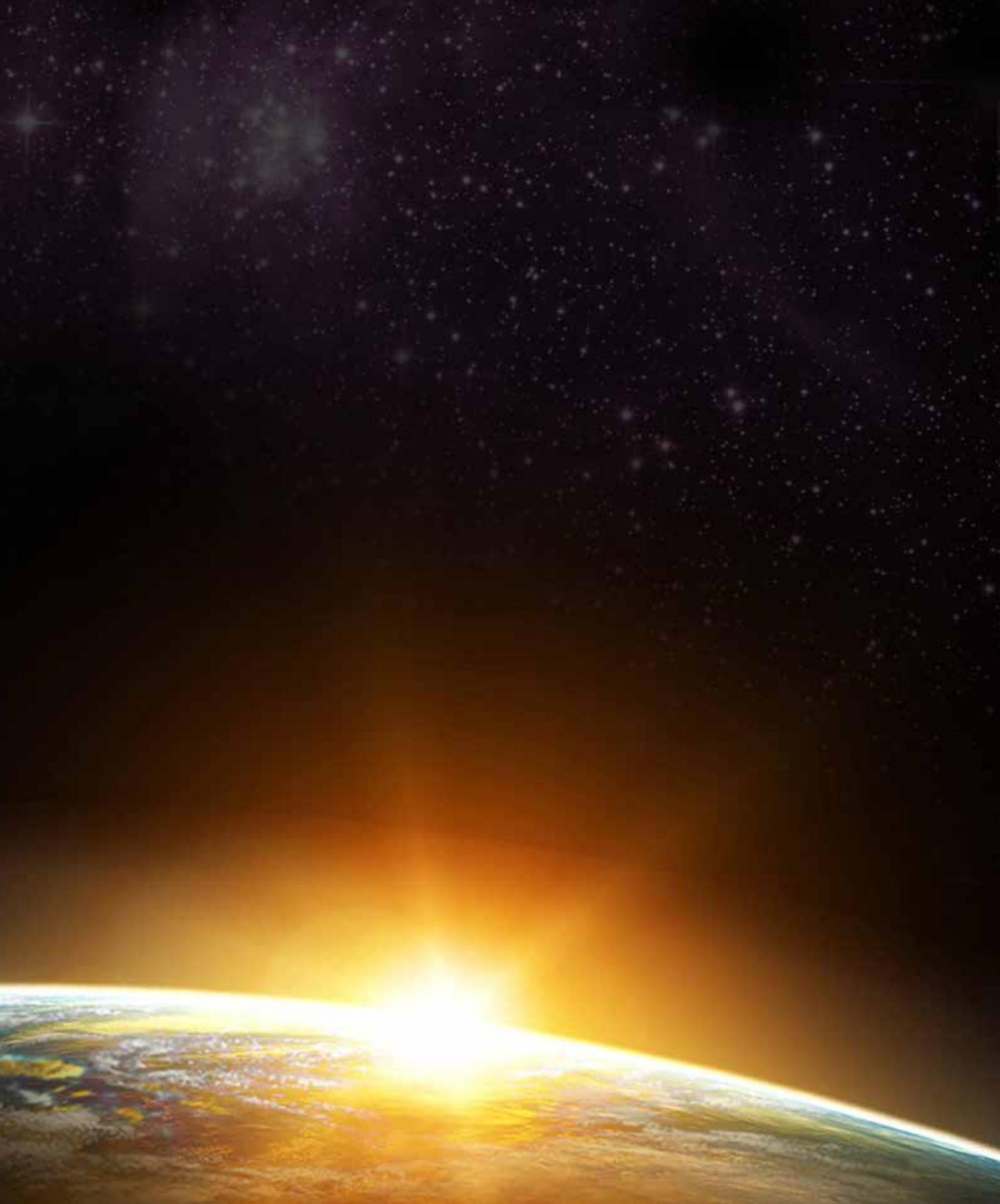
Lukman Mahfoedz, CEO of MedcoEnergi

# Content

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02	Message from Chairman
03	Foreword from CEO
05	Capitalizing on Core Competence
08	Exploration and Production
22	Other Energy Related Businesses
30	Our People, Standards and Information Systems

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# Message from President Commissioner

The essence of what MedcoEnergi today and tomorrow is going back to our core business of oil-and-gas exploration and production, with four key components: strengthening our producing asset portfolio, increasing reserves life index, completing major projects and accelerating growth of other energy-related assets through strategic partnership. As an oil and gas company we continue to focus intensively on how to secure the Company's long term growth and sustainability.

We believe that the Company has been moving safely on track to sustain its operating profitability over the next few years, at which time we will start to reap the benefits of our major oil and gas projects, including the Donggi Senoro Gas and LNG development, the largest upstream and downstream gas development project in Indonesia in recent memory. We remain cautiously optimistic that the commencement of the Donggi Senoro Gas and LNG plant will be a turning point for the Company to establish itself as a major player in the gas and LNG business, both upstream and downstream.

MedcoEnergi has improved operating margins as a result of cost efficiency and a better, more streamlined organization. Our Company is on track to sustain current levels of production and profitability through completion of major projects on time. The commissioning of these major projects, starting with the Donggi Senoro Gas and LNG projects in 2015, followed by the completion of

Block A Gas project and Area 47 Libya oil project both in 2017 and Cosmos/Yasmin project in Tunisia which is slated for its completion in 2019, will assure the Company's near to medium-term growth prospects.

MedcoEnergi continues to strengthen corporate governance. The Committees under the BOC have undertaken their duties to ensure that Good Corporate Governance (GCG) principles pertaining to transparency, responsibility, accountability, independence and fairness are adequately implemented throughout MedcoEnergi. The GCG is also manifested in our Corporate Social Responsibility (CSR), that is the investments that we continue to make in the communities where we operate. Our business continues to generate considerable value by creating jobs, empowering communities and supporting the development of local economies in the areas where we operate.

I am extremely pleased at the way MedcoEnergi is being led and managed in all facets of its operations and how the Company has recently shown a renewed sense of vigor and purpose to deliver increasing returns and values to shareholders and other stakeholders.

Yours sincerely,

**Hilmi Panigoro**  
President Commissioner



# Foreword from President Director & CEO

PT Medco Energi Internasional Tbk (MedcoEnergi) is a publicly listed Indonesian oil and gas company with current operations in Indonesia as well as in overseas, including Libya, Oman, Papua New Guinea, Tunisia, United States of America and Yemen.

MedcoEnergi was founded in 1980 by Arifin Panigoro, one of the Indonesia's leading oil and gas businessmen, as the first private national oil and gas drilling company. Within over three decades we have significantly grown our business and built a solid fundamental for our human capital and array of portfolios from all over the world, especially in Indonesia and Middle Eastern and North African countries.

In operations, we have enabled to largely maintain oil and gas volume production, by arresting the rate of production decline from our oil and gas fields to below 10% year-on-year, against the industry trend of 20-25%. We are also able to pursue our EOR pilot project to learn that we can effectively apply the technology on oil fields that comprised of limestone formation, a procedure that had never done anywhere in the world.

In 2013, we made a major change on the way we operate our fields. The operation organization has been moved from the headquarter-centric base to a full field-based station. This change will have bring two major improvements to the Company, namely increased agility and responsiveness of the operations team in responding to issues and challenges at the fields/sites, as well as a more streamlined headquarter structure, enabling better focus on planning and strategic pursuits.

To support the Company's growth agenda, we have kicked off several major development projects in MedcoEnergi. We have seen tangible results of our major project development progress and we are clearly excited about this. The completion of these major projects will indeed support the growth of the Company from the year 2015 onwards, not only in the domestic level but also in the international level. To strengthen and expand our existence in international arena, we have formed a new directorate of International E&P and New Ventures to manage the Company's overseas assets.

With ongoing support from all stakeholders, we are pleased to share some of our success stories in oil and gas production as well as our tireless efforts to look for more oil and gas through exploration programs as well as selective opportunity in oil and gas assets acquisition in Indonesia and overseas.

The Company is set to double its current production rate in the near future by delivering successful major projects, growing its reserves organically through high-graded exploration activities and successful acquisition programs, while always complying with the highest safety, health and environmental standards. Our aim is to maximize values for our stakeholders. We welcome your interest, involvement and support as we continue to pursue aggressively the Company's growth agenda.

Warm greetings,

**Lukman Mahfoedz**  
President Director & CEO

# Our Belief

## Becoming the Energy Company of Choice

Our vision is to be the energy company of choice for our investors, shareholders, partners, employees, communities and the greater public.

It is a vision that will be realized by developing energy resource potential into profitable investment portfolios.

We operate our business in adherence to the highest standards of Good Corporate Governance (GCG) and of Safety, Health and the Environment (SHE). In addition, we implement a consistent Corporate Social Responsibility (CSR) program. In all of these areas MedcoEnergi has received accolades from its stakeholders.

All of our work is conducted in a professional, ethical, open, and innovative way. These values are the core of our corporate culture, which drives MedcoEnergi towards sustainability.



Professional



Ethical



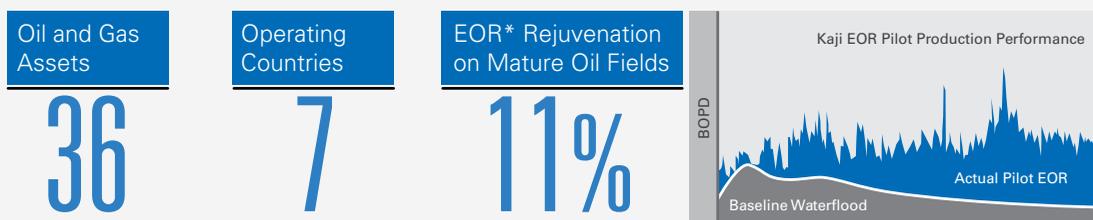
Open



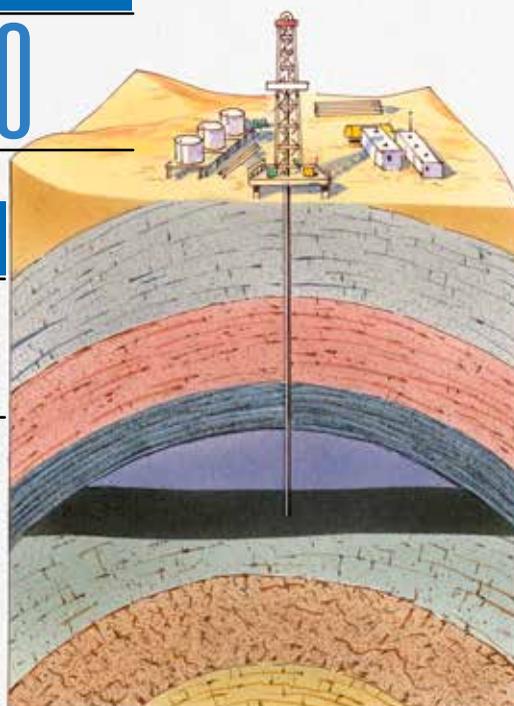
Innovative

# Capitalizing on Core Competence

Backed by proven achievements in E&P, the Company refocused its efforts on oil and gas E&P, capitalizing on its core competence in this segment to fuel future growth.



\*Enhanced Oil Recovery



# Milestones

1980 Incorporated as an Indonesian drilling contractor.

1992 Established an oil and gas subsidiary.

Acquired a Technical Assistance Contract (TAC) and Production Sharing Contract (PSC) for Tesoro's oil and gas blocks in East Kalimantan.

1994 Initial public offering as MedcoEnergi on the Indonesia Stock Exchange. Ticker symbol is MEDC.

1995 Acquired 100% shares of PT Stanvac Indonesia from Exxon and Mobil which held three oil and gas blocks in South Sumatra: South & Central Sumatra, Rimau and Pasemah.

1996 Discovered the giant oil field Kaji and Semoga, Rimau, South Sumatra.

1997 Entered into the downstream business to operate Pertamina's methanol plant at Bunyu Island.

2000 Acquired three new working areas: Simenggaris, Western Madura and Senoro-Toili. Discovered oil field in Soka, South Sumatra.

2002 Acquired 25% working interest in Tuban Block.

Awarded a "B+" corporate credit rating with stable outlook by Standard & Poor's in February 2002, above Indonesia's sovereign credit rating.

2003 Signed Gas Supply Agreement with PLN (Indonesian state-owned electricity company) for gas supply from South & Central Sumatra PSC.

2004 Acquired 100% shares of Novus Petroleum Ltd, marking the Company's expansion into international oil and gas arena.

Inaugurated the Company's first gas-fired power plant in Batam Island, Panaran I.

2005 Awarded Oil & Gas Exploration and Production Sharing Agreement of Area 47 from the Government of Libya.

Acquired Langsa Block and Sembakung Block in Indonesia.

Signed Operation & Maintenance Agreement with PLN for Tanjung Jati B coal power plant of 2 x 660 MW.

2006 Awarded a 10-year Service Contract Agreement of Karim Small Fields (oil fields) in Oman.

Commissioned Panaran II gas-fired power plant in Batam.

Awarded 3 x 110 MW of Sarulla geothermal power project, North Sumatra.

2007 Drilled exploration wells in Area 47 in Libya and made six oil discoveries.

Launched pilot project for Enhanced Oil Recovery (EOR) in Rimau Block.

Commenced the development of Senoro Gas and LNG Projects through establishment of a joint venture of PT Donggi-Senoro LNG (DSLNG).

**2008** Signed a Production Sharing Agreement with the Government of Yemen for Block 82 and 83.

Completed the sale of the Company's drilling subsidiary, PT Apexindo Pratama Duta Tbk.

Signed the first Coal Bed Methane (CBM) PSC in Indonesia to develop CBM in Musi Banyuasin Regency, South Sumatra.

Completed drilling 20 exploration wells in Area 47, Libya. 18 out of 20 wells were discovered oil and gas (exploration success rate of 90%).

**2009** Entered into coal mining business by acquiring two mining concession rights in Nunukan, North Kalimantan.

**2010** Secured operatorship and successfully made three discoveries from three exploration wells in Area 47 in Libya.

Obtained 20 year extensions for three PSC working areas: South & Central Sumatra, Block A and Bawean.

**2011** Completed the sale of Anaguid Block in Tunisia.

Invited PT Saratoga Power to become a shareholder of PT Medco Power Indonesia.

Secured Commerciality declaration of Area 47, Libya.

**2012** Acquired 25% of Block 9 Malik, Yemen.

Inaugurated maiden shipment of 38,000 tons of coal to China.

Earned PROPER Gold for Rimau Block for second year running (2011 and 2012).

Signed a strategic partnership with Puma Energy LLC for PT Medco Sarana Kali Baru, fuel oil distribution & storage business unit.

**2013** Secured project financing for Senoro for US\$ 260 million.

Completion asset swap with Salamander for Bangkanai with Simenggaris and Bengara.

Establishment of a Joint Operating Company (JOC) of Nafusah Oil Operations B.V (Nafusah) with NOC Libya and Libyan Investment Authority. JOC Nafusah will develop and operate Area 47.

Steadily increased the average gas sales price to reach over US\$ 6/MMBTU for domestic markets.

**2014** Acquired eight oil and gas working areas in Tunisia, through an acquisition of Storm Venture International (Barbados) Ltd.

Secured the 2<sup>nd</sup> Commerciality declaration of Area 47 Libya for the additional three fields.

Awarded for Oil and Gas Production Contract, Block 56, by the Government of Oman.

Received Gold PROPER Award for Rimau Block for fourth consecutive year (2011, 2012, 2013 and 2014)

**2015** Signed a gas supply agreement for Block A PSC gas with Pertamina with the agreed gas price of US\$ 9.45/MMBTU



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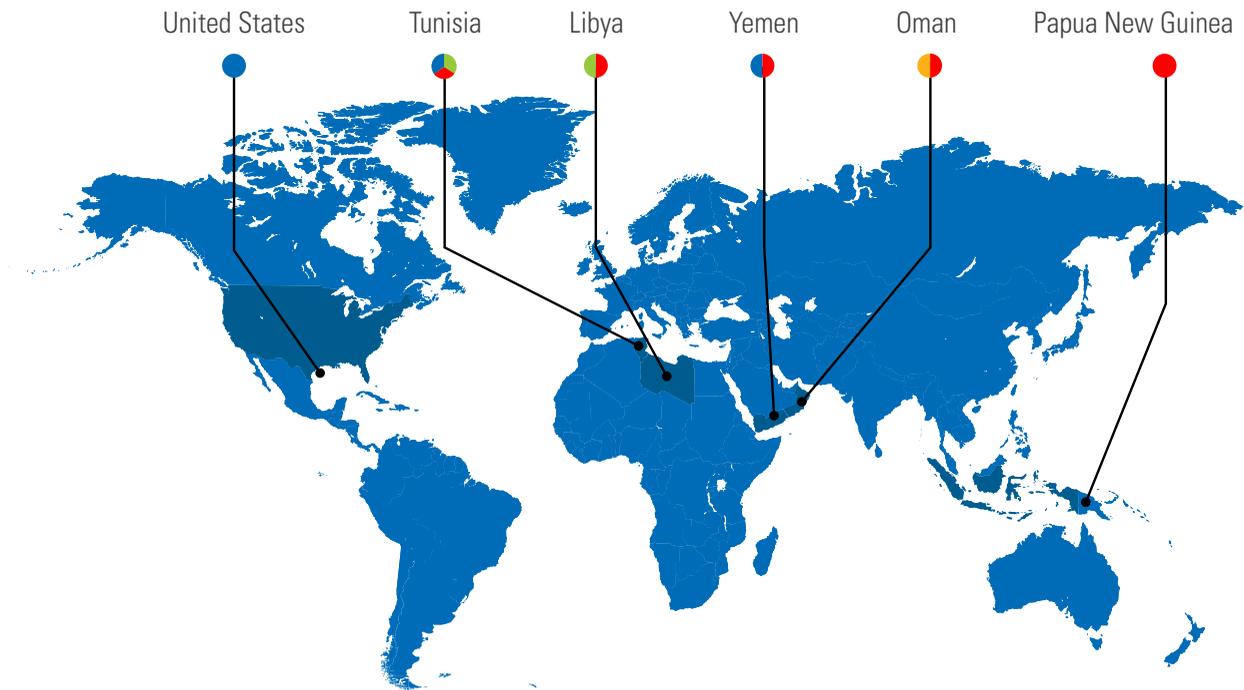
# Exploration and Production



## In the Pursuit of Growth

The construction work on Donggi Senoro LNG plant has commenced since 1 March 2011 and the work is completed by year-end 2014.





● Exploration ● Service Contract ● Development ● Production ● CBM ● Economic Participation

Partnership is a key success factor for MedcoEnergy, enabling it to increase production, maintain reserve growth and access advanced technology.

In the last two decades, MedcoEnergy has successfully grown its exploration and production business and consistently added to and replaced reserves. We have expanded our business to include seven countries, i.e. Indonesia to Libya, Oman, Papua New Guinea, Tunisia, USA and Yemen. These operations include exploration, development and production of crude oil and natural gas.

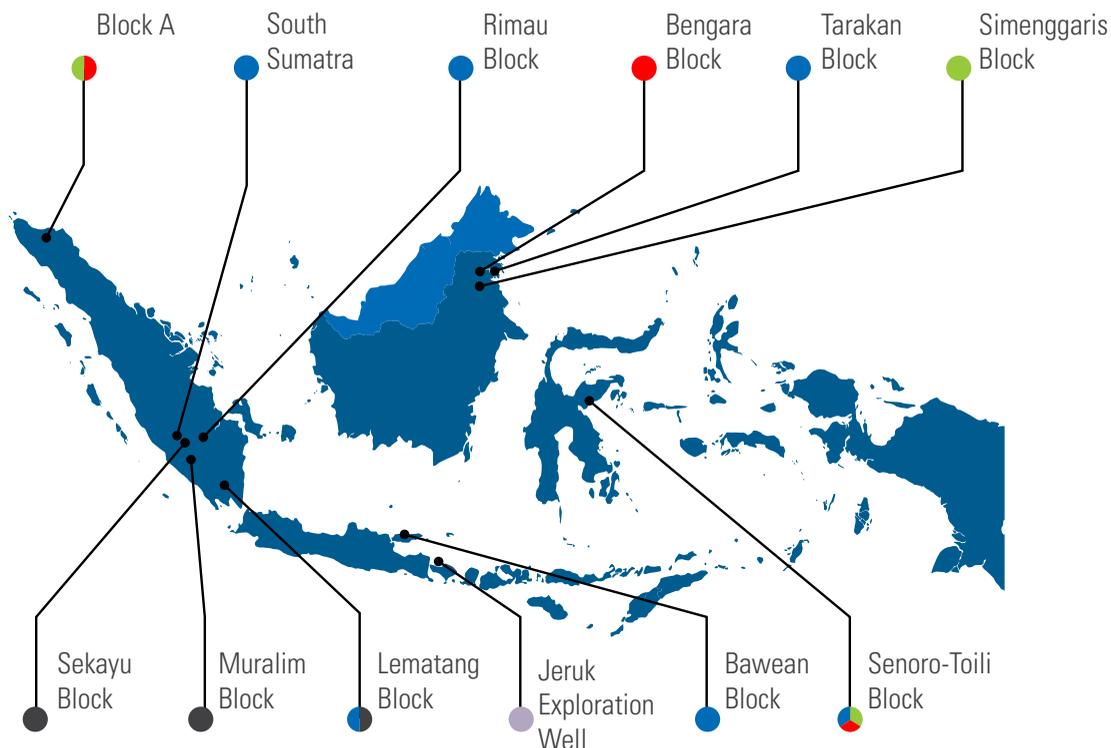
Partnership is one of the key success factors in expanding our exploration and production business. We have

been working together with various reputable companies worldwide to maximize the value of our assets and at the same time to grow our businesses.

We have demonstrated our expertise in enhancing production of mature and marginal fields and operating the assets efficiently, both in domestic and international assets. For the past few years, we, together with our partners, have been developing several oil and gas major capital projects with total required investment of over US\$ 6 billion. Our net investment is estimated at over US\$ 1.6 billion, stretching forward over the next few years. We continue to make encouraging progress in these major project developments and our target is to deliver it on time, on budget and safely in operations.

We have been able to obtain strong support from local government and communities. We empower local communities in the surrounding areas of our operations, create jobs for them and increase their education level. It is our long-term commitment to create and deliver sustainable value to all local communities wherever we operate.

We are committed to providing energy for society's needs and set our goal to double the current production rate in the near future. We will continue to conduct exploration activities in the most potential prospects, implement Enhanced Oil Recovery (EOR) technology at our mature assets, and pursue acquisitions of new potential or



producing oil and gas assets. We are also looking at the opportunity to strengthen and expand our exploration and production business in international operations by pursuing more oil and gas assets, particularly in Asia Pacific and MENA (Middle East North Africa) regions.

Our major projects, exploration and development activities at challenging areas and development of new oil and gas project require high technology application and massive capital investment. The involvement of our experienced partner in those areas is a key element to materialize our objectives. We are confident that our history of successful

performance combined with partnership with reputable companies will enable MedcoEnergi to demonstrate an even better performance thus maximizing values to our shareholders, stakeholders in the near future.

Country	Partners
Indonesia	Cue Energy Resources, Dart Energy, Japan Petroleum Exploration (JAPEX), Korea Gas Corporation (KOGAS), KrisEnergy, Lundin, Mitsubishi Corporation, PT Pertamina Hulu Energi (PHE), Santos, Singapore Petroleum Company (SPC)
Oman	Intaj, Kuwait Energy Company KSC, Oman Oil Company, Petrovest General Trading LLC, Vision Oil and Gas LLC
Yemen	Calvalley Petroleum, Hood Oil, Indian Oil Corporation Ltd., Kuwait Energy Co., Oil India Ltd., Yemen Oil & Gas Company (YOGC)
Libya	Libyan Investment Authority and NOC Libya
Tunisia	Copper, Cygam, DNO, ENI, ETAP, PA Resources

# Exploration



## Libya; Breaking the Record

MedcoEnergi entered into the Exploration and Production Sharing Agreement IV (EPSA IV) of Area 47 with a participating interest of 50% in 2005 partnership with Verenex Energy Inc. In 2008, the discovery of 352 MMBOE contingent resources in Area 47 was successfully made. MedcoEnergi became the operator of Area 47 in 2010 and since then increased gross contingent to 588 MMBOE (up by 67% from the level in 2008) through the drilling and testing of additional exploration wells. The discovery of contingent resources in 2008 and additional resources discovered until 2011 demonstrated MedcoEnergi's success in executing an exploration program in Libya.

From the commencement of exploration drilling activities in September 2006 to the end of 2013, we have drilled 20 exploration wells and seven appraisal wells, and completed a third 3D seismic program of 1,225 km<sup>2</sup> in the eastern part of Area 47 and 2,400 km of 2D seismic in the western and southern part. MedcoEnergi and its partner have successfully discovered resources from 18 out of the 20 exploration wells drilled in four years, and achieved an exploration success ratio of 90%, well above the average global success rate.

Commerciality of Area 47 was obtained in late 2011. The Joint Operating Company (JOC) has been established in February 2013, namely Nafusah Oil Operations B.V. In this JOC, MedcoEnergi owns an interest of 24.5%, while National Oil Corporation (NOC) of Libya and Libyan Investment Authority (LIA) will own interest of 51% and 24.5% respectively. A Management Committee has been established to oversee both Medco International Ventures Limited as the Operator of the exploration/appraisal phase and Nafusah Oil Operations B.V. as the Operator of the development/ operation phase.

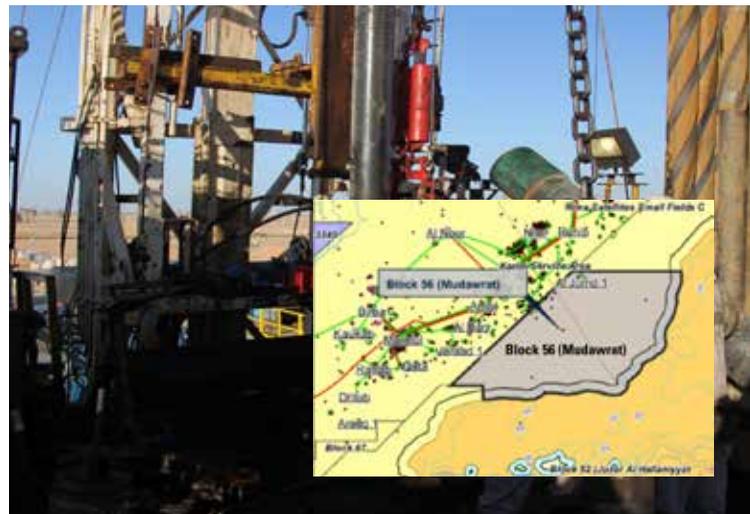
We are also continuing our exploration program in Area 47 and are confident that the program will unlock upside exploration potential remains in Area 47. During 2013 - 2014, MedcoEnergi has successfully completed drilling of two more exploration and three appraisal wells and one well testing. Repeating another success story, a further oil and gas discovery was successfully made. In September 2014, the second commerciality approval of Area 47 was obtained from NOC Libya.



## Block 82, Yemen

As part of MedcoEnergi’s strategy to increase its oil reserves, MedcoEnergi expanded its operations in Yemen, where it was awarded Block 82 after winning the International Bid held by the Ministry of Oil and Minerals of the Republic of Yemen through the Petroleum Exploration and Production Authority in December 2008.

An exploration well drilling program in Block 82 has been defined based on seismic interpretation results. MedcoEnergi’s integrated suite of well planning and drilling in the reservoir is based on a combination of seismic, geological or reservoir data.



## Block 56, Oman

As part of the Omani Government’s open bid round in 2013, MedcoEnergi was successfully awarded to operate Block 56, which is an exploration block located 1,050 km south from the capital of Muscat towards the city of Salalah, Oman. The block resides at the eastern margin of proven prolific hydrocarbon Oman Salt Basin. Several technical discoveries were present already and the block has a potential hydrocarbon of around 373 MMBO oil in place.

Another potential prospect is present as the extension of Huqf Uplift Play of Ara with total resources of around 400 MMBO oil in place. We commit to bringing this block into a success exploration, development and operation in the near future.



## Tunisia; New Exploration Opportunities

MedcoEnergi, interest in Tunisia comprises four exploration areas, two development areas and two production areas with concession periods of either 30 or 50 years. All of the blocks are located in prolific hydrocarbon areas. Five onshore blocks (Adam, Sud Remada, Bir Ben Tartar, Jenein and Borj El Khadra) are located in the Ghadames Basin, the same basin as Area 47 Libya is located, where a large oil and gas reserves have been discovered with a 90% exploration success rate. The remaining three offshore blocks (Cosmos, Hammamet and Yasmin) are located in the Pellagian Basin off the northeast coast of Tunisia.

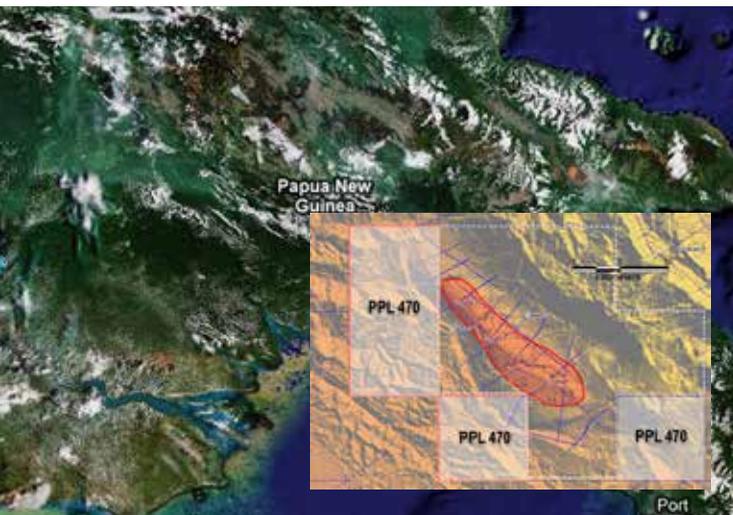
Significant exploration upside potentials both in onshore and offshore interest was indicated by total net risked recoverable contingent and prospective resources up to 58 MMBOE, from three onshore exploration permits (Sud Remada – Bir Ben Tartar, Jenein, and Borj El Khadra) and three offshore exploration and development areas (Hammamet, Cosmos and Yasmin).



## Block A, Indonesia

Through its exploration activities, MedcoEnergi seeks to increase the Company's gas reserves by undertaking an exploration well drilling activity in Block A, located in the East Aceh Regency, Aceh Province in Indonesia. The Matang well is the first exploration well drilled in the last 17 years in Aceh. Gas from three existing fields and the Matang exploration field will be used for domestic consumptions, including industry and electricity generation.

The drilling work and a Drill Stem Test (DST) have been completed in May 2013 to prove -up gas reserves. This Matang-1 exploration well drilling has successfully encountered the main reservoir objective, and is capable of flowing a significant gas rate with relatively low CO<sub>2</sub> and H<sub>2</sub>S content. The potential additional gas reserves will be used to supply domestic Indonesian markets.



## PPL 470, Papua New Guinea

With its abundant gas reserves, Papua New Guinea is expected as one of the important countries that will help to increase MedcoEnergi's reserves in future.

PPL 470 consists of four onshore blocks with working areas totaling 324 km<sup>2</sup>. The areas are located in the Papuan Fold Belt (Papuan Basin) and in a proven petroleum system as they are adjacent to the Juha gas field operated by major multinational companies that are currently supplying gas to an LNG plant. MedcoEnergi believes that PPL 470 will add significant value to the Company's strategy, which focuses on high-graded exploration opportunities to expand our E&P operations internationally.



# Increasing the Productivity of Aging Oil Fields

Operating beyond borders, MedcoEnergi continues to expand its operations by utilizing advanced technology

# Development



## Senoro Development; Breaking through Gas Market Barrier

MedcoEnergi is committed to monetizing and innovatively creating a market for its abundant stranded gas reserves from remote areas in Indonesia. One such example is the Senoro gas field, which is located in a remote area in Central Sulawesi Province. The Senoro gas field contains sufficient reserves and contingent resources to supply 250 MMSCFD to an LNG plant under a long term gas supply, commencing for the first gas supply in the fourth quarter of 2014. In addition, another gas supply of 55 MMSCFD has been contracted for the Indonesian domestic market for an ammonia plant, located near the gas field. MedcoEnergi is proud that it can enter into an elite LNG producer community and has obtained the support of the Indonesian government and partners. The LNG plant is jointly owned by MedcoEnergi, Pertamina, Mitsubishi and Korea Gas Corporation and operated under the JV of PT DSLNG.

The plant produces approximately 2 million tons of LNG per annum. Construction of the plant is completed and the plant has received its first gas supply in 2014. Commercial production is targeted to commence and deliver the first LNG cargo in 2015. This will be the fourth LNG plant in Indonesia and the first LNG project built together by national companies within a downstream business scheme in Indonesia. It is an honor for MedcoEnergi to have the full support of the Government of Indonesia.

MedcoEnergi rigorously applies the Medco Project Excellence Process (MPEP) throughout the lifecycle of the project to ensure any capital investment made by MedcoEnergi and our partners is utilized effectively and a successful delivery of the project is made.



## Cosmos and Yasmin, offshore Pellagian Basin, Tunisia

MedcoEnergi commits to developing the offshore Cosmos, Yasmin and Fushia fields that is scheduled for completion in 2019. The Net 2P Reserves of offshore development Cosmos and Yamin is over 12 MMBOE. Total production is envisaged approximately at 16,000 BOEPD from development projects of these offshore main fields.



## Area 47, Libya

The first Commerciality approval of the Area 47 was obtained in late 2011. Following the commerciality declaration, we have established a JOC, namely Nafusah Oil Operations, B.V (Nafusah), with our partners of NOC Libya and LIA. The Nafusah JOC is undertaking the development, operation and maintenance of discovered oil and gas fields. Following the second Commerciality approval that was obtained in September 2014, we expect to commercialize six out of 16 oil and gas fields that we have found from the 18 discovered wells. Together with NOC Libya and LIA, we aim to build a production facility for 50,000 BOPD of oil and 90 MMSCFD of gas which is slated for its first production by 2017. The remaining ten oil and gas fields are currently being appraised and will be followed by the Phase-2 development.

# Production



## Rimau; Long Live the Giant

One of the major milestones in our successful history was the discovery of the huge Kaji-Semoga oil field in South Sumatra, which played a major part in helping MedcoEnergi position itself as one of the largest oil producers in Indonesia in the early 2000's. The field was discovered in 1996 and started its production in 1997. The Kaji-Semoga field reached its peak production in 2002. MedcoEnergi is striving to arrest the declining production and increase oil recovery factors by implementing secondary and tertiary recovery techniques. We have taken several key initiatives including utilizing sand fracturing techniques, drilling infill wells, minimizing pressure drawdown and implementing Enhanced Oil Recovery (EOR) techniques using surfactants and polymers.

By implementing these EOR techniques, we are able to obtain a total recovery factor up to 50% from the Kaji-Semoga field. Upon its completion, we continued with the EOR pilot program evaluation and have successfully reached the volume target for the

accumulation of oil recovery by April 2014. Following this success, we will proceed with the evaluation of EOR full scale implementation and preparation for the Plan of Development for further Government approval. MedcoEnergi is one of the first E&P companies and the first national company in Indonesia to apply EOR technology with chemical in a carbonate reservoir. In addition, our environmentally friendly approach to developing the Rimau Block, where the Kaji-Semoga oil fields reside, made us the first E&P company to receive the highest recognition from the Indonesian Ministry of Environment and Forestry by obtaining a Gold PROPER (Corporate Performance Rating Program) rating for fourth years running (2011, 2012, 2013 and 2014).



## Block 9, Yemen

In line with the Company's business strategy, MedcoEnergi acquired an interest in an oil producing block in Yemen in 2012. Block 9 is an exploration and production block, located in the province of Hadramaut, Republic of Yemen. The block is located within the Sayun-Masila Basin and has an area of 2,234 km<sup>2</sup> where some of this area has previously been successfully explored. MedcoEnergi acquired a 25% participating interest in Block 9 from Reliance Exploration & Production DMCC on 1 January 2012, gaining access to approximately 59 MMBO of 2P oil reserves. Future plans are in place to further develop the oil field in order to increase total production from the existing fields as well as from successful exploration of many exciting upside potentials in this Block 9.



## KSF, Oman

MedcoEnergi has signed an exploration and production services contract with the Petroleum Development Oman (PDO), a joint venture between the Government of Oman and Shell, to operate Karim Small Fields (KSF). MedcoEnergi is responsible for providing services and conducting operations on behalf of PDO Oman. As operator, the Company is responsible to arrest the decline in production and even increase production through various means where a set of Key Performance Indicators are applied to measure and to become the basis for awarding MedcoEnergi.

MedcoEnergi took full-field responsibility over 115 wells initially producing 9,000 BOPD in August 2006. Through the end 2012, not only has MedcoEnergi successfully arrested natural production decline, but also increased the oil production rate to over 22,000 BOPD. In addition, MedcoEnergi received the Health, Safety and Environment (HSE) Shield Award from PDO for successfully achieving an outstanding record of over 8 million man-hours without lost time injury by mid 2014.

# E&P Technologies



## Enhanced Oil Recovery

Since discovery in 1996, the Kaji-Semoga Fields continues to produce with increasingly advanced production technology. Primary recovery using conventional methods with artificial lift was successfully followed by secondary recovery with water flood. A tertiary recovery technique has been introduced by the end of 2012 through a pilot project EOR with surfactant and polymer injections. MedcoEnergi is the first in Indonesia to attempt such EOR in limestone reservoirs.

By implementing this EOR technique, we aim to increase the recovery factor of Kaji-Semoga field from the current recovery factor. In late 2011, we started our EOR pilot program by implementing pre-flush injection at several wells and completed the injections by the end of 2012. In 2014, we successfully completed the EOR pilot project

by achieving the target of incremental oil production. We are continuing with the evaluation of EOR full scale implementation.

MedcoEnergi is one of the first exploration and production companies and the first national company in Indonesia to apply EOR technology. Having the experience and technological capacity, we will be able to utilize this EOR technique in our assets worldwide.



## High Pressure High Temperature (HPHT)

MedcoEnergi began development of the Lematang Block in 2007 and completed the construction of production facilities and delivered first gas supply in 2010, through the application of advanced technology and sophisticated materials. The Singa-3 well was the first well in Indonesia to be drilled horizontally using the MPD (Managed Pressure Drilling) technology, applicable for wells of extreme operation conditions with a temperature of 342 °F (172.2 °C), a pressure of 8,000 psig (approximately 55 MPa), with CO<sub>2</sub> and H<sub>2</sub>S content of 32% and 200 ppm respectively.

MedcoEnergi collaborates with academic institutions and industry to determine the material and technology to manage the unique characteristics of the Singa Well. The collaboration called for a retrofit of the wellhead that was rated well beyond the API specifications for oil & gas wells, allowing MedcoEnergi to ramp-up gas production up to 35%. In addition, the wellhead is inlaid with INCONEL material and applied with NASA's technology on its heat sink.



## Water-Based Fracturing

A promising outcome of a water-based fracturing campaign has seen incremental reserves and the development of the remaining oil from the tight reservoir of Telisa formation in South Sumatra, Indonesia. Conventional fracturing with oil based fracturing fluids is not possible in this water-sensitive formation.

Water-based fracturing fluid with a careful selection of the right propane material has contributed to a recovery factor enhancement up to 10%. This achievement has increased the level of confidence for further Telisa development projects in the future.

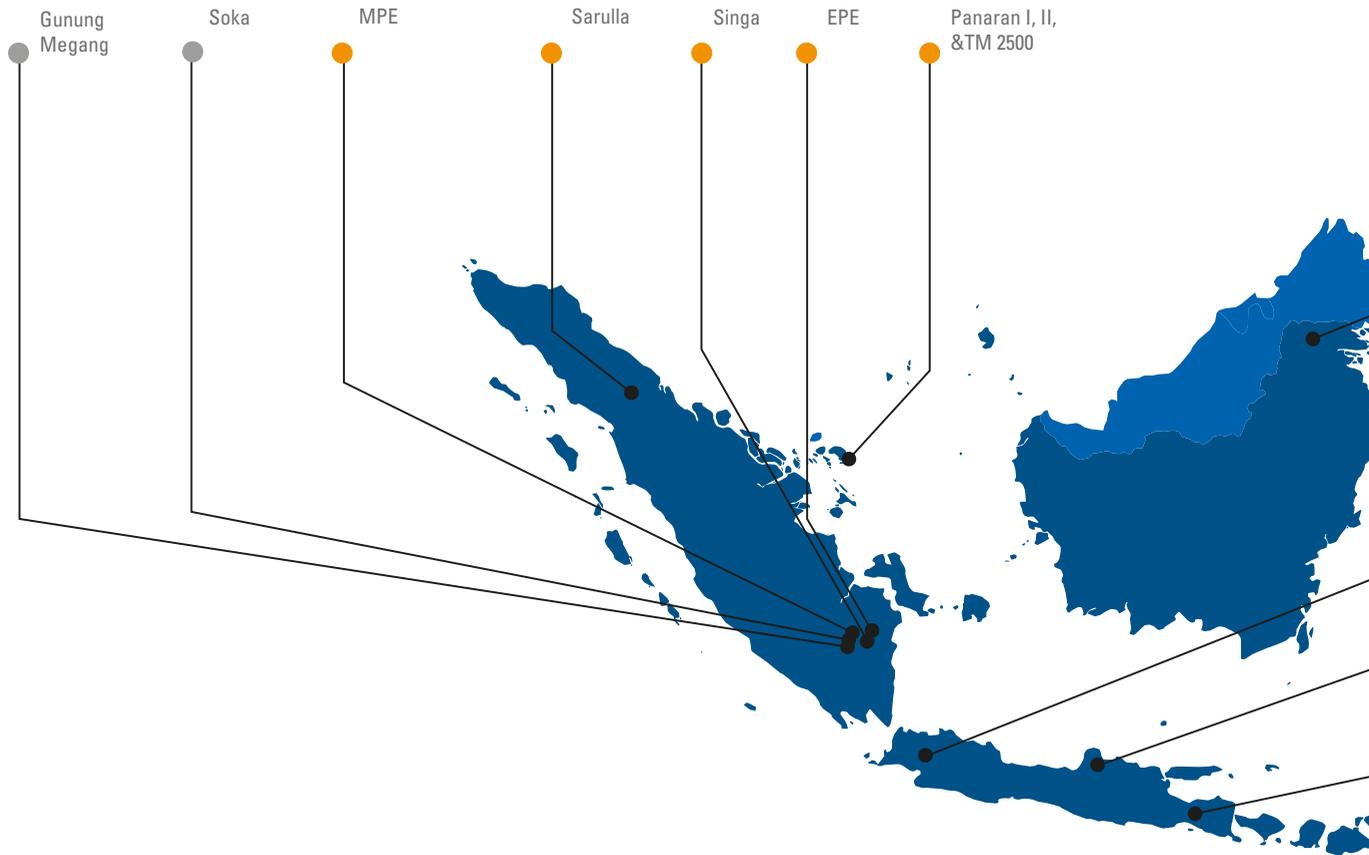


# Other Energy Related Business



## Coal Production

MedcoEnergi's coal production has exceeded the production target and producing coal with a high calorific-value of 6,800 kCal/kg adb.



● Power    ● Mining    ● Gas Distribution

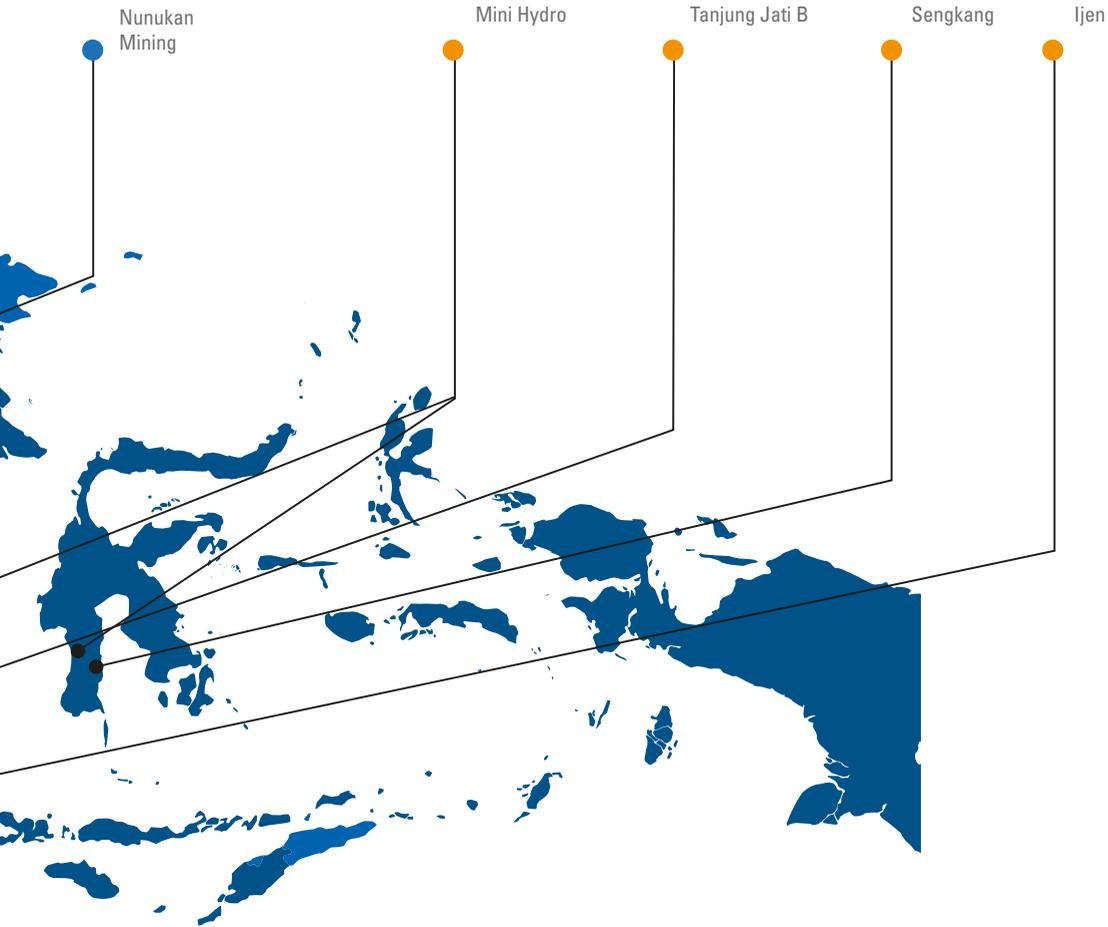
MedcoEnergi is committed to providing energy for society. Our expertise and ability to grow the exploration and production business have strengthened our commitment to expand the business into other energy-related businesses. The year 1997 marked the beginning of MedcoEnergi's effort to become an integrated energy company.

Since then, MedcoEnergi has significantly grown its other energy related businesses and engaged in high speed diesel marketing, storage and transportation, gas transportation, drilling rigs and services, power

generation and coal mining. Meanwhile, the establishment of drilling rigs and services, electrical power generation and coal mining businesses were driven by the increasing demand for such products. MedcoEnergi is always searching for any available opportunity to grow its other energy-related business. We believe that our other energy-related businesses have a great future in Indonesia.

We are endeavoring to grow those businesses and to integrate them with our exploration and production business. However, we realize that this growth

will require more advanced technology, competent people and significant capital investment. We are confident that the involvement of prominent strategic partners with expertise in each area of our energy-related businesses will enable us to grow these businesses and add more values to our shareholders as well as to other stakeholders.



Business	Customers, Partners
Power	ABB, General Electric, Hyundai Engineering, Kyushu Electric, INPEX, Itochu, NAES, Ormat Technologies, Pertamina Geothermal Energy, PGN (Indonesian State-owned gas distribution company), PLN (Indonesian State-owned electricity company), PLN Batam, Roll Royce, WestJec.
Gas & Pipeline Distribution	Medco E&P Indonesia.

# Power



Medco  
Power

Saratoga

## Independent Power Producer & Power Services Provider

MedcoEnergi, together with its partner PT Saratoga Power, has conducted power business through PT Medco Power Indonesia since December 2011.

MedcoPower is developing renewable projects comprising of mini-hydro and geothermal power plants in Sarulla in North Sumatra and Ijen in East Java. Construction of Sarulla Geothermal Power Plant Project has started in early 2014 and would produce the largest single-contract of geothermal power in the world of 3 x 110 MW. While in East Java, MedcoPower starts exploring a geothermal power plant development of 2 x 55 MW in Ijen, following a geology and geophysics study.

We are also operating a total of six gas-fired power plants in Batam and South Sumatra. Our Independent Power Producer (IPP) in Batam utilizes various types of engines to ensure a continuous supply of electricity, including simple cycle, combined cycle engines and a truck mounted plant.

In Batam we complete the construction of a new 2x 35 MW gas-fired power plant. The plant is slated for its COD (Commercial Operation Date) by 2015. Whereas in South Sumatra, our IPP gas engines supply energy to gas production facilities and the surrounding communities, with most of the electricity produced will be delivered to local PLN.

Indonesia state-owned electricity company, PLN, has recognized MedcoPower's commitment and capability to supply electricity. PLN awarded MedcoPower an operation and maintenance service contract for the 2 x 660 MW coal-fired power plant in Tanjung Jati, Central Java, which commenced operation in 2006, supplying 8% of total electricity flowing through the Java-Bali transmission. MedcoPower has succeeded in operating this plant to its full capacity while maintaining the highest SHE standards, marked by the achievement of 13.5 million man-hours without lost time accident by year-end of 2013.

# Coal Mining



## Diversifying our Energy Sources

In 2009 MedcoEnergi began its coal mining business by acquiring two mining companies, PT Duta Tambang Sumber Alam (DTSA) and PT Duta Tambang Rekayasa (DTR). These two companies own mining business licenses (IUP) in Nunukan, North Kalimantan. Based on DTSA and DTR geological data and the historical success rates of neighboring operators, it is estimated that Nunukan will be capable of producing coal with a high calorific-value of 6,800 kCal/kg adb.

Our approach has always been to maintain an environmentally friendly operation with good mining practices. Moving forward, we will grow our business with a focus on small to medium size of coal and mineral and saleable commodity, implement joint venture schemes with existing mining business license holders, and in the long term look, seize for opportunities to develop low rank coal prospects using coal utilization process.

MedcoEnergi's production target is 600,000 metric tons per year with initial production starting in fourth quarter of 2012. In October 2012, the Company has successfully shipped its maiden coal sales to China and in 2013 our coal operation has met the target with a total coal production of 634,000 ton with coal sales 526,000 ton. In the coming years, we believe that we will be able to discover more coal prospects as well as to enter the new venture of other mining as operator and developer.

# Gas Pipeline



## Gas Pipeline & Distribution

MedcoEnergi entered into the gas pipeline and distribution business in 2008. Our first facility was the gas pipeline and booster compression station at Gunung Megang in South Sumatra.

This facility is used to transport the gas produced from MedcoEnergi's gas producing field, located in Singa Lematang Block. The 17.5 kilometers of 10" pipeline was built to connect the Gunung Megang facility to the Singa Lematang facility, pushing the gas through the booster compression station at a capacity of 3 x 22.5 MMSCFD.

As a part of our growth plan, we successfully develop a compression station consist of 3 units of compressor in South Sumatra, Indonesia. The plant, which has a total compressed-gas capacity of 45 MMSCF per day with the

target pressure of up to 1,000 psi, is to support our E&P gas operations.

In addition, MedcoEnergi also plans to produce Natural Gas Liquid (NGL) and construct multi-user gas pipelines in Sumatra and Kalimantan.

We are geared towards building a large gas distribution business in Indonesia, encompassing trading, processing, transportation, and operating and maintaining relevant facilities.



MEDCOENERGI

# Pursuing the Growth, Ensuring Sustainability

Building knowledge and competence in  
oil and gas exploration and production



# Our People, Standards and Information Systems



## Obtain Highest Recognition

Gold PROPER Award, the highest recognition for preserving the environment from the Indonesian Ministry of Environment and Forestry, accepted by Frila B. Yaman, COO MedcoEnergi.

# Our Human Capital



## Developing and Building on Core Competence

People are our capital and the key to our success. People competency and engagement are crucial to the Company's performance. We therefore organize, develop and reward our employees so that they can continuously increase their competency and deliver their best performance.

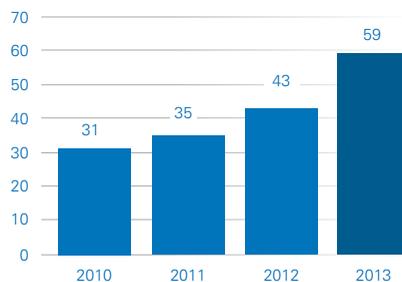
We have invested in several strategic human capital initiatives to attract, motivate and retain the right talents. In developing our future leaders, we have embarked on a structured leadership development program, involving employees from staff to senior management level.

Our talent management process ensures MedcoEnergi has a sustainable supply of talent to fill various key positions within the organization.

Today, MedcoEnergi employs over 3,000 people worldwide, including over 300 petro-technical professionals. Our

human capital is made up of people from various nations who all embrace the MedcoEnergi culture and spirit.

Four accelerated development programs were undertaken by the Company, testifying to MedcoEnergi's strong commitments to human capital development programs, not only for senior and mid-level staffs, but for junior level as well.



Total Employees under the Accelerated Development Program

# Empowering Local Communities



## Sustainable Growth through Social Activities and Initiatives

Growing an energy business in a pluralistic society carries the responsibility of empowering the local communities and interacting respectfully with the environment. Close cooperation with the government at national and local levels is a key to ensuring the sustainability of economic and social growth in addition to conservation of the environment.

MedcoEnergi has contributed in a unique way. Our community development activity in operation areas has provided energy to local communities through small gas-fired and hydro-power plants in several villages in South Sumatra, Indonesia. The Company provides financial support, such as micro financing to local small-scale entrepreneurs (e.g. carpenters, fishermen, cracker producers, etc). We also support the local community to plant organic paddy fields. Briefly, we develop small-scale

energy-related and community-based projects using locally available resources. In this way, we also preserve the environment.

Our Company has demonstrated a strong commitment to local education particularly in our operation areas. We continue providing scholarships and improving school facilities.

We believe that a better education will improve the quality of life of the community. MedcoEnergi has introduced various initiatives to empower women in the community, such as a community development program for organic System of Rice Intensification (SRI). MedcoEnergi has been awarded for the Millenium Development Goals award in the category of "Promoting Gender Equality and Empowerment of Women."

# High SHE Standard



## Safe, Effective and Efficient Operations

MedcoEnergi is committed to managing its operations safely, effectively and efficiently. MedcoEnergi always ensures that all of its assets implement Performance Integrity of MedcoEnergi (PRIME) as its SHE management system. PRIME was developed in accordance with the International Safety Rating System 7<sup>th</sup> edition (ISRS7), the audit standard that is implemented in all MedcoEnergi assets.

As a high standard of SHE system, the contents of PRIME are also in line with various international standard management systems: ISO 9001 (Quality Management System), ISO 14001 (Environmental Management Systems), OHSAS 18001 (Occupational Health and Safety Assessment Series), PAS 55-Asset Management, and GRI (Global Reporting Initiative).

PRIME is a guideline for MedcoEnergi to implement operation management system, risk management, employee

competency management, facility integrity management, crisis management, and knowledge management.

MedcoEnergi has been implementing various initiatives to regularly enhance its SHE performance and to show appreciation for employees and contractors who implement our behavior based safety program.

We have conducted Health Risk Assessment programs and provided specific health program for our employees to prevent any potential occupational illness.

MedcoEnergi requires all of its contractors to implement Contractor Safety Management (CSM) and evaluate their SHE performance during their service to ensure that they understand and implement CSM properly and effectively.

# Preserving Environment



## Respecting Nature for Future Generations

Currently almost 7 billion people inhabit the Earth. Our world is faced with serious challenges, among others: poverty, environment, and health. MedcoEnergi is continuously trying to find better ways to produce and use energy to drive the economy, industry, and transportation.

MedcoEnergi has undertaken several initiatives to restore the ecological balance that is affected by its operations, including management of water and air pollution and hazardous solid waste materials.

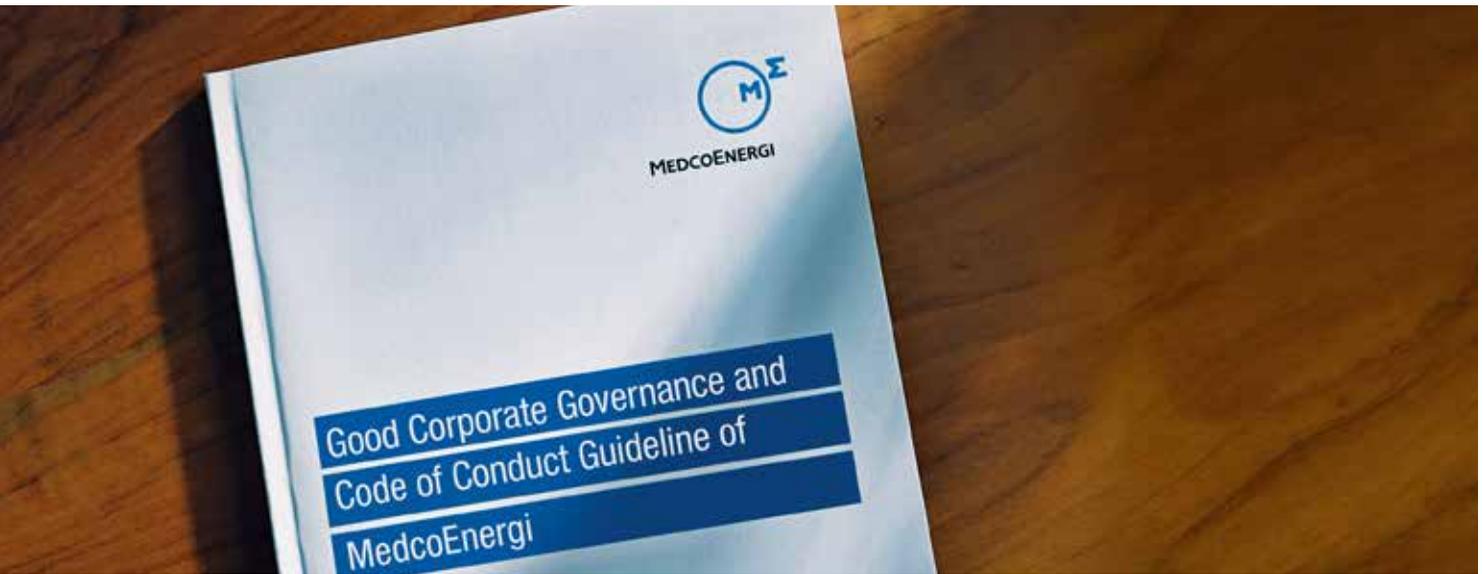
We always strive for our operations to comply with the environmental law and regulation wherever we operate. We regularly produce a feasibility study on the environment for every activity, such as analysis of environmental impact and efforts on environmental management and ecological monitoring.

In preserving the environment, we are committed to implementing various initiatives, including: greenhouse gas emission reduction, water conservation, waste management, utilization of resources and biodiversity conservation.

These initiatives have enabled us to enhance our performance in preserving the environment. We also obtained Green PROPER ratings for several of our oil and gas producing blocks in Sumatra and Kalimantan.

We are endlessly pursuing better, more environmentally friendly operations to produce and use energy to reduce greenhouse gas emissions and global warming.

# GCG as a Culture



## Key Factor in Realizing the Vision and Mission

MedcoEnergi is recognized by the Indonesian capital market community as a pioneer in adhering to the highest standards of GCG principles and business ethics.

We have received several GCG awards since 2005 and are always striving to achieve an even better performance.

MedcoEnergi has implemented a policy whereby all directors and employees are required to declare that they will comply with the GCG principles and business ethics. In addition, the Company has introduced a 'whistle-blowing' system to support the policy, which has been utilized by the Directors to monitor the implementation of corporate values by all members of MedcoEnergi.

Fraud, dishonesty, harassment, unethical behaviour and workplace safety hazards have a negative effect on our

workplace. By reporting misconduct, our stakeholders can help us to ensure that our people are safe and secure in their work environment and also that fraud and dishonesty can be eliminated, thus saving the company financial losses.

Type of wrongdoings that are covered in our system include Fraud, Corruption, Bribery, Conflict of Interest, Misconduct Behaviours, Financial Statement Fraud, Breaches of Policy and Other Unethical Behaviour.

Our stakeholders' active involvement will make MedcoEnergi a safe, fair and honest place to work.

# Information System Excellence



## Seamless Communications

MedcoEnergi relies heavily on seamless communications. We have invested extensively in Information Communication Technology (ICT). Technology is our enabler, which allows us to grow as well as to strengthen our internal control system.

Since 2001, we have used a robust infrastructure of ICT System. The system is a single integrated centralized data centre, which is protected with disaster recovery system using virtualization technology.

MedcoEnergi already has most of its business process already online, highly integrated with its Enterprise Resource Program (ERP) system. In addition, we are also one of the first companies in Indonesia to fully use online collaboration technology in our daily business system integrated with an electronic document management system. We are able to work any time anywhere with proper security and data integrity.

With such a system, we are now able to build up our internal control system and make decisions more quickly and more effectively. At the same time, we can reduce our carbon footprint due to using less paper and fewer business trips.

We have also established a technology-centric collaborative room. MedcoEnergi has empowered its employees to perform multidisciplinary collaborative work on all of our assets. When needed, the collaborative room can transform itself into a crisis management center.

MedcoEnergi's commitment to the information system has been proven by obtaining international IT standard, the ISO/IEC 20000 in IT service management. This ensures reliability in the information system which will greatly support MedcoEnergi's growth.

# Awards

**2014**



- Gold PROPER for Rimau Block for the fourth year running since 2011 in recognition of the Company's efforts to conserve the environment, at a level that exceed the statutory requirement
- Green PROPER for several E&P assets in Indonesia
- Achieved 8 million man-hours without lost-time injury in Karim Small Fields from Petroleum Development Oman

**2013**



- Achieved 4.7 million man-hours without lost-time injury in Karim Small Fields from Petroleum Development Oman.
- Gold PROPER for Rimau Block for the third year in 2011 and Green PROPER for all E&P assets in Indonesia

**2012**



- Gold PROPER for Rimau Block for the second year, in recognition of the Company's efforts to conserve the environment, at a level that exceed the statutory requirement.
- GCG award - The Best Non-Financial from Indonesian Institute for Corporate Directorship
- Supply Chain Management (SCM) award - for Best KPI for the second year running since 2011 from SKKMigas in fulfilling all requirements for procurement and asset management.

**2011**



- Gold PROPER for Rimau Block in South Sumatra and Green PROPER for South Sumatra Extension Block (South Sumatra), Tarakan Block (East Kalimantan), and Kampar Block (Riau)
- GCG award - The Best Non-Financial from Indonesian Institute for Corporate Directorship
- Asia's Best Corporate Social Responsibility from Finance Asia Magazine
- Attained 4 awards for four different categories in CSR Award 2011 from CFCD for Rimau Block

**2010**



- GCG award -The Best Equitable Treatment of Shareholders from Indonesian Institute for Corporate Directorship
- Green PROPER for Rimau Block, South Sumatra Extension and Kampar from the Ministry of Environment of Indonesia
- Millennium Development Goals award from Metro TV for category of Environmental of Sustainability

**2009**



- GCG award - Best GCG Overall 2009 from Indonesian Institute for Corporate Directorship
- Annual Report Award 2008 as first runner-up in the category of private non-financial public and listed company
- Millennium Development Goals award from Metro TV in the category of Improvement in Gender Equality and Women Empowerment through its community development program of Organic SRI

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**2008**



- Green Corporate award in the category of Environment for Medco Methanol Bunyu from the Association of Indonesian Engineers
- Environmental Management & Monitoring award for Medco Power Indonesia from the Ministry of Environment of Indonesia
- Zero Accident award for PT Medco LPG Kaji from the Ministry of Manpower RI

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**2007**



- "No Lost Time Accident" awards from the Government for several assets including Tarakan Block and Rimau Block
- Social Empowerment award from the Coordinating Ministry of Peoples Welfare (Menko Kesra) in 2007.
- One of Indonesia's Most Admired Knowledge Enterprises (MAKE) 2007

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**2006**



- The best Annual Report in the Annual Report Award 2005
- The best of top 10 Companies at GCG Perception Index by IICG and SWA Magazine

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**2005**



- The best Annual Report in the Annual Report Award 2004
  - Zero Accident award for PT Medco LPG Kaji from the Ministry of Manpower RI
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# Approximate Conversion Factors

Crude oil*	To	metric tons	kilolitres	barrels	US gallons	metric tons/year
<b>From</b>	Multiply by					
Metric tons		<b>1</b>	<b>1.165</b>	<b>7.33</b>	<b>307.86</b>	<b>-</b>
Kilolitres		<b>0.8581</b>	<b>1</b>	<b>6.2898</b>	<b>264.17</b>	<b>-</b>
Barrels		<b>0.1364</b>	<b>0.159</b>	<b>1</b>	<b>42</b>	<b>-</b>
US gallons		<b>0.00325</b>	<b>0.0038</b>	<b>0.0238</b>	<b>1</b>	<b>-</b>
Barrels/day		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>49.8</b>

\*Based on worldwide average gravity

Products	To convert	barrels to metric tons	metric tons to barrels	kilolitres to metric tons	metric tons to kilolitres
	Multiply by				
LPG		<b>0.086</b>	<b>11.6</b>	<b>0.542</b>	<b>1.844</b>
Gasoline		<b>0.117</b>	<b>8.5</b>	<b>0.740</b>	<b>1.351</b>
Kerosene		<b>0.128</b>	<b>7.8</b>	<b>0.806</b>	<b>1.240</b>
Gas oil/diesel		<b>0.134</b>	<b>7.5</b>	<b>0.830</b>	<b>1.192</b>
Fuel oil		<b>0.149</b>	<b>6.7</b>	<b>0.939</b>	<b>1.065</b>

Natural gas and LNG	To convert	billion cube metres NG	billion cube feet NG	million tons oil equivalent	million tons LNG	trillion British thermal units	million barrels oil equivalent
<b>From</b>	Multiply by						
1 billion cubic metres NG		<b>1</b>	<b>35.3</b>	<b>0.90</b>	<b>0.73</b>	<b>36</b>	<b>6.29</b>
1 billion cubic feet NG		<b>0.028</b>	<b>1</b>	<b>0.026</b>	<b>0.021</b>	<b>1.03</b>	<b>0.18</b>
1 million metric tons oil equivalent		<b>1.111</b>	<b>39.2</b>	<b>1</b>	<b>0.805</b>	<b>40.4</b>	<b>7.33</b>
1 million metric tons LNG		<b>1.38</b>	<b>48.7</b>	<b>1.23</b>	<b>1</b>	<b>52.0</b>	<b>8.68</b>
1 trillion British thermal units		<b>0.028</b>	<b>0.98</b>	<b>0.025</b>	<b>0.02</b>	<b>1</b>	<b>0.17</b>
1 million barrels oil equivalent		<b>0.16</b>	<b>5.61</b>	<b>0.14</b>	<b>0.12</b>	<b>5.8</b>	<b>1</b>

Units
1 metric ton = 2204.62 lb. = 1.1023 short tons
1 kilolitre = 6.2898 barrels
1 kilolitre = 1 cubic metre
1 kilocalorie (kcal) = 4.187 kJ = 3.968 Btu
1 kilojoule (kJ) = 0.239 kcal = 0.948 Btu
1 British thermal unit (Btu) = 0.252 kcal = 1.055 kJ
1 kilowatt-hour (kWh) = 860 kcal = 3600 kJ = 3412 Btu

Calorific equivalents	
One ton of oil equivalent equals approximately:	
Heat units	10 million kilocalories
	42 gigajoules
	40 million Btu
Solid fuels	1.5 tons of hard coal
	3 tons of lignite
Gaseous fuels	See natural gas and LNG table
Electricity	12 megawatt-hours
One million tons of oil produces about 4500 gigawatt-hours (= 4.4 terawatt-hours) of electricity in a modern power station.	





**MEDCOENERGI**

**PT Medco Energi Internasional Tbk**

The Energy Building, 53<sup>rd</sup> Floor  
SCBD Lot 11A

Jl. Jend. Sudirman

Jakarta 12190, Indonesia

Phone. (62-21) 2995 3000

Fax. (62-21) 2995 3001

Email. [corporate.secretary@medcoenergi.com](mailto:corporate.secretary@medcoenergi.com)