

Brief Summary/Kesimpulan Singkat
Working Group on Oil, Gas and Coal
The 5th Indonesia – China Energy Forum
13 November 2017

- Pihak Indonesia memandang bahwa kolaborasi antara Indonesia dan RRT di bidang migas penting dalam rangka meningkatkan investasi dan kerja sama di masa depan. Pihak Indonesia mengharapkan perusahaan RRT terus berinvestasi di Indonesia, dan berharap perusahaan hulu migas Indonesia dapat juga beroperasi di Tiongkok.
- Pemerintah Indonesia memiliki roadmap pengembangan infrastruktur gas nasional. Indonesia menawarkan kepada RRT peluang kerja sama pengembangan mini LNG dan mini floating LNG di wilayah timur Indonesia.
- Pemerintah Indonesia memiliki roadmap pengembangan kilang minyak. Pertamina membuka peluang kerja sama pembangunan kilang minyak bumi kepada perusahaan RRT. Pertamina mengharapkan RRT dapat berpartisipasi untuk mengembangkan kilang di Indonesia.
- Petrochina menyambut positif skema Gross Split PSC dan menyampaikan ketertarikan untuk bekerjasama dengan Pertamina dalam operasi hilir migas di Indonesia.
- Pihak Indonesia menawarkan kerja sama biodiesel dengan RRT. Pihak Indonesia juga menyampaikan dukungan untuk program pengembangan biodiesel RRT.
- Kebijakan terkini batubara Indonesia adalah pengendalian produksi, mengurangi ekspor, mengembangkan Clean Coal Technology, meningkatkan kemampuan sumber daya manusia untuk eksplorasi.
- Produksi batubara Indonesia tahun 2017 sebanyak 476, domestik 80 juta ton sisanya diekspor. RRT adalah salah satu negara tujuan utama ekspor. Sebagaimana komitmen Menteri ESDM, ekspor batubara ke Tiongkok akan tetap dilakukan.
- Pihak RRT mengharapkan kerja sama bidang batubara dengan Indonesia dapat ditingkatkan. Pihak RRT berharap menjadi pengimpor batubara terbesar dari Indonesia.
- Pihak Indonesia menilai positif investasi Shenhua Group di Indonesia dan berharap proyek Jawa-7 dan Sumsel-1 berjalan dengan baik dan selesai tepat waktu.
- Synfuel China memiliki kegiatan Mild Hydro-Pyrolysis Liquefaction yang digunakan untuk brown coal. Pihak Synfuel China mencari partner untuk pengembangan brown coal di Indonesia.
- Pihak Indonesia menyambut baik peluang kerja sama antara PT. Bukit Asam dan Shenhua Group dalam bidang batubara dan energi.

- Pihak Indonesia mengucapkan terima kasih atas dukungan finansial dari pihak RRT untuk pembiayaan proyek-proyek di Indonesia dan mengharapkan dukungan finansial dapat ditingkatkan.

Tambahan dari Chairman of PRC

- Pihak RRT menyambut positif kerja sama yang telah dilakukan kedua negara di sektor migas. Kedua Pemerintah telah bekerja dengan baik dalam mencari peluang kerja sama.
- Di masa depan, kerja sama LNG agar dapat ditingkatkan, mempertimbangkan bahwa Indonesia merupakan eksporter LNG terbesar ketiga di dunia, sedangkan RRT adalah negara importir LNG terbesar keempat di dunia. RRT juga menyambut baik peluang kerja sama mini LNG.
- Selain perusahaan migas, pihak RRT akan merekomendasikan perusahaan-perusahaan lain untuk hadir berinvestasi ke Indonesia.
- RRT menyampaikan keingintahuan mengenai aturan baru perjanjian kerja sama migas dalam skema gross split. Pihak RRT percaya bahwa dengan aturan baru tersebut, kerja sama kedua negara dapat ditingkatkan.
- Pihak RRT menyampaikan apresiasi atas kerja sama bisnis (B-to-B) yang dimulai dari forum energi kali ini.
- Terkait finansial, pihak RRT mengharapkan komunikasi antara kedua pihak dapat ditingkatkan, sehingga pemahaman dan kerja sama di masa depan dapat lebih baik lagi.
- Pihak RRT mengucapkan terima kasih kepada Kementerian ESDM yang telah mendukung investasi perusahaan RRT di Indonesia, dan berharap selalu mendapat dukungan di masa depan.

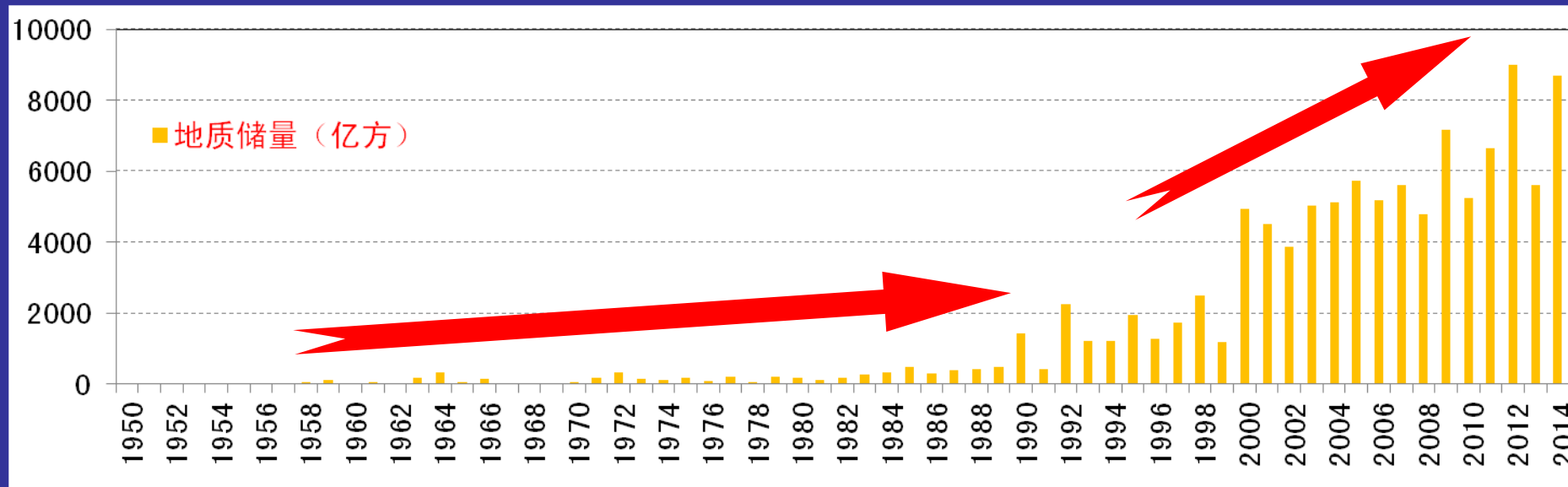
发展中的 中国石油天然气产业

Department of Oil & Gas, NEA, China
Nov 2017

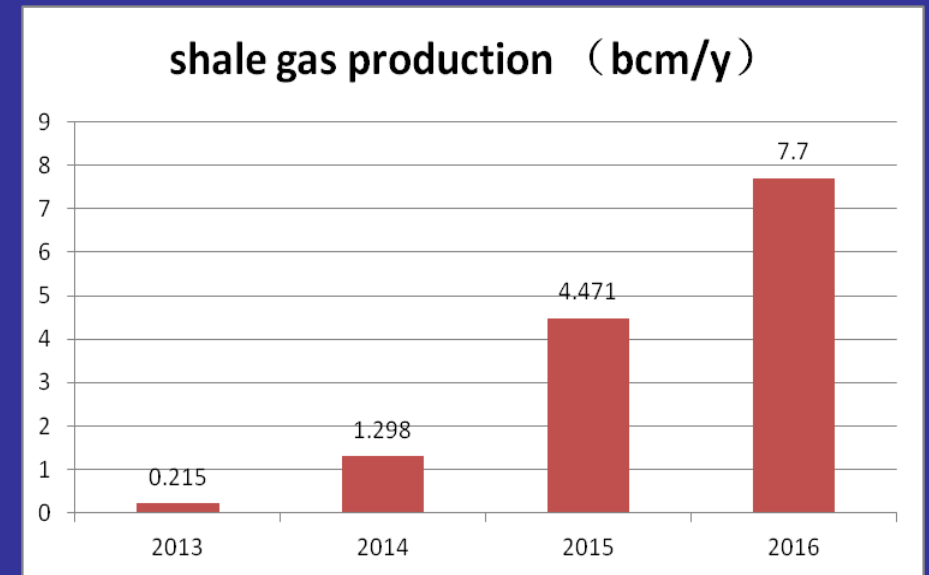
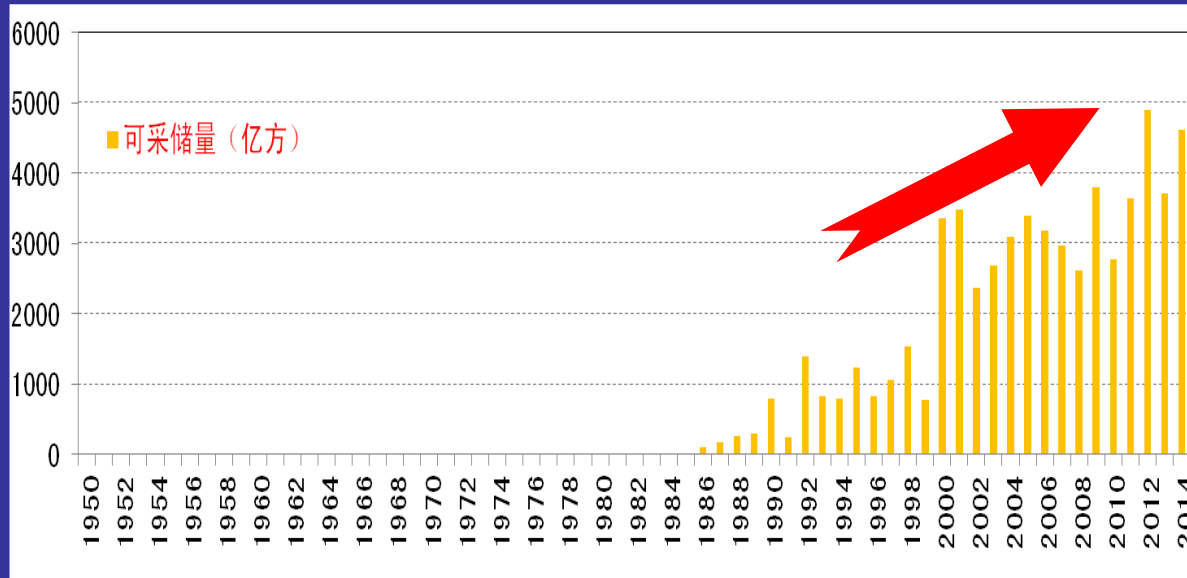
中国天然气产业发展现状

目前中国累计探明天然气地质储量超过13万亿方，探明程度19%。2000年后，中国天然气新增探明地质储量高速增长，年均新增探明储量5807亿方，年均增长率3.83%。

中国1950~2014年新增探明天然气地质储量增长态势图

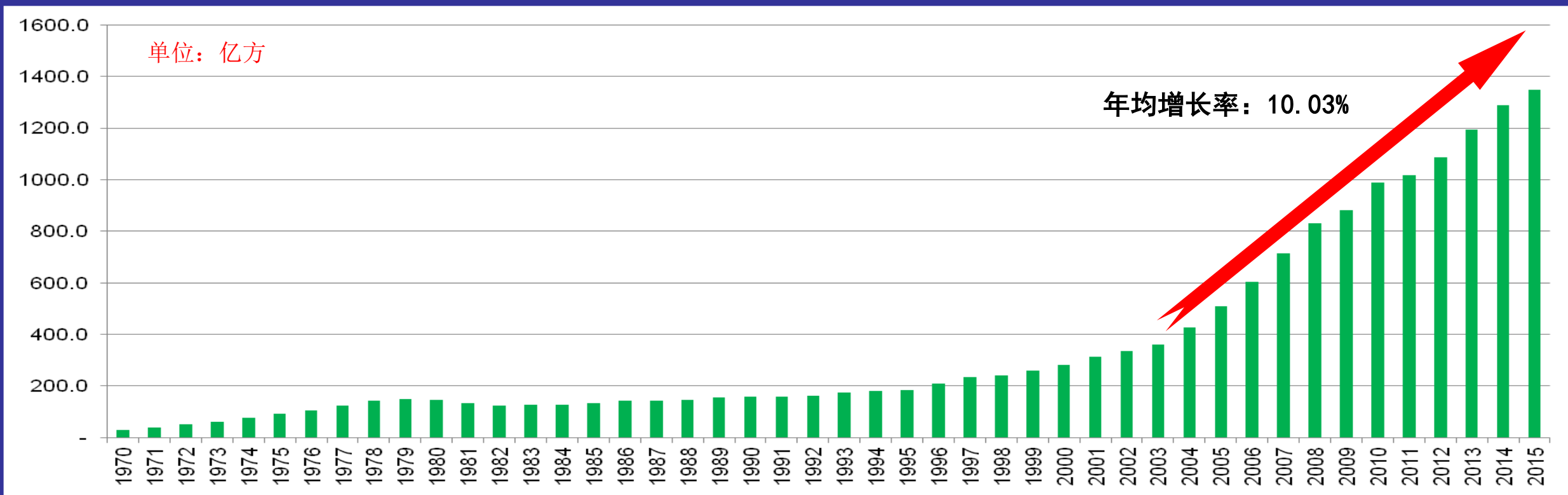


中国天然气新增探明可采储量与地质储量同步高速增长，年均新增可采储量3374亿方，年均增长率2.14%。



中国非常规发展迅速，以页岩气为主要代表，2016年中国页岩气产量77亿立方米，位居世界第三，预计2017年将超过100亿立方米。

2015年全国天然气产量1350亿方，2004~2015年天然气产量年均增长10.03%；
2016年天然气产量达到1370亿立方米，预计2017年可达到1450亿立方米。



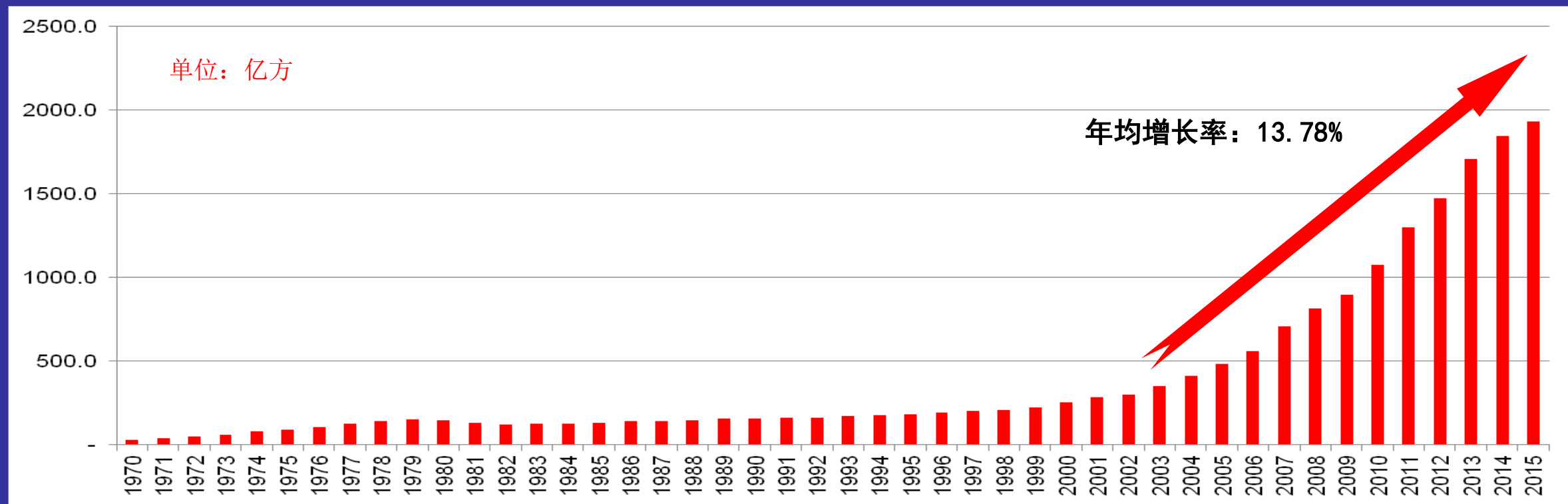
逐年天然气产量图

天然气长输管道布局示意图



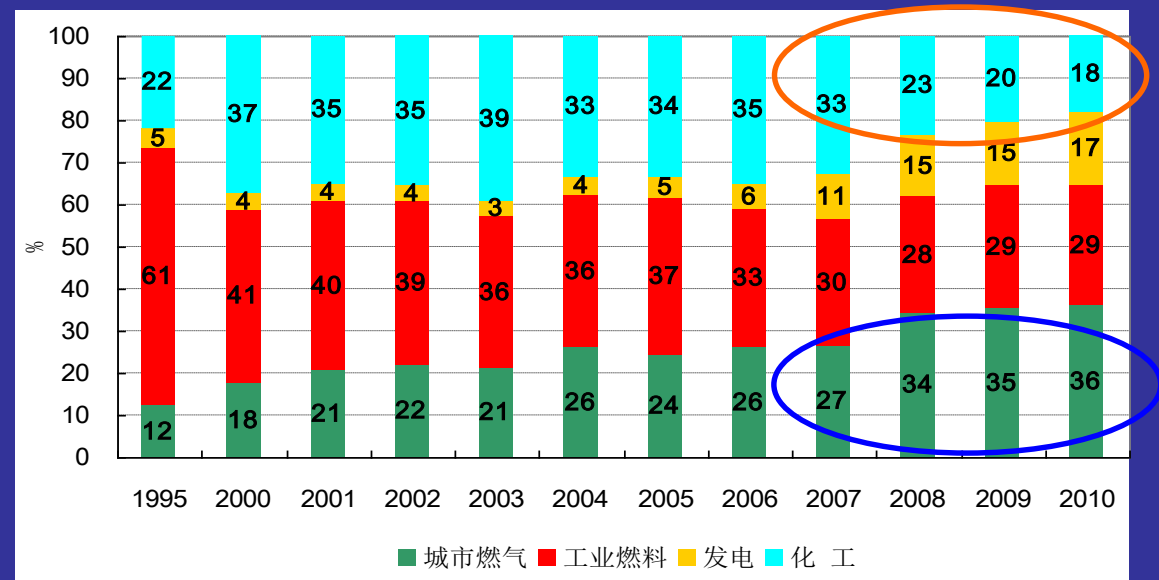
截至目前，中国天然气长输管道里程已超过7万公里，覆盖了除西藏外的全部省份。建成12座LNG接收站，LNG接收能力4380万吨/年。

2015年全国天然气消费量1931亿方，2004~2015年天然气消费量年均增长13.78%。天然气在一次能源消费结构中占比不断提高，达到5.8%。人均年消费天然气135立方米，远低于467立方米的世界平均水平（3.5倍）。

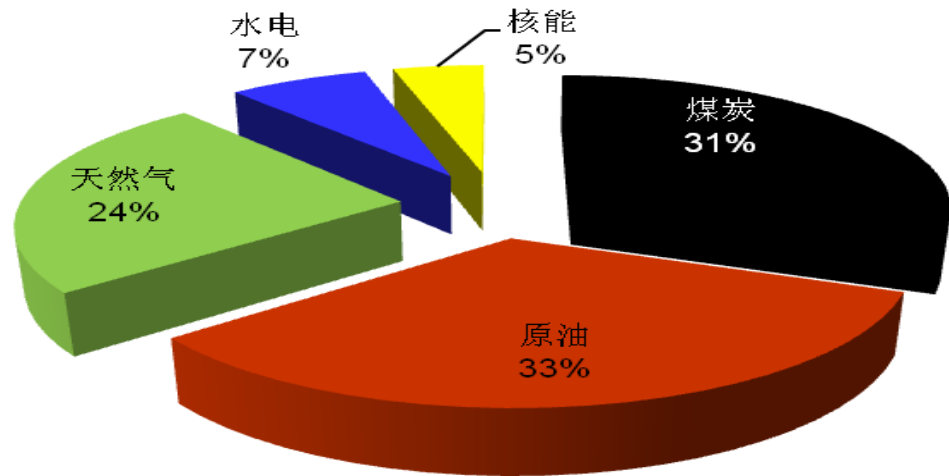


逐年天然气消费量图

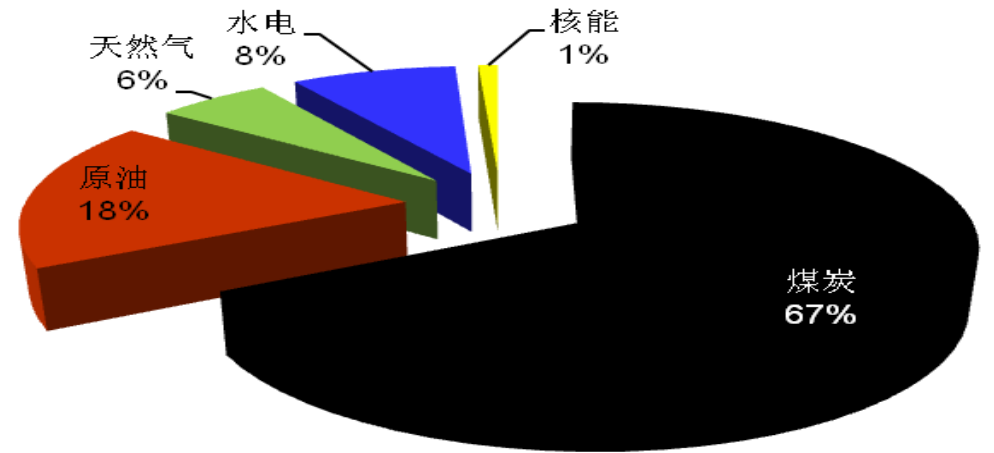
2000年来，中国城市燃气比重不断上升，工业燃料和化工用气下降，发电用气上升。目前城市燃气、发电、化工和工业燃料分别占32.5%、14.7%、14.6%、38.2%，与2010年相比，城市燃气、工业燃料用气占比增加，化工和发电用气有所下降。全国城镇天然气管网里程达到43万公里，用气人口3.3亿人，天然气发电装机5700万千瓦，建成加气站6500座，加注站13座。



中国煤炭消费比重(67%)基本与世界石油天然气和水电、核能消费比重相当(69%)；煤炭以外的各种能源在一次能源中的比重刚好与煤炭在国际能源结构中的比重相当。



世界能源消费结构



中国能源消费结构

发展机遇和挑战



经济发展



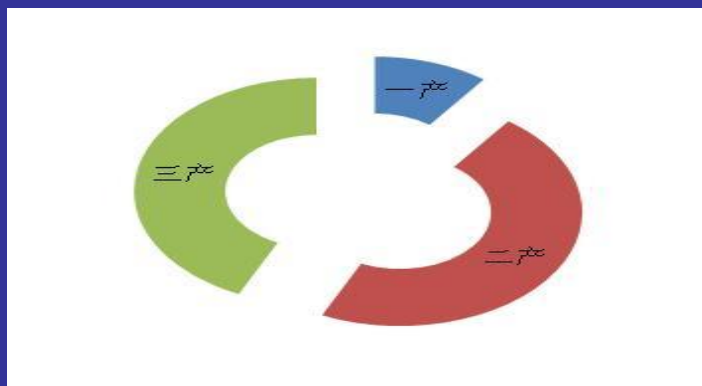
人口增长



工业化



城镇化



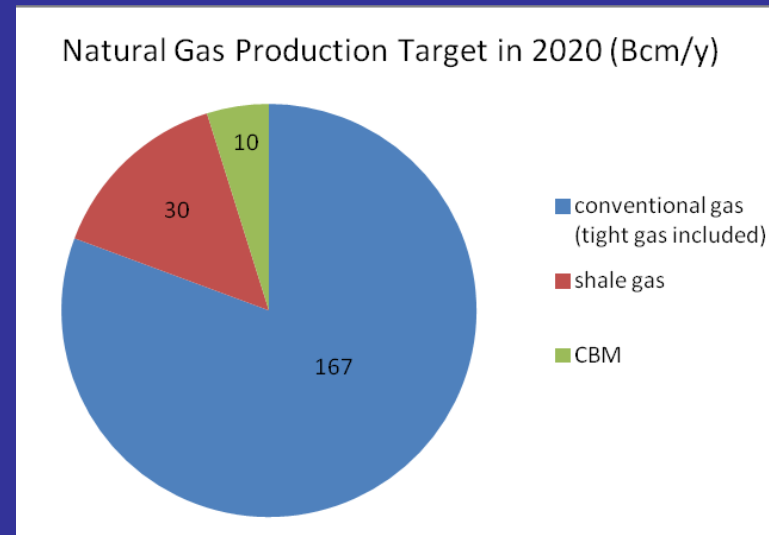
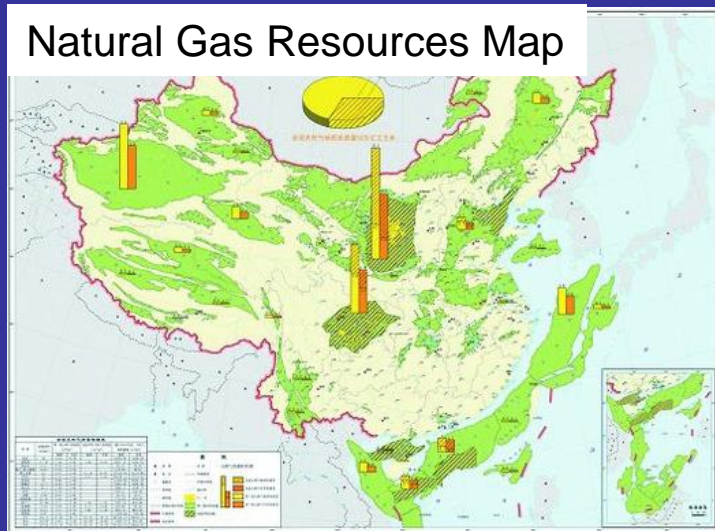
能源结构调整



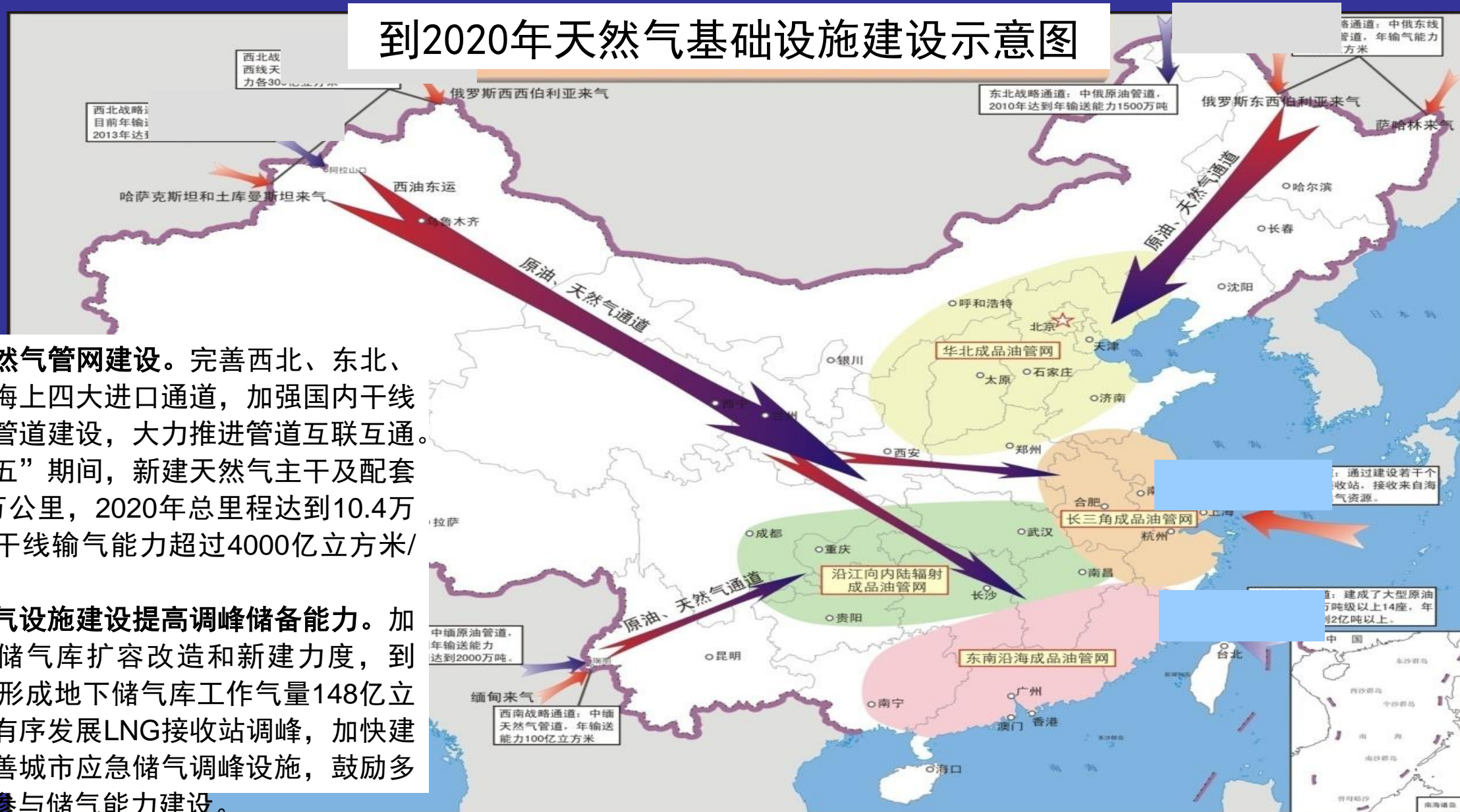
产业发展政策

中国天然气产业发展展望

加强勘探开发增加国内资源供给。“海陆并进、常非并举”，2020年实现国内天然气产量2070亿立方米。在加强常规天然气开发的同时，加大致密气、页岩气、煤层气等低品位、非常规天然气勘探开发，2020年力争页岩气年产量300亿立方米，地面抽采煤层气产量100亿立方米。



到2020年天然气基础设施建设示意图



加快天然气管网建设。完善西北、东北、西南、海上四大进口通道，加强国内干线和区域管道建设，大力推进管道互联互通。“十三五”期间，新建天然气主干及配套管道4万公里，2020年总里程达到10.4万公里，干线输气能力超过4000亿立方米/年。

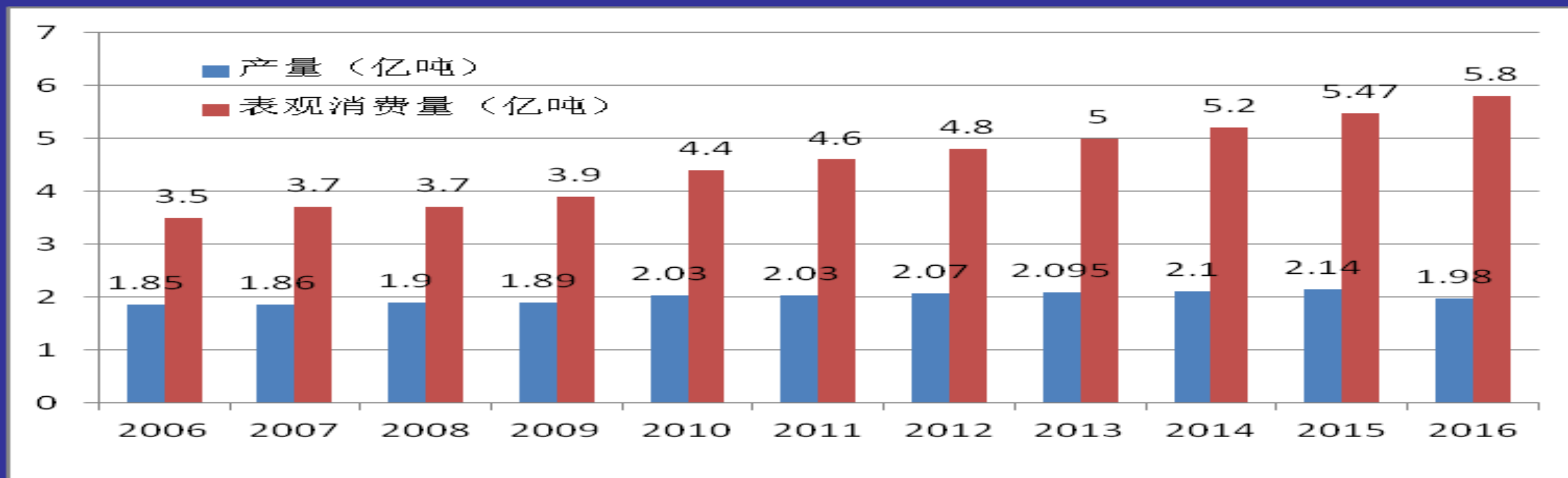
加快储气设施建设提高调峰储备能力。加大地下储气库扩容改造和新建力度，到2020年形成地下储气库工作气量148亿立方米。有序发展LNG接收站调峰，加快建立和完善城市应急储气调峰设施，鼓励多种主体参与储气能力建设。

培育天然气市场和促进高效利用。以燃料清洁替代和新兴市场开拓为主要抓手，加快推进天然气在城镇燃气、工业燃料、燃气发电、交通运输等领域的大规模高效科学利用。逐步将天然气培育成为我国现代能源体系的主体能源之一，到2020年，天然气在一次能源消费结构中的占比力争达到10%左右。到2030年，力争将天然气在一次能源消费中的占比提高到15%左右。

为实现上述天然气利用目标，需配套实行更加严格的环保政策，推进价格改革等市场化建设，完善产业政策和标准规范，强化投融资支持，加大科技创新，推进试点示范等。

中国石油产业发展现状

截至2016年底，中国累计探明石油地质储量超过380亿吨，探明程度30%，处于勘探中期。2010-2015年，中国石油产量连续6年稳定在2亿吨以上。受国际油价大幅下跌影响，2016年原油产量降为1.98亿吨。2016年中国石油表观消费量5.78亿吨，占国内能源消费总量的18.%。



西北、东北、西南和海上四大进口战略通道布局基本完成，油源供应、进口渠道和运输方式逐步实现多元化。“十二五”期间国内新投运原油长输管道总里程**5000**公里，新投运成品油管道总里程**3000**公里。截至**2016**年底累计建成原油长输管道**2.9**万公里、成品油管道**2.5**万公里



技术水平

(Technology system of China's oil and gas industry)

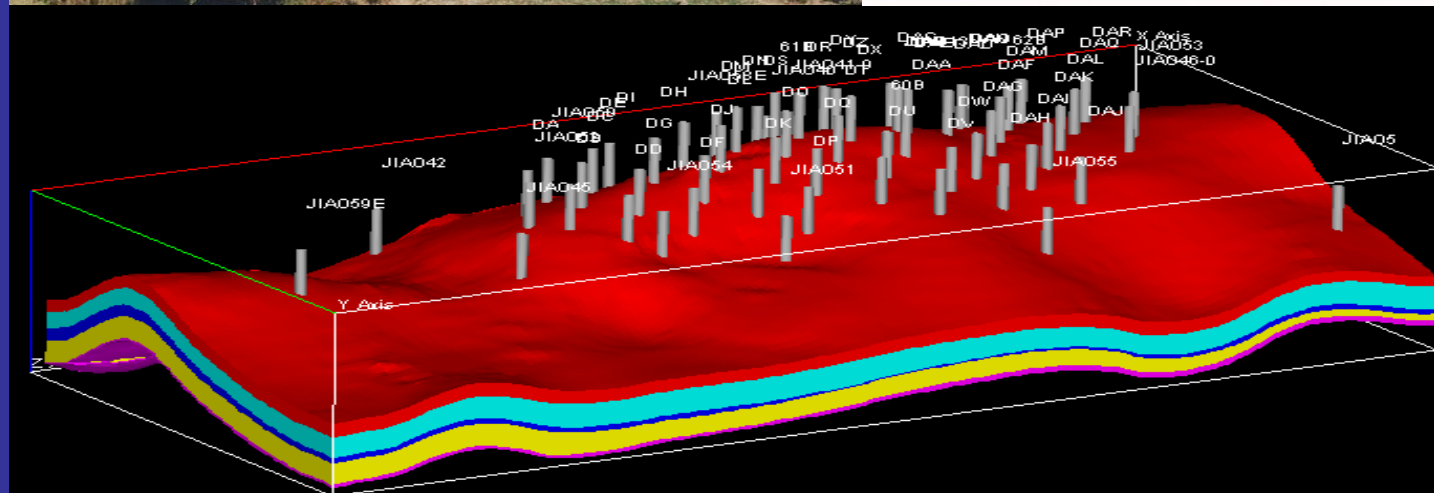
☆复杂断块油气勘探开发

☆油田早期注水分层开采

☆高含水油田稳油控水开发

☆提高采收率技术

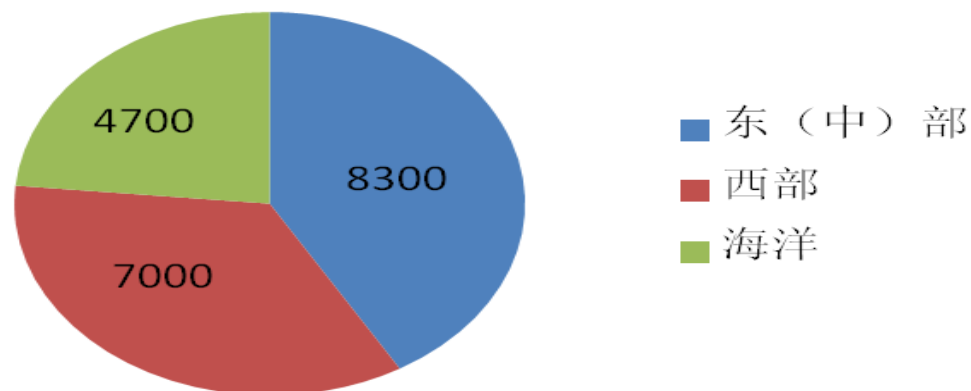
达到国际领先水平



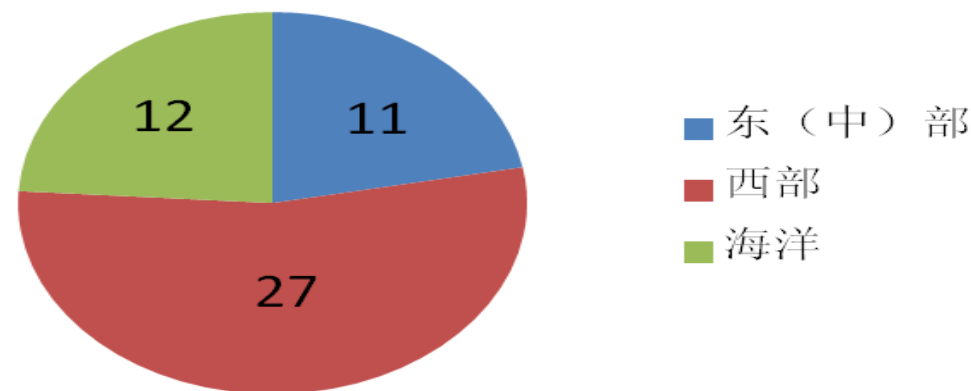
中国石油产业发展展望

加强勘探开发保障国内资源供给。陆上和海上并重，加强基础调查和资源评价，加大新区、新层系风险勘探，深化老区挖潜和重点地区勘探投入，夯实国内石油资源基础。巩固老油田，开发新油田，加快海上油田开发，大力支持低品位资源开发，实现国内石油产量基本稳定。“十三五”期间新增探明地质储量50亿吨左右。稳定松辽盆地、渤海湾盆地等东（中）部生产基地，巩固发展鄂尔多斯、塔里木和准噶尔盆地等西部石油生产基地，支持低品位资源勘探开发工程示范和科技攻关，2020年国内石油产量稳定在2亿吨以上。

2020年国内石油产量分布（万吨/年）



“十三五”新增石油探明储量分布（亿吨）



坚持石油节约利用，大力发展清洁替代能源

推进石油行业能效提升，努力提高原油商品率。推进终端燃油产品能效提升和重点用能行业能效水平对标达标。实施内燃机、锅炉等重点用能设备能效提升计划，推进工业企业余热、余压利用。实施更加严格的燃油标准。加快发展轨道交通和水运等资源节约型、环境友好型运输方式。

大力推广电能、天然气等对燃油的清洁化替代。积极支持天然气、电力等清洁能源汽车以及船舶发展。在“禁煤区”重点开展20蒸吨/小时以下的燃油工业锅炉天然气、电能替代。推进煤制油、煤制气产业示范，推动形成技术路线完整、产品种类齐全的煤炭深加工产业体系。促进生物质能的开发和利用。合理扩大生物乙醇汽油生产和消费，适当发展生物柴油、生物航煤等先进生物燃料。



中国煤炭深加工、生物柴油 政策及产业现状

**Policies and current status for
China's coal deep-processing and
biodiesel industry**

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中国国家能源局科技司 S&T Bureau of NEA, China

13 November 2017

Djakarta, Indonesia

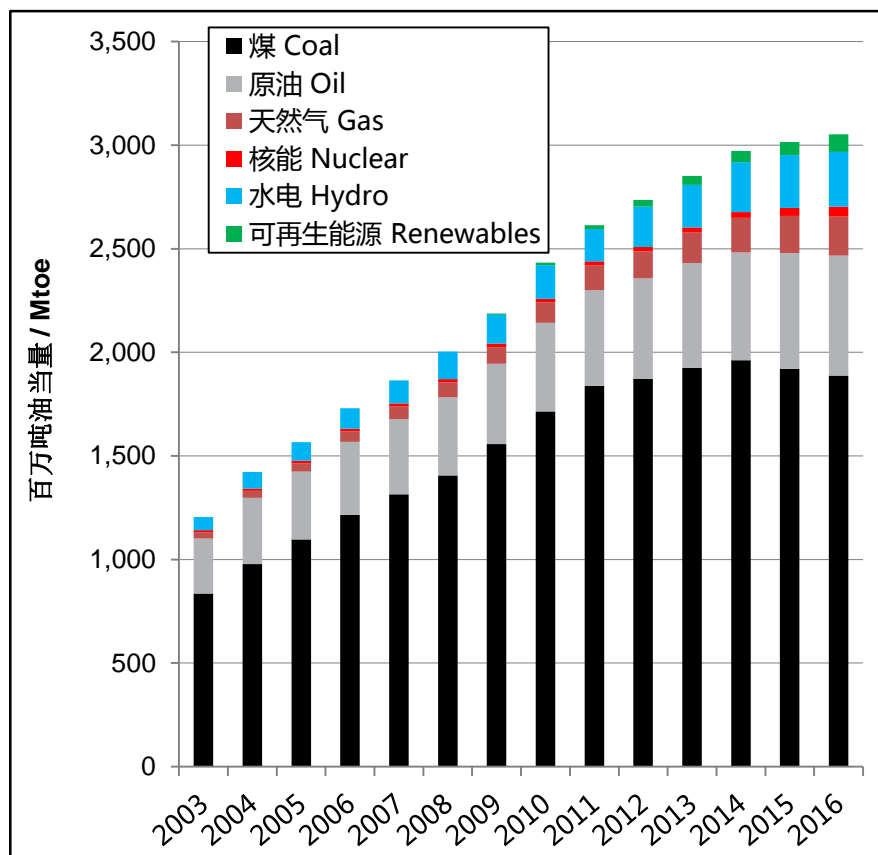
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- 一、中国煤炭深加工政策及产业现状**
Policies and current status for China's coal deep-processing industry
 - 二、中国生物柴油政策及产业现状**
Policies and current status for China's biodiesel industry
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产业发展背景

Background for the industry

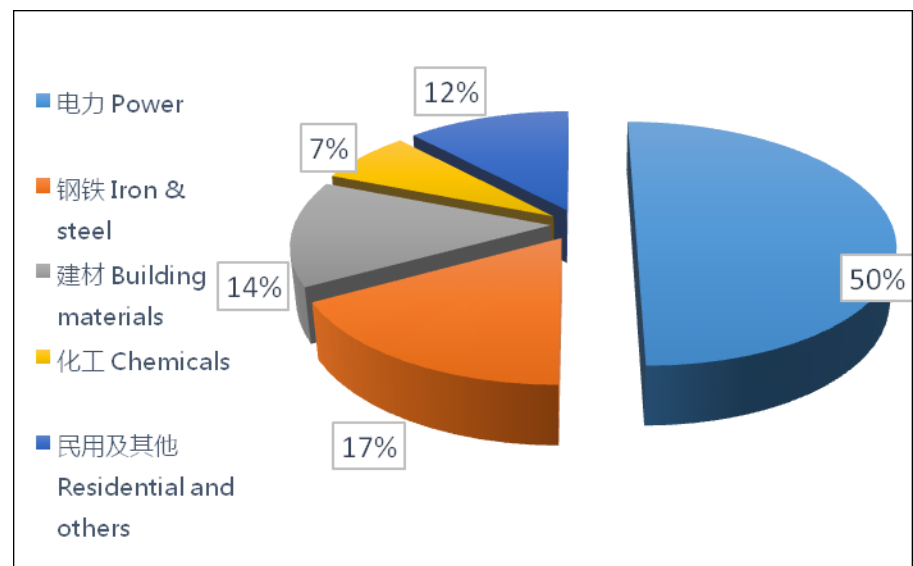
- 煤炭资源丰富、石油天然气资源相对不足是中国资源禀赋的显著特征，煤炭长期在中国一次能源消费中占据主导地位

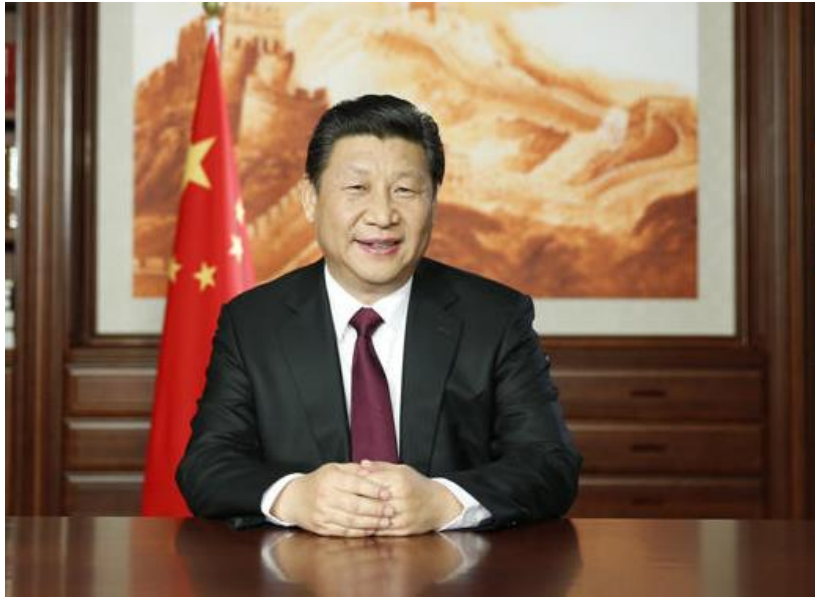
China's resource endowment is rich in coal, and lacking oil and gas. Coal has been playing a dominant role in China's primary energy consumption for the long past.



发电将长期作为煤炭消费最大部门，化工用煤当前占比不大。

Generation has always been and will be the largest single coal consuming sector in the longer future, while coal consumed by chemical industry now takes only a small share.





“煤老大”在较长一个时期内作为我国主体能源的地位不会发生变化。要大力推进煤炭清洁高效利用。

The dominating role of coal in China's energy consumption will remain for a long time. China will enforce development of clean and efficient use of coal.

煤炭应主要用于发电，同时要适度发展现代煤化工，包括煤制油、煤制气、煤制烯烃。

Coal should be mainly used for generation; meanwhile, modern coal chemical industry will be promoted based on China's actual demand, including coal to liquids, coal to gas, coal to olefins, etc.

- 煤炭是我国一次能源供应主力军，也是未来节能增效、大气污染防治、绿色发展的重点领域

Coal is China's most prominent primary energy supply source, and will be the most critical sector for energy conservation, air pollution prevention and mitigation, as well as green development in the future.

- 煤炭既是能源又是资源，要坚持燃料与原料并举，走具有中国特色的以清洁高效利用为主体，先进燃煤发电与现代煤化工一体两翼的道路

Coal is energy, but precious resource at the same time. China will use coal as both fuel and raw material, and develop coal utilization industries along the path with China's specific characteristics, which insists on clean and highly-efficient utilization of coal, with advanced coal-fired power generation and modern coal chemical industry as two key targeting areas.



- 以煤制油、煤制气、煤制烯烃为代表的煤炭深加工示范项目均打通工艺流程，实现长周期稳定运行，产业规模快速增长，产业布局初步形成。
- Key demonstration projects of coal deep-processing have been successfully integrated and completed in construction, and achieved stable operation for long periods. The scale of the whole industry is expanding fast, and a basic industry structure with well-designed resource allocation has been formed for the first stage.

当前项目进展 Latest projects progress

煤制油 Coal to liquids

- 一套直接液化装置
One set of direct coal to liquid facility
- 4套间接液化装置
Four sets of indirect coal to liquid facilities
- 总产能：654万吨/年
Total output: 6.54 MMt/a

煤制气 Coal to gas

- 4套煤制天然气装置
Four sets of coal to gas facilities
- 总产能：51亿立方米/年
Total output: 5.1 Bcm/a

煤制烯烃 Coal to olefins

- 7套60万吨级煤制烯烃装置
Seven sets of 0.6 MMt/a coal to olefins facilities
- 总产能：458万吨/年
Total output: 4.58 MMt/a

煤制乙二醇 Coal to ethylene glycol

- 10套20万吨级煤制乙二醇装置
Ten sets of coal to ethylene glycol facilities
- 总产能：212万吨/年
Total output: 2.12 MMt/a

煤炭直接液化装置

Direct coal to liquid facility



- 世界上唯一百万吨级煤炭直接液化装置，采用自主技术；中国成为全世界唯一掌握百万吨级煤直接液化关键技术国家。

The only one set of mega-ton scale direct coal to liquid facility, applying China's domestic technologies and facilities. China has become the only country grasping the key technologies for mega-ton scale direct coal to liquid conversion in the world.

业主 Owner	神华集团 Shenhua Group
投产年 Online year	2011
位置 Location	内蒙古 鄂尔多斯 Ordos, Inner Mongolia
规模 Capacity	108万吨/年 1.08 MMt/a
总投资 Investment	127亿元 12.7 billion RMB
产品优势 Products	超清洁油品 Ultra-clean diesel 特种油品 Special oil products

煤炭间接液化装置

Indirect coal to liquid facility



- 世界上单体规模最大的煤制油装置，装置国产化率达到98.5%

The largest single set of coal to liquid facility, with a domestic rate reaching 98.5%

- 我国自主研发的低温费托合成工艺和催化剂各项性能均达到国际先进水平

Performance of the low temperature F-T synthesis technologies, and the dedicated catalysts are among the most advanced ones in the world

业主 Owner	神华集团 Shenhua Group
投产年 Online year	2016
位置 Location	宁夏 宁东 Ningdong, Ningxia
规模 Capacity	400万吨/年 4 MMt/a
总投资 Investment	550亿元 55 billion RMB
产品优势 Products	超清洁油品 Ultra-clean diesel 高附加值化工品 High-value special chemicals

煤制天然气装置

Coal to natural gas facility



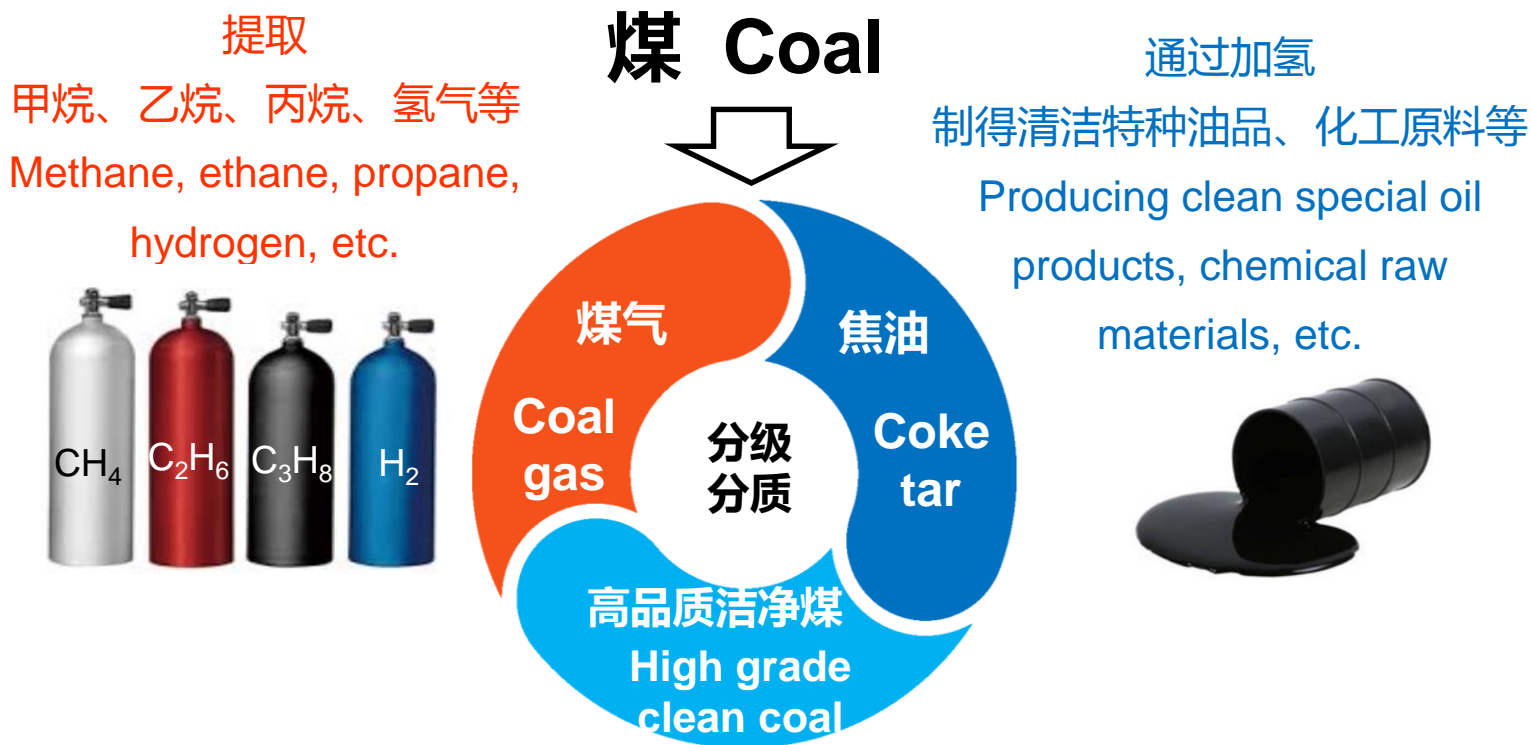
- 规划规模40亿方/年，总投资257亿元
Total planning capacity 4 Bcm/a, with investment totaling 25.7 billion RMB;
- 协同保障进口管道天然气供应安全，替代煤炭散烧，有效缓解大气污染；解决富煤区能源长距离外送有效方法
Helping ensure natural gas supply security; replacing distributed coal combustion and reducing air pollution; an effective pathway for long-distance energy transmission from coal-rich areas

业主 Owner	大唐集团 Datang Group
投产年 Online year	2013
位置 Location	内蒙古 赤峰 Chifeng, Inner Mongolia
规模 Capacity	一期13.3亿方/年 Phase I: 1.33 Bcm/a
产品流向 Target market	补充京津冀地区天然气供给不足 Provide backup gas to the Great Jing-Jin-Ji Area

探索方向：低阶煤分质利用

Exploring: Graded utilization of low-quality coal

以煤炭为原料，基于煤炭各组分的不同特性，在一定温度、隔绝空气条件下
Coal as raw material; taking advantage of coal's characteristic of complex-components



有害元素降低，热值提高，用于发电、冶炼、化工、民用等
Lower noxious elements concentration and higher heat value;
Perfect fuel for power generation, iron & steel, chemical, and residential sectors

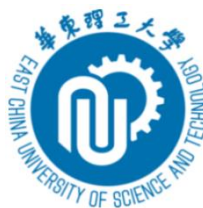
产业发展的核心能力

Key competitiveness for future development

业主
Developer



科技公司
S&T



工程公司
Engineering



装备制造
Manufacturing



- 培养了一批**科研开发人才**。
Talents for R&D
- 形成了一批**设计建设人才**。
Talents for design & construction
- 造就了一批**运营管理人才**。
Talents for operation and management
- 带动了一批**装备制造人才**。
Talents for facility manufacturing

“十三五” 发展规划

The 13th Five-Year Plan

加 急

国家能源局文件

国能科技[2017]43 号

国家能源局关于印发 《煤炭深加工产业示范“十三五”规划》的通知

河北、山西、内蒙古、辽宁、吉林、黑龙江、安徽、湖北、贵州、云南、陕西、甘肃、宁夏、新疆发展改革委(能源局),中国石油和化学工业联合会,有关企业:

为贯彻落实中央财经领导小组第六次会议精神、《国民经济和社会发展第十三个五年规划纲要》以及《能源发展“十三五”规划》,加快推进煤炭清洁高效利用,指导煤炭深加工产业科学健康发展,国家能源局组织编制了《煤炭深加工产业示范“十三五”规划》,经国务院同意,现印发你们,请认真贯彻执行。

附件:煤炭深加工产业示范“十三五”规划

— 1 —

- 2017年2月,国家能源局印发《煤炭深加工产业示范“十三五”规划》,对十三五期间煤炭深加工产业发展做出了全面部署

In February 2017, National Energy Administration of China issued the 13th Five-Year Plan for Coal Deep-processing Industrial Demonstration, which clarified the oval tasks for development of the coal deep-processing industry during the 13th Five-Year Plan period.

十三五发展目标（至2020年）

Objectives for the 13th Five-Year Plan (by 2020)



预计煤制油产能为
1300万吨/年

Coal to liquid:
13 MMt/a

Coal to gas:
17 Bcm/a

预计煤制天然气产能为
170亿立方米/年



预计低阶煤分质利用产能为
1500万吨/年(煤炭加工量)

Graded utilization of low-quality coal:
15 MMt/a (by raw coal)

十三五工作任务（至2020年）

Key tasks for the 13th Five-Year Plan (by 2020)



十三五工作任务（至2020年）

Key tasks for the 13th Five-Year Plan (by 2020)

- 规划涵盖14个新建项目和25个储备项目

Plan covers 14 new projects and 25 projects for reservation

煤制油 Coal to liquids	煤制气 Coal to gas	低阶煤分质利用 Graded utilization of low-quality coal
4	5	5

- 技术进一步完善 Technologies to be further improved
 - 大型煤气化 Large-scale coal gasification
 - 加氢液化 Hydrogenation liquefaction
 - 低温费托合成 Low temperature F-T synthesis
 - 甲醇制烯烃 Methane to olefins
- 完成工程示范 Industrial demonstration to be completed
 - 百万吨低阶煤热解 Mega-ton scale low-quality coal pyrolysis
 - 五十万吨级中低温煤焦油深加工 0.5 Meta-ton scale deep-processing of coke tar in mid- and low-temperature environment
 - 10亿立方米级自主甲烷化 Billion cubic meter scale methanation applying domestic technologies
 - 百万吨级煤制芳烃 Mega-ton scale coal to arenes

一、中国煤炭深加工政策及产业现状
Policies and current status for China's coal deep-processing industry

二、中国生物柴油政策及产业现状
Policies and current status for China's biodiesel industry

产业发展现状及特点

Current status and characteristics of the industry

- 原料：多为油料作物 Mostly using oil-rich vegetables (seeds) as raw material
- 中国原料来源与他国不同 China is different in raw material

美国：大豆

US: bean



中国：废弃油脂



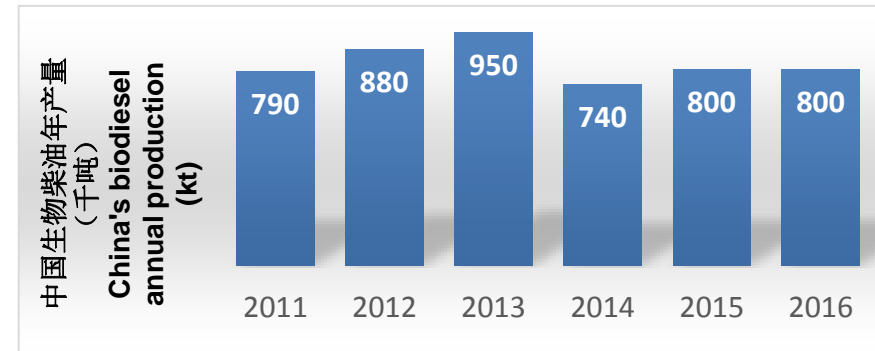
欧盟：油菜籽

EU: rapeseed



巴西：蓖麻油

Brazil: castor oil



- 中国生物柴油产业尚处于初期，现有生产企业数十家，规模小，且技术水平相对不高

China's biodiesel industry is still in its infancy, with several dozens of small-scale producers with nearly-outdated technologies

十三五发展目标（至2020年）

Objectives for the 13th Five-Year Plan (by 2020)

- 颁布两项指导性支持政策 Two supporting policies published as guidance
 - 2014年11月《生物柴油产业发展政策》
November 2014, Policies on Biodiesel Industry Development
 - 2016年10月《生物质能发展“十三五”规划》
October 2016, the 13th Five-Year Plan for Biomass Energy Development
- 主要发展目标 Main targets
 - 开展市场封闭推广示范，推进生物柴油在交通领域的应用
Implement closed-market demonstration on biodiesel, mainly focusing on transport sector
 - 到2020年实现生物柴油利用目标200万吨
Total consumption of biodiesel achieving 2 MMt/a



谢谢!
Thanks!



Aim High and Look Far Never Forget Why We Started

5th Indonesia – China Energy Forum Presentation by CNOOC

13/11/2017 Jakarta



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5th

Indonesia – China
Energy Forum
By CNOOC

Aim High and Look Far

- 1. CNOOC Profile**
- 2. CNOOC Portfolio in Indonesia**
- 3. CNOOC Operation in Indonesia**
- 4. Prospect and Expectation**



CNOOC Story

A **different** story from



and



The **largest** offshore oil & gas producer

Exclusive rights in conducting international cooperation offshore China

Fast and quality growth over **35** years

Integrated energy company



2016 (USD)

Sales 66.0 Billion

Income 1.6 Billion

Total assets 173.5 Billion

Net assets 101.7 Billion

Tax & fees 11.2 Billion



CNOOC Profile



No. **134** among Global Top 2000 Companies in 2016



No. **469** in 2007, the first time in history

No. **72** in 2015, No. **109** in 2016



No. **4** among the Strongest 250 Energy Companies worldwide in 2015

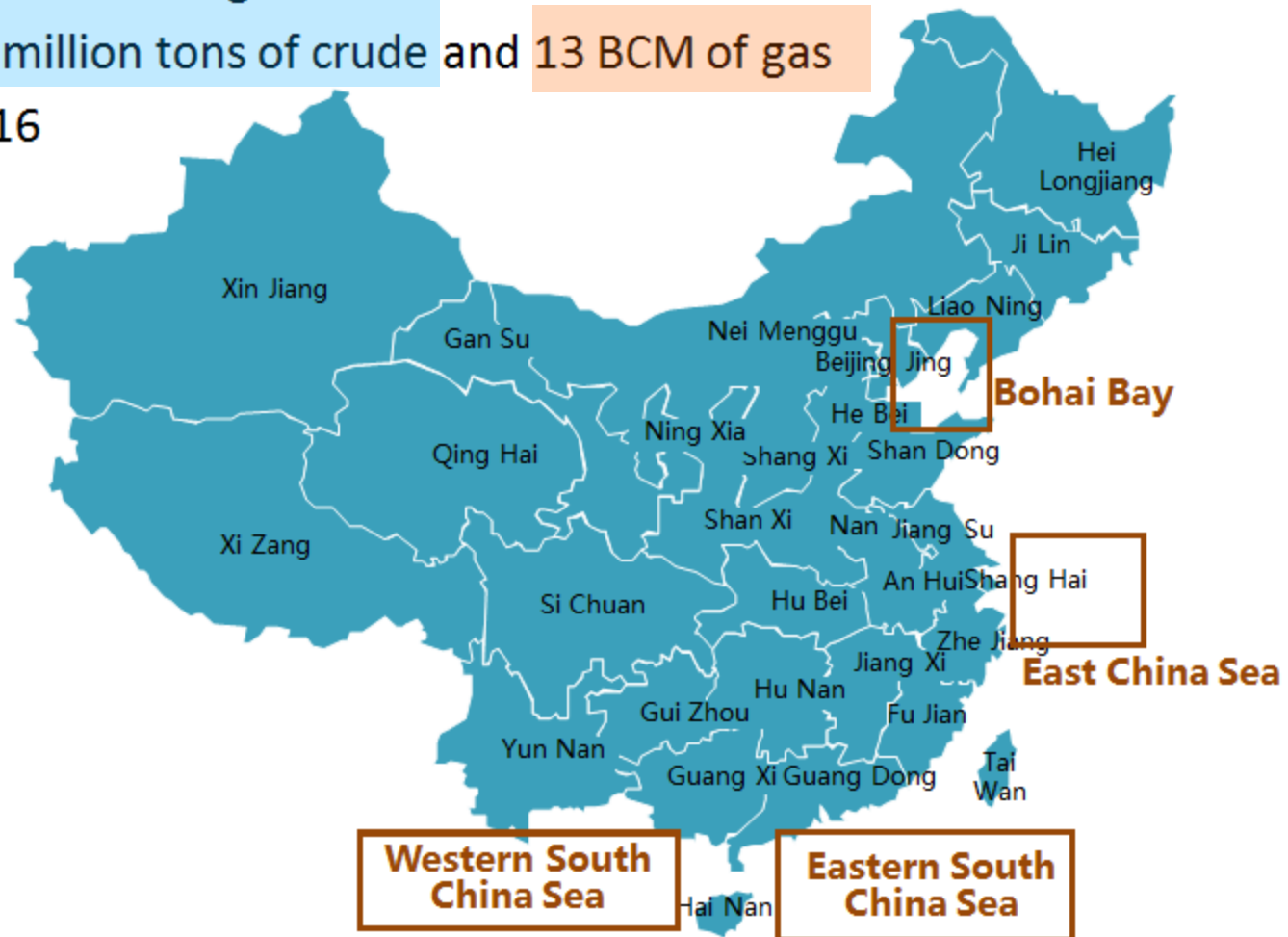


Top 50 Oil Companies in 2015



CNOOC Production in China

- ◆ Production over 50 million tons offshore China from 2010
- ◆ Over 100 oil and gas fields offshore China
- ◆ 45.55 million tons of crude and 13 BCM of gas in 2016





CNOOC Production Overseas

Assets in over *20* countries & regions worldwide

31.42 million tons of crude & 11.6 BCM of gas in 2016

Overseas assets & production over *40%* of CNOOC total



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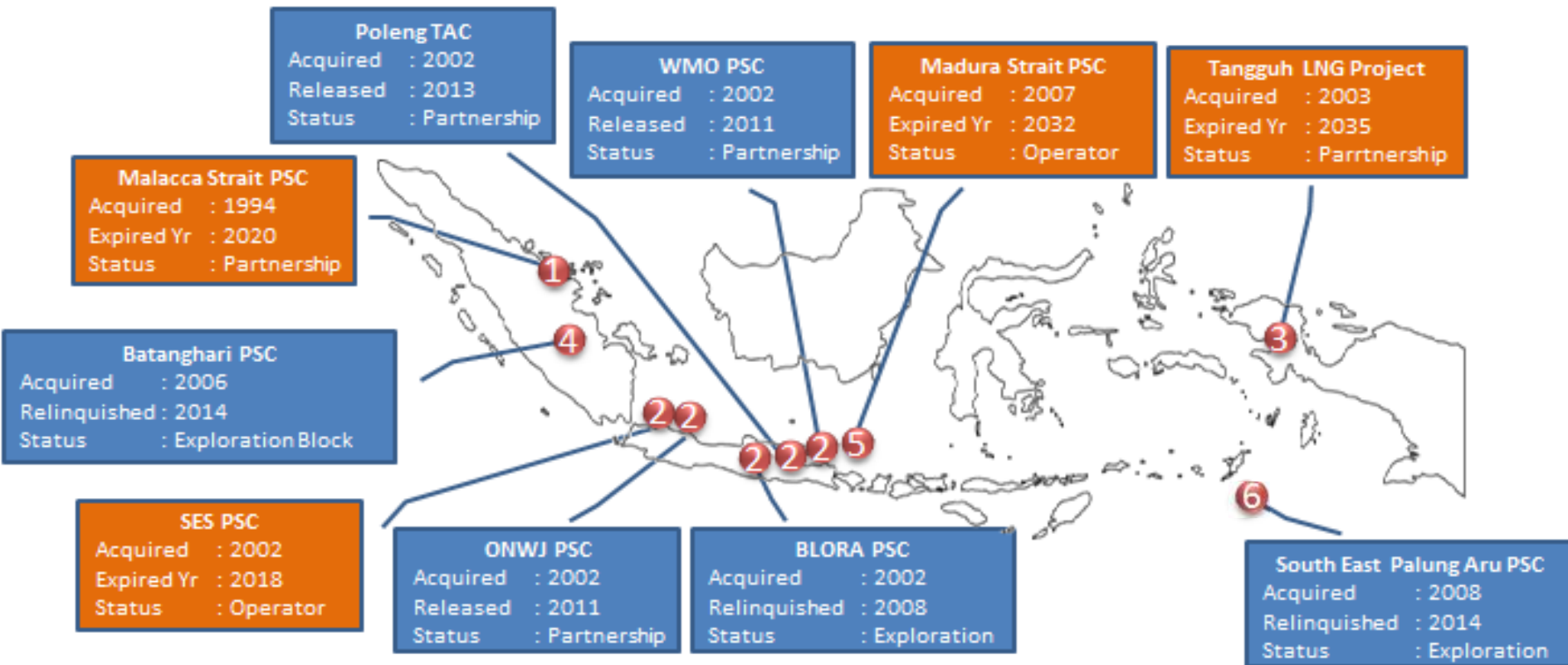
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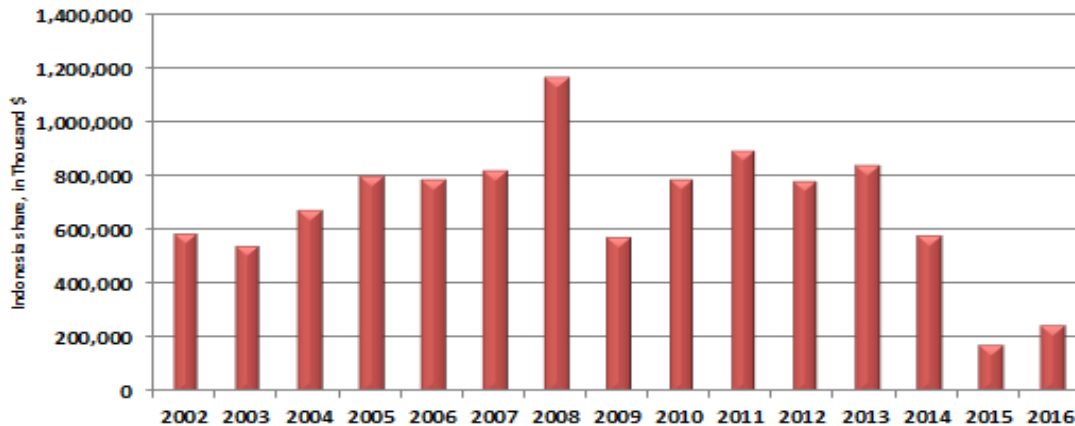
CNOOC Portfolio in Indonesia



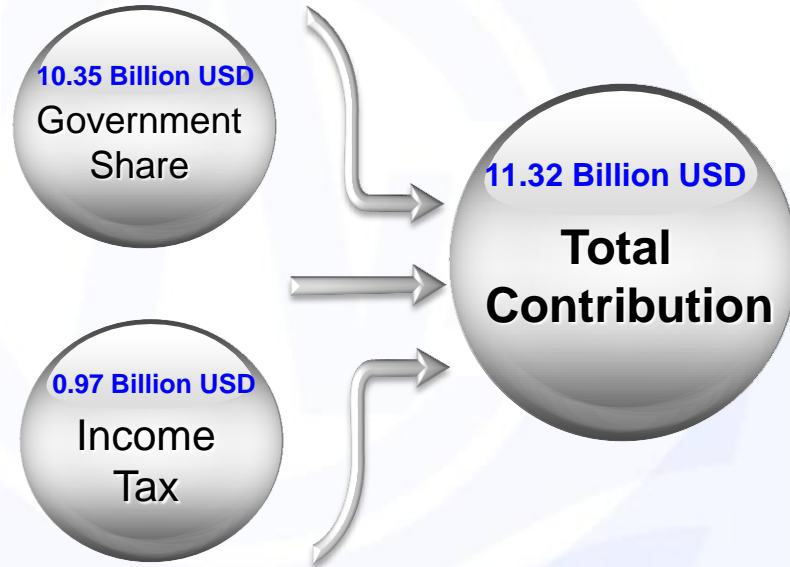
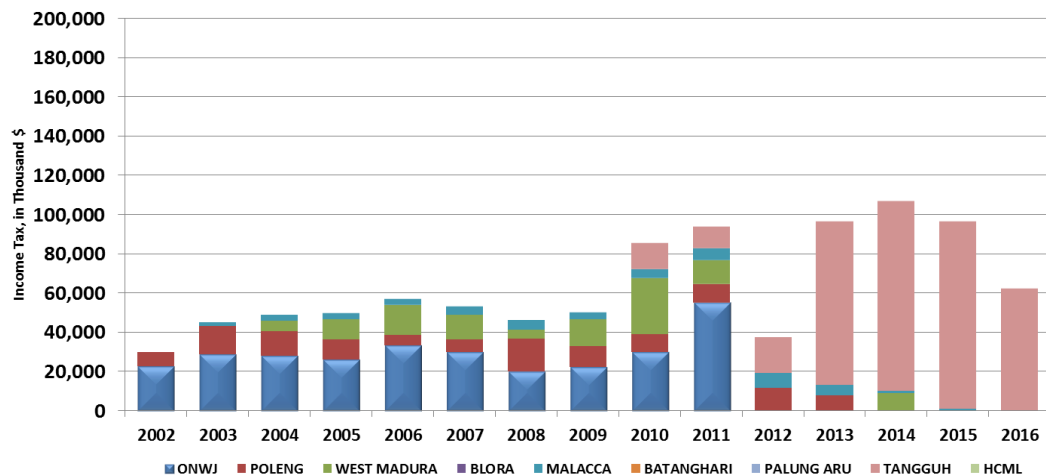


CNOOC Contribution to Indonesia

Indonesia Share
From CNOOC - SES



Income Tax
From CNOOC Indonesia Others (Not including SES)



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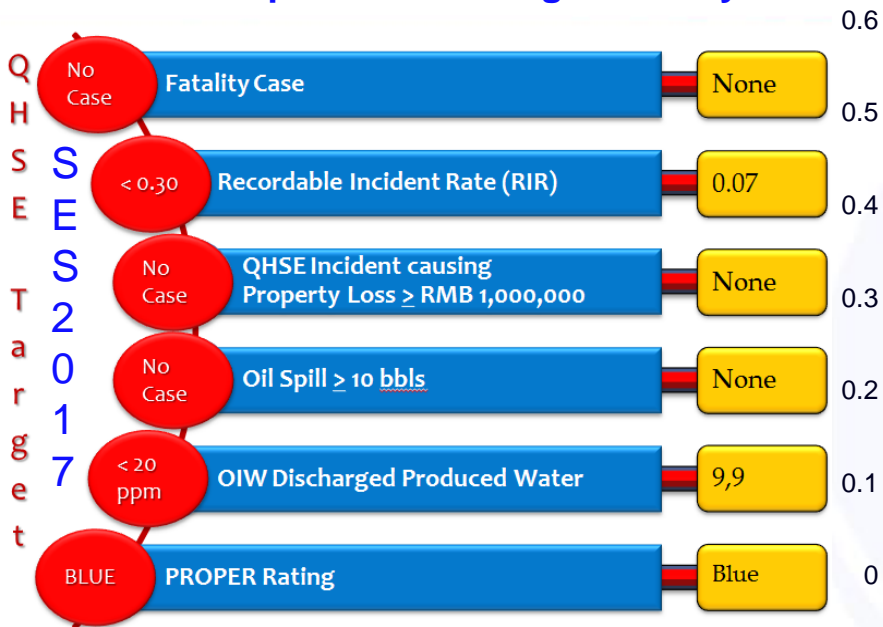
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QHSE Performance

CNOOC attaches great importance to health, safety and environmental protection, promoting the awareness of safety, strengthening safety and risk control, and enhancing the development of a safety culture. We have taken strict precautions to prevent major risks in order to achieve smooth and stable operations throughout the year.

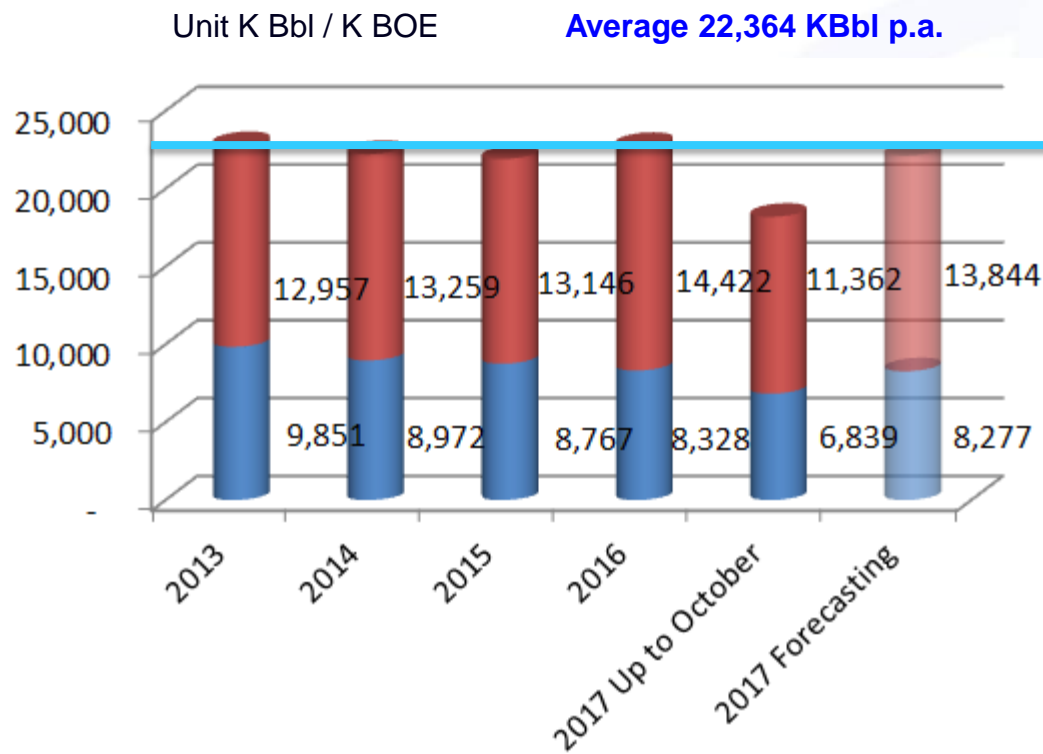


CNOOC SES RIR Since 2002





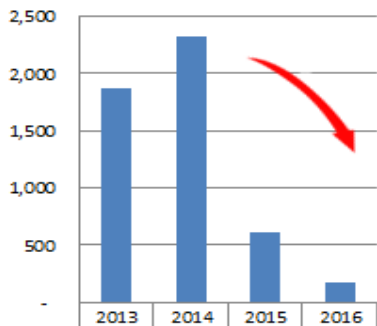
CNOOC WI Production in Indonesia



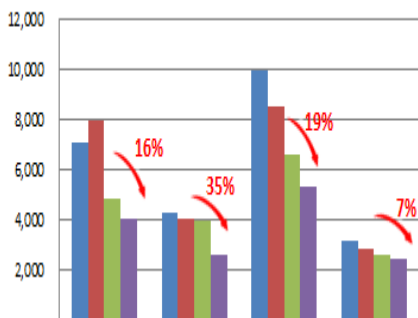


CNOOC Cost Control in “Winter”

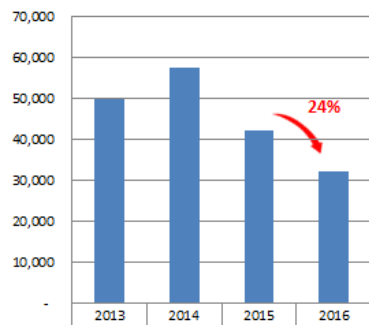
Yearly Wait-on-Boat (Hours)



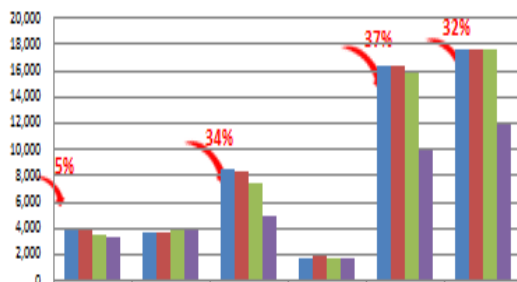
Average Daily Fuel Consumption [Liter]



Vessel Fuel Consumption [kL]



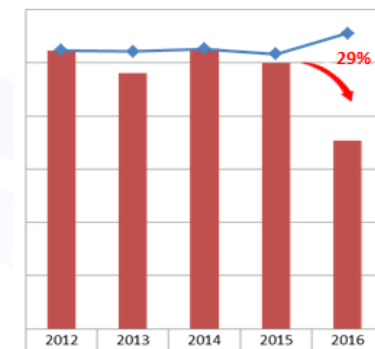
Marine Rental Average Charter Rate



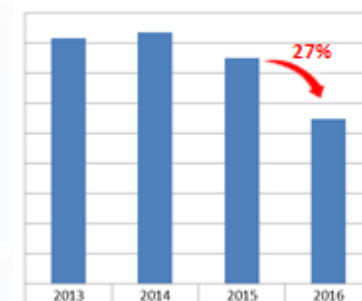
CNOOC initiated “Quality and Efficiency” campaign, reshape its cost competitiveness by

- Supply chain optimization
- Enhance efficiency through innovation
- Lower vessel fuel consumption
- Increase ESP average running life

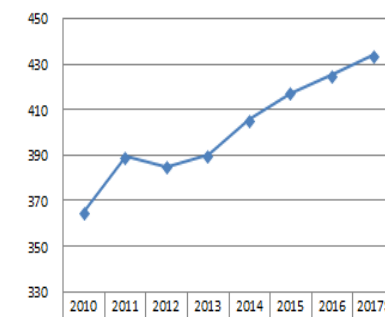
OPEX per BOE [US\$]



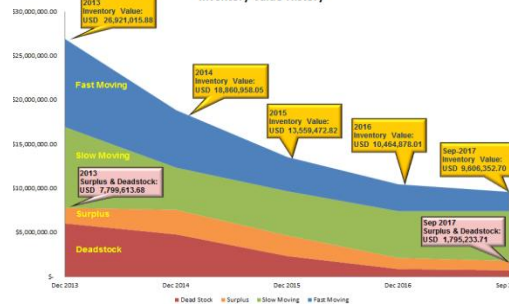
Total Procurement



ESP Average Run Life



Inventory Value History





Newly Build Project and WIP Under CNOOC Operator

BD Gas Project Highlight:

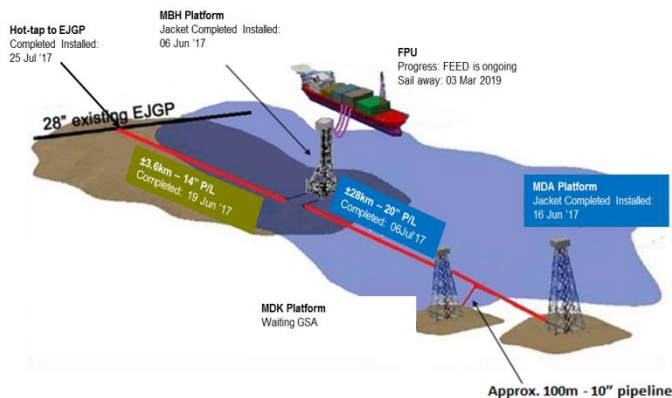
CNOOC First Overseas / Offshore HTHP and High H₂S Drilling and Completion Project.

Execution : 1) Drilling & Completion risks mitigation and management as first priority 2) Technical studies and design optimization 3) Delicate project management 4) Strong support from headquarter 5) Excellent team work.

Achievements : 1) Zero Incident or Accident 2) Cost savings +/- 11 MMUSD 3) Higher production than program 4) Technologies breakthrough and innovation .

MDA-MBH & MDK Project Highlight:

- 3 Platforms (MDA, MBH, and MDK) and Pipelines
- Floating Production Unit (Capacity: 175MMscfd)
- 9 Wells: 2 for MBH, 5 for MDA, and 2 for MDK
- Production Sales: 120MMscfd for MDA-MBH and 24 mmscfd for MDK
- Estimate first gas: Q2 2019 (MDA & MBH)



Mila and Asti Project Highlight:

- 2 Platforms (Mila-A & Asti-A) and pipelines.
- Monopod gas wellhead platforms (Capacity: 40mmscfd for Mila-A and 30 mmscfd for Asti A)
- 5 wells: 3 for Mila-A and 2 for Asti-A
- Actual first gas: Nov 3, 2015 for Asti-A and Nov 25, 2015 for Mila-A





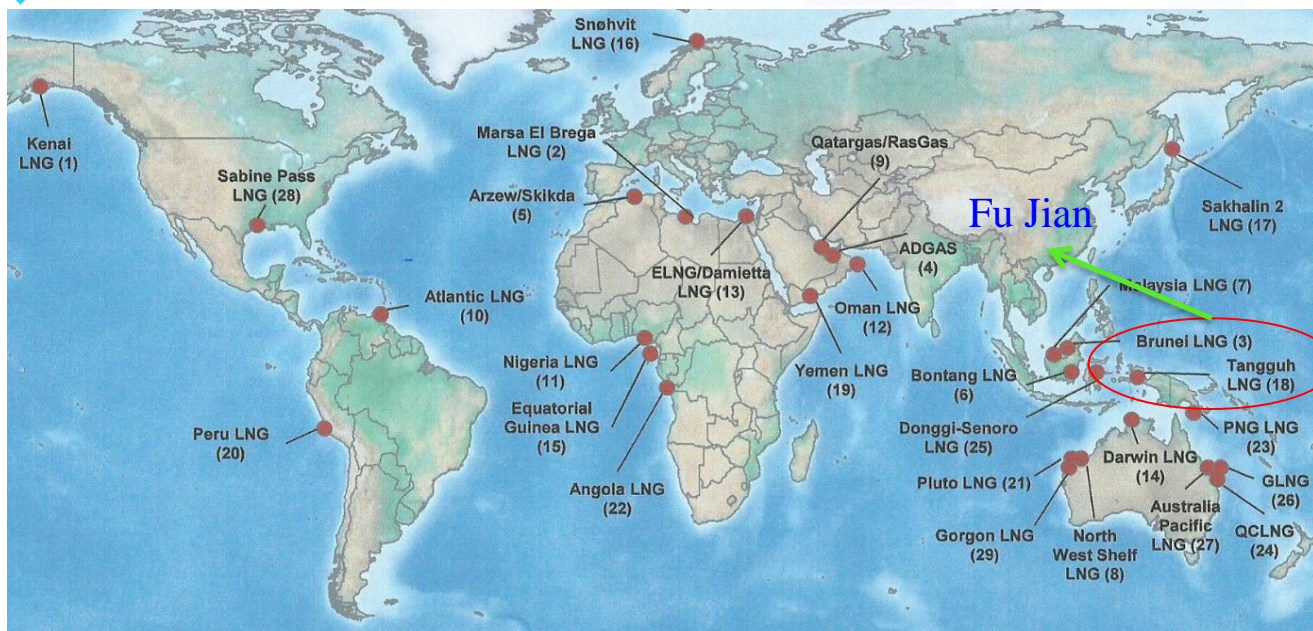
Tangguh LNG_Mutual Benefit



2.6 MTPA of LNG to Fujian

Win-Win

Partner to Tangguh



Min Rong



Min Lu



Human Resource Development

CNOOC treasures our employees as valuable resources of the company, along with our business development, we pay great attention to the employees' interests and personal advancement

MANPOWER



Employment Policies

CNOOC strictly abides by Indonesia Laws and regulations, respects the rights and interest of all employees.

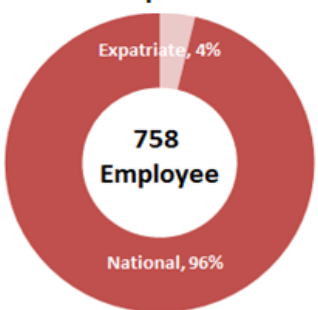
Employee Rights

CNOOC provides employees with all kinds of social compulsory insurance to respect their interests.

Employee Development

CNOOC has always been upholding the 'People – Oriented' principle and is keen to provide opportunities for employee's advancement

National Permanent
Direct Contract
Expatriate



Third Party Contract



Service Contract



Total CNOOC
Operator Project Workforce





National Capacity Building (Operator Project)

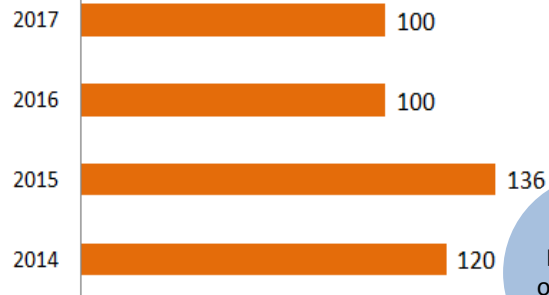
Operator Trainee Program

A part of CNOOC's commitment to society and part of recruitment program. This program aims to recruit and prepare local personnel to be CNOOC operator



Internship, Practical Work, and Thesis Writing

Work-related or thesis writing program for university students or recent graduates



Internship opportunity

Local Workforce Utilization

National Capacity Building

Culture Shaping program

1. Formulation

Formulating a set of values and behavior that will be used as a guidance to build culture

2. Internalization

Set of activities to enable values and behavior to working environment

3. Embedding Mechanism

A systematic process that enable organization system to apply values

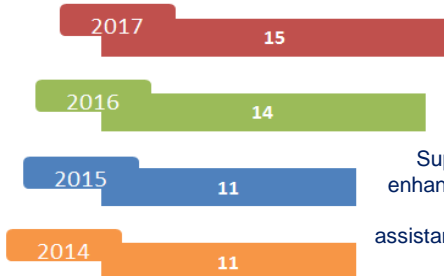
Education Assistance

National Training Program

Technical

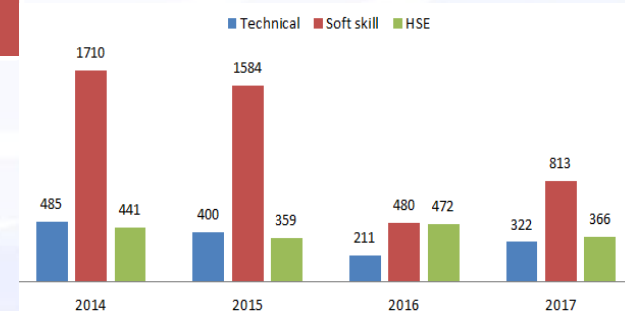
Soft skill

HSE



Education Assistance

Supporting employee's initiative to enhance education and obtain higher scholar degree by giving fund assistance for undergraduate and post graduate degree





Corporate Social Responsibility

Working Together To Make The World Better

It is our commitment to sustainable development that we will exploit existing natural resources in a safe, efficient, and environment-friendly manner and provide society with clean, reliable, and stable energy that will meet people's reasonable energy demands.

As our business operations achieved continuous growth and our economic contributions grow steadily, we take responsibility for the company's effects on environmental and social wellbeing, promoting positive social and environmental change.



Built Library



Built wharf and dock road



Fresh Water Donation



Free medical services



Ambulance Donation



Hawksbill turtle conservation



Mangrove plantation



Training for fishermen



School Renovation



Compute Donation

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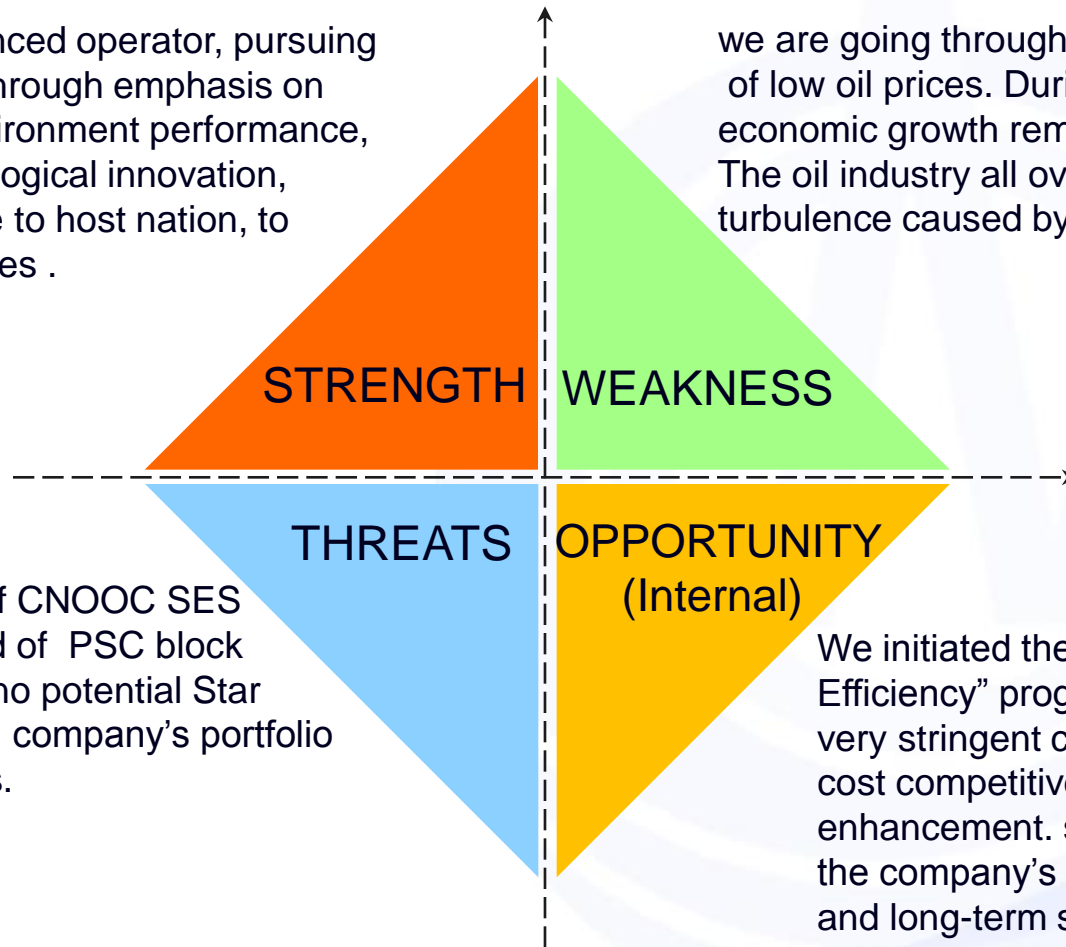
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Prospect and Expectation

CNOOC is an experienced operator, pursuing operation excellence through emphasis on quality, health and environment performance, leadership and technological innovation, striving to deliver value to host nation, to investors and employees .

we are going through another “cold winter” of low oil prices. During the past years, global economic growth remained stubbornly low. The oil industry all over the world experienced turbulence caused by the plunge in oil prices.



Our Cash Cow Asset of CNOOC SES is approaching the end of PSC block operatorship , there is no potential Star Asset to fill up this gap, company's portfolio facing shrinking threats.

We initiated the “Year of Quality and Efficiency” program by implementing very stringent cost control, reshaped our cost competitiveness, realized efficiency enhancement. struck a balance between the company's short-term going concern and long-term sustainable development.

CNOOC is your entrusted partner always

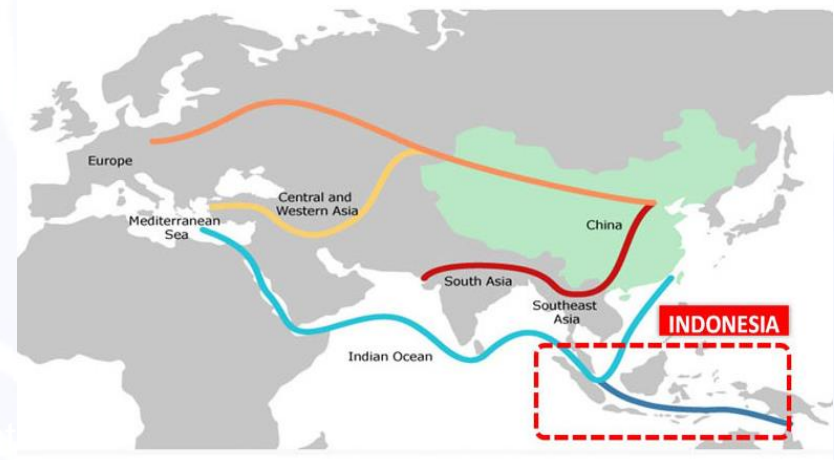


Opportunity (External)

OBOR and GMF are complementary to each other, the alignment of China's OBOR with Indonesia's GMF has enriched bilateral ties



Indonesia as a Global Maritime Fulcrum



Terima Kasih

Thank you

谢谢





国家能源局
National Energy Administration



中国煤炭工业发展现状及中国-印尼煤炭领域合作展望

Current Situation of Chinese Coal Industry and Cooperation Prospects between China and Indonesia

任立新

中国国家能源局煤炭司

Ren Lixin

Coal Department

National Energy Administration

Jakarta, Indonesia

November 13, 2017



国家能源局
National Energy Administration



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中国煤炭工业发展现状



中国-印尼煤炭领域合作展望



Current Situation of Chinese Coal Industry



Cooperation Prospects between China and Indonesia

1. 中国煤炭工业发展现状

Current Situation of Chinese Coal Industry

- 富煤少油乏气是中国能源禀赋的特点，煤炭作为中国的主体能源有力支撑了中国经济近40年的高速发展。
- 中国煤炭工业也经历了由小到大、由弱到强的发展历程，生产力水平不断提升、市场化程度不断提高，已跻身世界先进行列。

➤China is a country which is rich in coal but poor in oil and gas. As the principal energy source of China, coal has provided strong support for nearly 40 years of rapid development of China's economy.

➤Chinese coal industry has evolved from small to large and weak to strong. With the continuous improvement of productive level and marketization degree, it has reached the world's advanced level.

1. 中国煤炭工业发展现状

Current Situation of Chinese Coal Industry

➤ 产力水平居世界前列。

Productivity has reached the world advanced level.



2000-2015年中国煤炭生产消费量统计图 数据来源：国家统计局

Statistics of China's coal production and consumption during 2000-2015

Source: National Bureau of Statistics of People's Republic of China

1. 中国煤炭工业发展现状

Current Situation of Chinese Coal Industry



年产3500万吨的神华哈尔乌素露天煤矿

35 Mt/a Ha'erwusu Open-pit Coal Mine of Shenhua Group Zhungeer Energy Co., Ltd.

1. 中国煤炭工业发展现状

Current Situation of Chinese Coal Industry

➤ 科技创新能力显著提升。

Scientific and technological innovation capacity has been improved significantly.



黄陵矿业集团一号煤矿智能化工作面
Intelligent fully-mechanized mining face of #1
coal mine of Huangling Mining Group



1. 中国煤炭工业发展现状

Current Situation of Chinese Coal Industry



上海外高桥三厂2×1000MWe超超临界机组

2×1,000 MWe ultra-supercritical units of Shanghai Waigaoqiao No.3 Power Plant

1. 中国煤炭工业发展现状

Current Situation of Chinese Coal Industry



神华宁煤集团400万吨间接液化项目

4 Mt/a Indirect Coal Liquefaction Project of Shenhua Ningxia Coal Industry Group

1. 中国煤炭工业发展现状

Current Situation of Chinese Coal Industry

➤ 始终坚持绿色发展。

Always adhere to green development.



山东能源新汶矿业集团综合机械化充填开采

Fully-mechanized cut-and-fill mining by Shandong Energy Xinwen Mining Group

1. 中国煤炭工业发展现状

Current Situation of Chinese Coal Industry



神华神东煤粉锅炉项目

Pulverized Coal-Fired Boiler Project of Shenhua Shendong Coal Group

2. 中国-印尼煤炭领域合作展望

Cooperation Prospects between China and Indonesia

➤ 中印尼两国煤炭资源丰富，均是世界煤炭生产大国。印尼更是中国进口煤炭的第一来源国，近年来中国每年进口印尼煤炭都超过7000万吨。

➤ With abundant coal resources, both Indonesia and China are among the world's leading coal producers. Indonesia has even become China's first source of imported coal, and has supplied more than 70 million tons of coal every year.

2. 中国-印尼煤炭领域合作展望

Cooperation Prospects between China and Indonesia

➤ 在投资领域，神华集团南苏煤电项目建设2台150MW发电机组、配套年产210万吨煤矿，总投资38002万美元，于2011年正式投产，至今运营稳定。

➤ In the investment sector, two 150 MW coal-fired power generation units and its supporting 2.1 mt standard coal/a coal mine for the Shenhua Guohua Sumsel-1 2×150 MW Coal-fired Power Generation Project, with an total investment of 380.02 million US dollars, were put into operation in 2011, and they are still under safe and stable operation.

2. 中国-印尼煤炭领域合作展望

Cooperation Prospects between China and Indonesia

➤ 中国与印尼开展煤炭领域合作潜力巨大、基础良好，可以实现互利共赢。

➤ 我们希望在两国政府的积极推动下，双方企业可以充分发挥各自比较优势，开展全方位交流，进一步提升中印尼煤炭领域合作的质量和水平。

➤ China and Indonesia have great potential and solid foundation for cooperation on coal sector and can achieve a win-win situation.

➤ We hope that the enterprises from both sides will give full play to comparative advantages and conduct all-round exchanges with each other, thus further enhancing the quality and level of cooperation in the field of coal industry.

Thank you!

A blue decorative wave graphic at the bottom of the slide.



Shenhua Group and Indonesia Electric Power Cooperation

Shenhua Guohua Electric Power Company
General Manager, Mr. Wei LI

November 2017

I.

Company Profile

II.

Cooperation between Shenhua Guohua and Indonesia

III.

Shenhua Guohua investment Capability

I. Shenhua Group Profile

Shenhua Group is the largest and most modernized **coal** company in China, a leading **power** company in terms of installed capacity & power generation, a world-class **CTL** company scale wise or technology wise, the only **transportation** company in China with its own railways, ports & fleets.



**49 coal mines/400 million tons
of coal produced per year**



**installed capacity:
82.57GW**



railways: 2155km



**port throughput: 263 million
tons per year**



40 ships



**the world's largest single CTL
project**

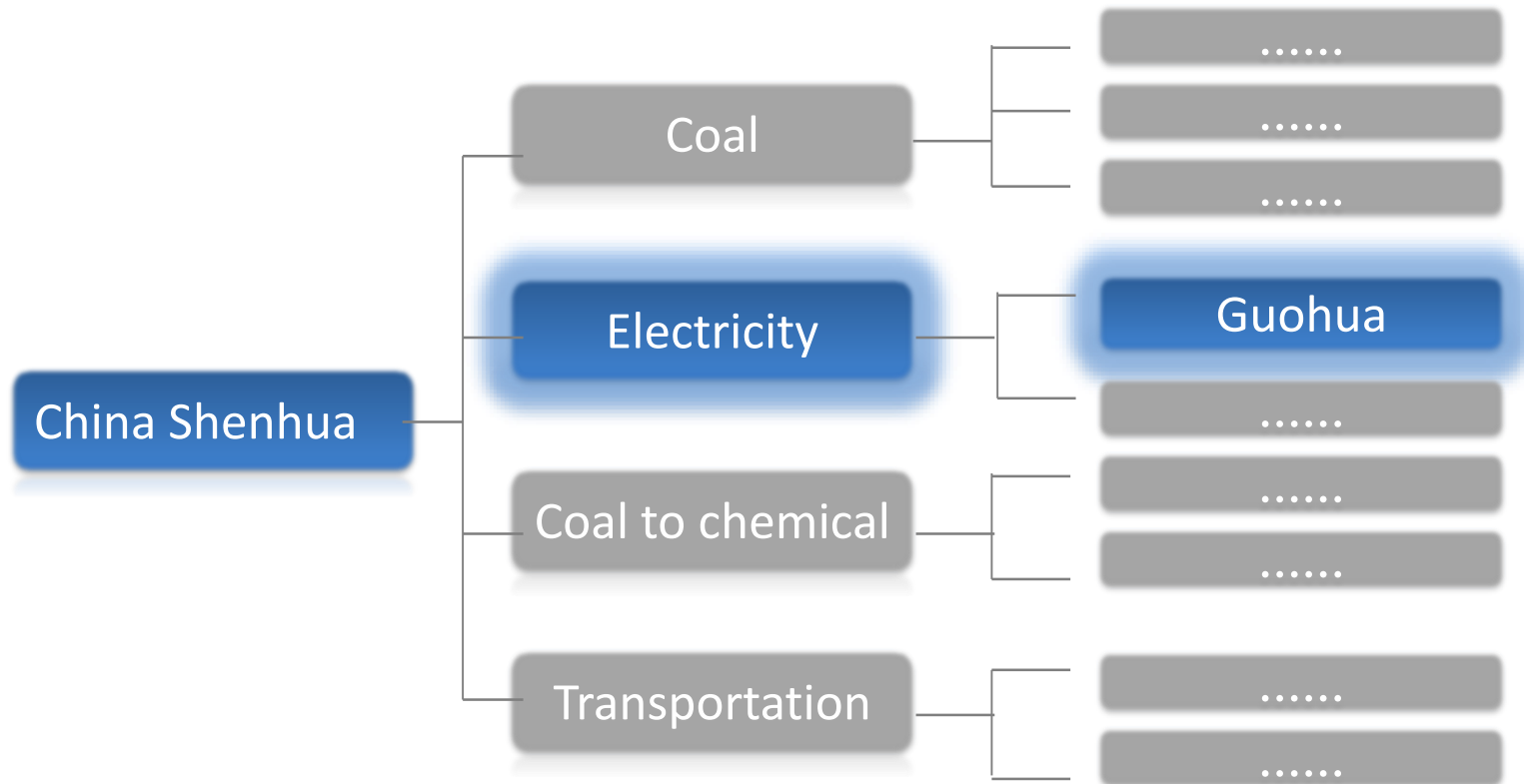
Shenhua Group is a coal-based integrated energy company with businesses involved in coal production, electricity generation, railway transport, port, shipping, coal-to-liquids and coal-to-chemicals.

I. Shenhua Group Profile

Installed Generation Capacity of Shenhua Group

No.	Type	Number of plants		Capacity (10MW)		Percentage (%)		Notes
		Operating	Approved (under construction)	Operating	Approved (under construction)	Operating	Approved (under construction)	
1	Coal	72	22	7285	3215	88.2	91.9	1.Shenhua operates a coal fleet of 82.57GW, including 16×1000MW units and 68×600MW units , with an average capacity of 460MW per unit 2.Among the 35 GW approved (under construction) project pipeline are 16×1000MW units (including 2 ×1000MW units under construction in Indonesia)
2	Gas	2	—	179	—	2.2	—	
3	Wind	55	29	741	272	9.6	8.1	
4	Solar	16	4	40	13.6			
5	Hydro	5	—	13	—			
Total		150	55	8257	3500	100	100	

II. Guohua Company Profile



China Shenhua Guohua Power Branch is a wholly-owned subsidiary to China Shenhua in the electricity sector for power generation. By the end of 2016, the Company has employees of 16,913 and manages 48 companies, with installed capacity of 38,300 MW.

II. Guohua Company Profile

Operation Index 2016

Item	Unit	2016
Total Assets	Million USD	21,439
Installed Capacity	MW	38,300
Revenue	Million USD	7,805
Annual Profit	Million USD	1,468

I

Company Profile

II

Cooperation between Shenhua Guohua and Indonesia

III

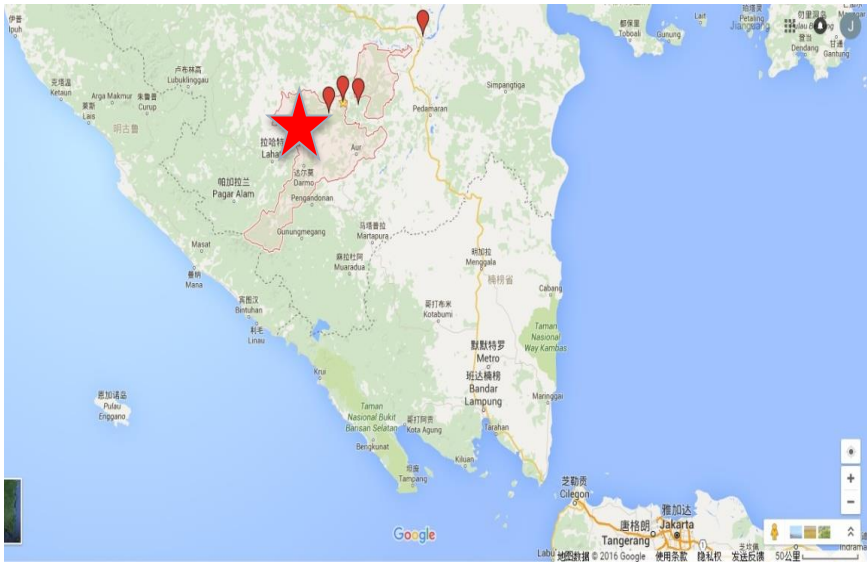
Shenhua Guohua investment Capability

Shenhua Guohua investment in Indonesia



1. Simpang Belimbing Project

PT. GH EMM Indonesia is located in Muara Enim in South Sumatra, Indonesia where about 100 km southwest of the provincial capital city.



1. Simpang Belimbing Project

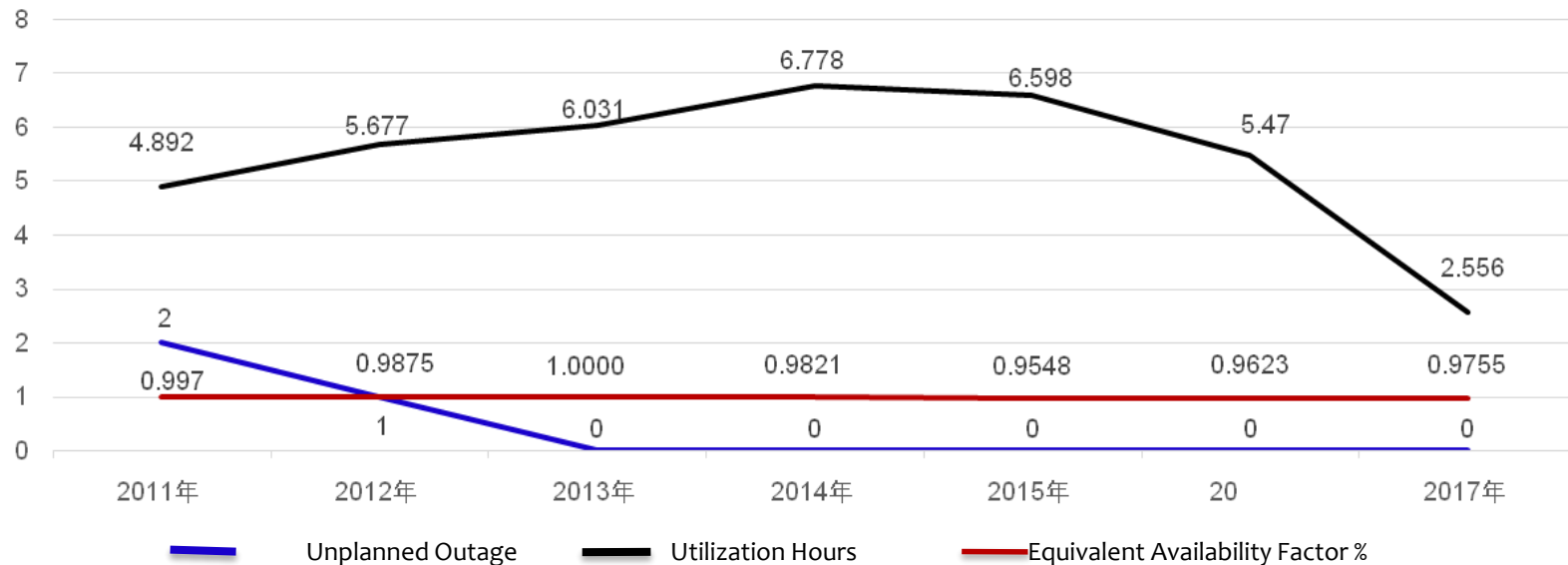
Shenhua Guohua (Indonesia) Simpang Belimbing Muara Enim Coal Fired Steam Power Plant constructed 2×150MW generator units, the supporting coal mine with an annual output of 2.1 million tons, as well as 100 kilometers of output transmission line. The two generator units completed COD in July and November, 2011, with a total construction period of 28 months. The total investment of the coal-fired power project was US\$380.02 million. The investment of output transmission line was about US\$40 million.

- Compared to PPA contract requirements, the construction periods of the two generator units were greatly ahead of the schedule (respectively 12 months and 11 months ahead of the schedule), which created a miracle in Indonesia's power engineering construction;
- Since the Project was put into production, the operation of the generator units was stable. Between 2013 and 2016, there was no unplanned outage for consecutive four years.
- In October 2016, PT.GH EMM Indonesia won INDONESIA BEST ELECTRICITY AWARD 2016; in December, it obtained Indonesian SMK3 standard golden certificate rating (safety and occupational health management), and became Indonesia's third power enterprise which obtained Indonesian SMK3 golden certificate rating issued by the National Department of Labor.



1. Simpang Belimbing Project

Units Reliability Index



Since the project was put into operation, the goal of "zero unplanned outage, zero injury of personnel, zero fire danger of firefighting, zero pollution of environment protection and zero incident of foreign affairs" was achieved.

Until the first half year of 2017, the Equivalent Availability Factor (EAF) of the generating units was 97.98%, with an average utilization time of 5794 hours; for 2013-2017, there were no unplanned outage for five consecutive years.

1. Simpang Belimbing Project

Created nine "FIRST"

- China's first overseas investment in coal-electricity IPP project
- Shenhua's first overseas asset project to realize revenue
- Guohua's first overseas company and international management team
- Indonesia's first true pithead power plant
- Indonesia's first power plant successfully burns inferior coal
- Indonesia's first power plant successfully uses coal drying technology
- Indonesia's first power plant successfully uses pump boat to take water
- Indonesia's first IPP plant generated electricity ahead of the PPA schedule
- Create the longest record of continuous operation of China electric power machinery after the units put into production

1. Simpang Belimbing Project

Simpang Belimbing Project company has actively fulfilled its corporate social responsibilities. So far, 143 Indonesian employees have been trained and employed. Moreover, the company has created additional 603 job opportunities including jobs of logistics, security, firefighting for local employees. The company has provided more than 2,000 jobs since it established. The company helps villagers improve their living standards. The company accumulatively paid a total of 420 million RMB (about 65 million US dollars) of various taxes to the government which increased local financial revenue and stimulated the local economy. The company has organized and implemented a number of projects that benefited surrounding villagers. For instance, the company completed the hardening work of the 3.5km traffic road; funded the construction of mosque in Muara Enim; visited the local orphanage and poverty during Eid al-Fitr; supported and participated in the villagers' religious activities during Eid al-Fitr and National Day; won praise from surrounding villagers and local government and created harmony win-win development atmosphere.



2. Sumsel-1 Project

(1) Construction Scale

Shenhua Guohua Indonesia Sumsel-1

2×350MW coal-fired power project with a total investment of 735 million US dollars. The project also constructs a length of 80km 275kV transmission line which accesses to Betung substation.

(2) Geographic location

Sumsel-1 project is located in Muara Enim county, South Sumatra Province, Indonesia, about 100 km southwest of the capital city, Palembang and about 15 km away from the Simpang Belimbing Power Plant.



2. Sumsel-1 Project

(3) Situation of land acquisition

The company has overcome many challenges and completed land acquisition work within 9 months to meet the current construction, long-term planning for 5 unites of 350MW. The company has also completed land acquisition of total length of 80 km transmission line and 179 towers out of 229 towers (completion rate is about 78%) within 6 months.



2. Sumsel-1 Project

(4) Licensing

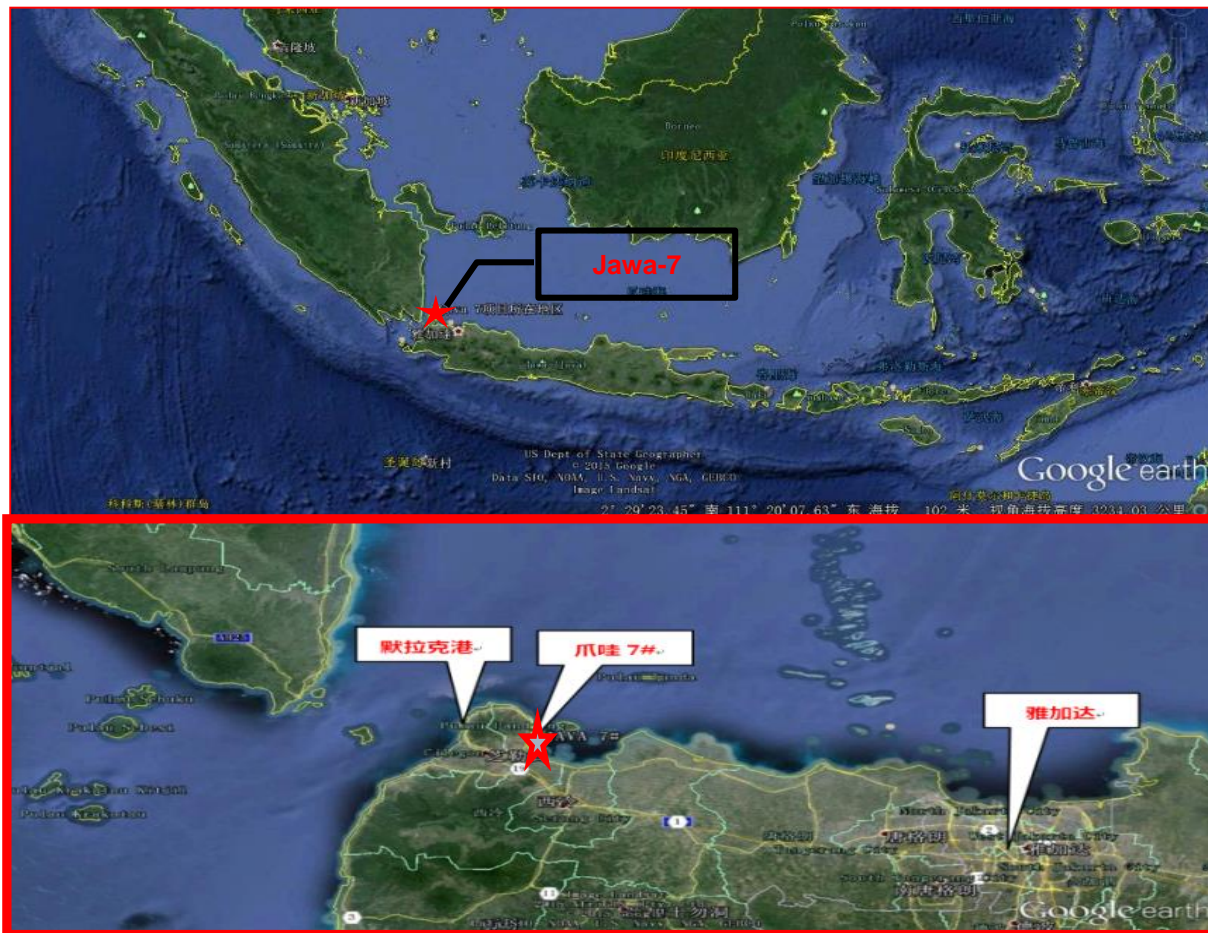
Pursuant to the relevant provisions of the PPA contract, in conjunction with the requirements of the Indonesian government laws and ordinances, the company has sorted out 34 licenses needed to apply; the company has achieved 27 permits of which 19 permits are highly required before the commencement all completed.



2017年8月20日，南苏1号项目现场具备开工条件要求

3. Jawa-7 Project

The project is located in Java Island, Indonesia, about 100km northwest of Jakarta. The project is located between Serang and Cilegon in Banten, the site is about 6km in west of Cilegon and about 15km in southeast of Serang and 13km in the northwest of Merak Harbor.



3. Jawa-7 Project

On January 13, 2016, the company was first incorporated in Jakarta through the 3-hour fast path of Investment Coordinating Board of Indonesia (BKPM) and co-invested by China Shenhua Energy Co., Ltd and PT.PEMBANKITAN JAWA BALI INVESTASI (PJBI), the proportion of the two investors are 70%, 30%. The project investment is 12 billion RMB (about 183 million US dollars); while, the capital accounted for 30%; the remaining funds provided by the National Development Bank loans.

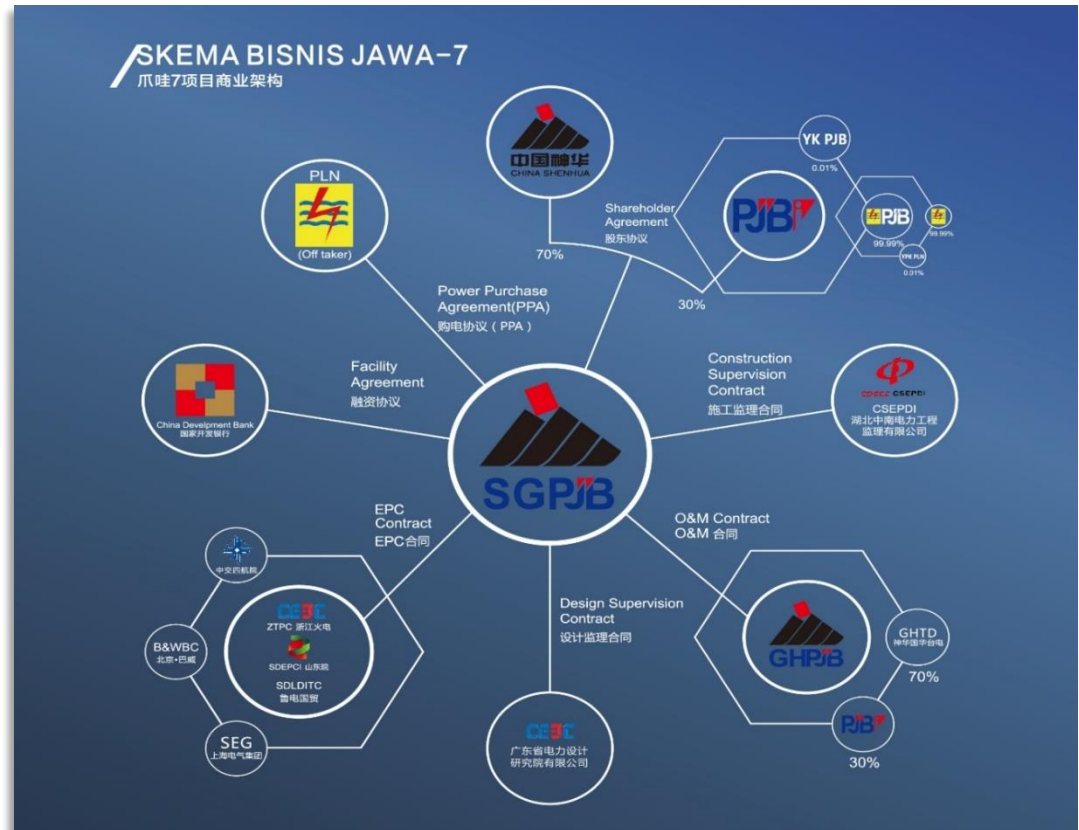
The project planning construction scale is $4 \times 1000\text{MW}$, with the condition of expanding $2 \times 1000\text{MW}$ class units. The first phase of construction are $2 \times 1050\text{MW}$ ultra-supercritical coal-fired generating units and simultaneous construction of flue gas desalination facilities; reserved condition of the installation of denitrification facilities and the construction of coal terminal with two 14000DWT berths. **The project is dedicated as China's first overseas export 1000MW scale units and also the largest capacity of single unit in Indonesia.** The cooling unit of the unit adopts sea water direct-current water supply and seawater desalination equipment of Shenhua's independent intellectual property rights. There are two return lines (1.6km) for the 500kV inlet and outlet lines and the π -type access to PLN grid. The project adopts EPC mode, and the 1st and 2nd unit is scheduled to complete COD on April 7, 2020 and October 7, 2020 respectively. The company strives to achieve two units all completion of COD by the end of 2019.



3. Jawa-7 Project

The Jawa 7 project is adopted BOOT (Build - Own - Operate - Transfer) mode and the operating period of 25 years.

The 500kV booster station and transmission lines of the project adopt BT (Build - Transfer) mode and hand over to PLN operation upon completion.



3. Jawa-7 Project



3. Jawa-7 Project

Organized meticulously, carried out Indonesian employees training and reserved talents for project operation and maintenance

At present, Jawa 7 Operation & Maintenance Company has completed its first recruitment and organized 35 Indonesian employees to have training at the Training Center of Guohua Taishan Power Plant.



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Cooperation between Shenhua Guohua and Indonesia

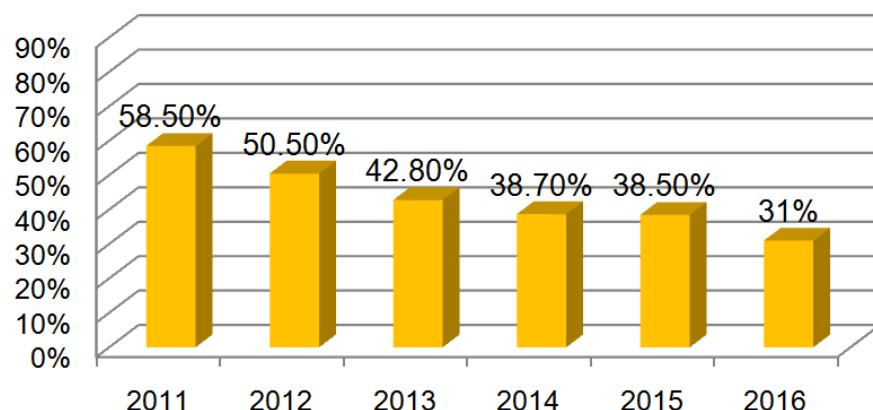
III.

Shenhua Guohua investment Capability

1. Financing Capability

China Shenhua huge room for financing

Guohua Asset-liability ratio

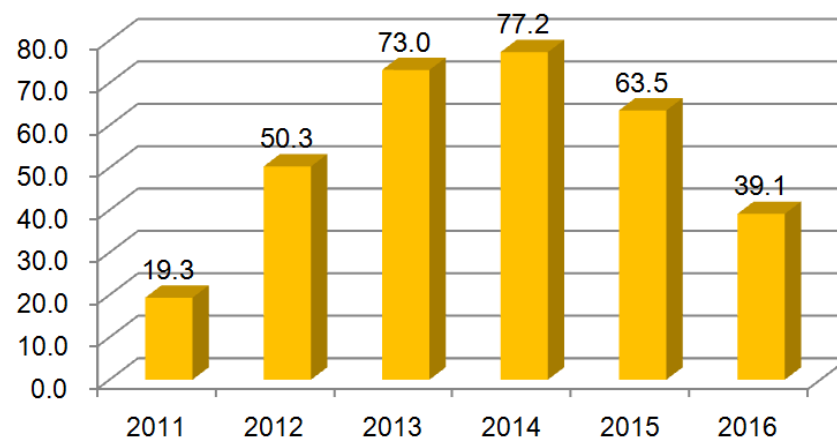


China Shenhua has an outstanding financial capability. By the end of 2016, the asset-liability ratio of China Shenhua was only 35%. Compared with the same industry, China Shenhua is able to sustain a debt financing of about USD 30 billions with its low asset-liability ratio and sufficient cash flow (Note: calculated as 70% of the asset-liability ratio).

Guohua power company's asset-liability ratio continued to decline for many years.

Guohua Power leading profitability

Unit Profit per kW (USD/kW)



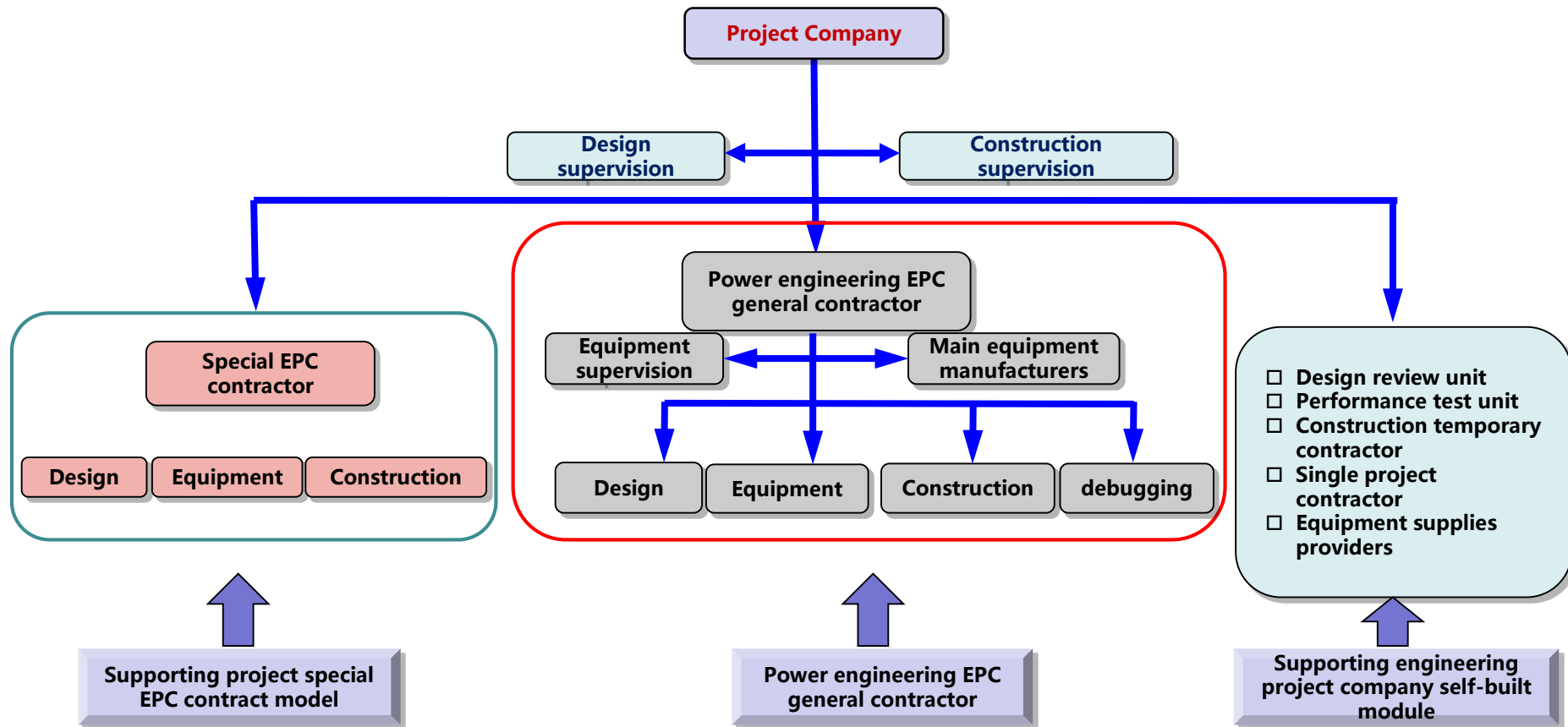
Affected by the domestic market in China, Guohua Power company's profitability has fluctuated, but it has maintained the best level in the industry.

1. Financing Capability

- China Development Bank is an important policy bank that supports the overseas investment of Chinese enterprises and international operation of centrally-administrated state-owned companies.
- In February 2015, CDB proactively signed the Development Finance Cooperation Agreement with China Shenhua. The major cooperative fields of the two parties involve international business sector, providing long-term and stable fund source as well as all-around supportive financial services for overseas projects.



2. Construction and operation capacity



- Guohua Power company is a leading, professional power construction, operation and management company in China.
- Guohua Power company strives to become a world-class power company.
- The EPC mode implemented by China Shenhua is a "Management and Control Enhanced Version EPC General Contracting Model" with Shenhua characteristics.
- In the process of overseas project implementation, on the basis of adopting the EPC general contracting mode, China Shenhua will take its advantages of technology management and project organization experience and give overall guidance, supervision and support to EPC contractors to organize the construction and implementation of projects.

2. Construction and operation capacity

300MW Units under Commercial Operation			
S/N	Project Name	Installed Capacity	Commercial Operation Year
1	Zhunge'er Power Generation Phase II Zhunge'er Power Generation Phase Phase III	2×330 2×330	2002 2007
2	Sanhe Power Generation Phase I Sanhe Power Generation Phase II	2×350 2×300	1999 2007
3	Ningdong Power Generation Phase I	2×330	2010
4	Zhoushan No.4 Unit	1×300	2014

1000MW Units under Commercial Operation			
1	Ninghai Power Generation Phase II	2×1000	2009
2	Suizhong Power Generation Phase I Suizhong Power Generation Phase II	2×880 2×1000	2000 2010
3	Xuzhou Power Generation Phase I	2×1000	2011
4	Taishan Power Generation Phase II	2×1000	2011

600MW Units under Commercial Operation			
1	Dingzhou Power Generation Phase I Dingzhou Power Generation Phase II	2×600 2×660	2004 2009
2	Taishan Power Generation Phase I	5×600	2003-2006
3	Ninghai Power Generation Phase I	4×600	2005-2006
4	Huanghua Power Generation Phase I Huanghua Power Generation Phase II	2×600 2×660	2006 2009
5	Taichang Power Generation Phase IV	2×630	2005 2006
6	Jinjie Power Generation Phase I Jinjie Power Generation Phase II	2×600 2×600	2006-2007 2007-2008
7	Hulunbeier Power Generation Phase I	2×600	2010
8	Chenjiagang Power Generation Phase I	2×660	2011
9	Mengjing Power Generation Phase I	2×600	2011

The power plants above are constructed and Operated by China Shenhua Guohua itself.

2. Construction and operation capacity

Construction level



- Guohua Power Generation Construction won 3 "National Gold Medal" and 6 Silver Medal; as well as 4 "China Construction Luban Award". Guohua Power company was praised by the State Electricity Regulatory Commission as "**the lowest cost, the best investment control**".

3. Technological Innovation and Application

“Near-zero emission”



Sanhe Power Plant panorama



Zhoushan Power Plant Unit 4 main control room

- By the State Environmental Protection Department, National Energy Administration as a demonstration of air pollution control, promotion in the national power industry.
- On June 25, 2014, Unit 4 of Zhoushan Power Plant was put into operation as the first new-built "ultra-low-emission" coal-fired generating unit in China. On July 20, 2014, Unit 1 of Sanhe Power Plant was the first unit of ultra-low emission "Transformation of coal-fired units into operation. The company expects to complete the transformation of ultra-low emissions of all domestic coal-mining machines (excluding shut-down units) by 2017.
- On October 9, 2014, "National Mobilization Meeting on Upgrading and Renovation of Coal-fired Energy-saving and Emission Reduction", Guohua Sanhe Power Plant was awarded the title of "National Coal and Energy Saving and Emission Reduction Demonstration Power Station" by the National Energy Administration.

3. Technological Innovation and Application

“Near-zero emission”



Zhoushan unit 4 boiler, denitration and electrostatic precipitator



Sanhe Unit 1 wet electrostatic precipitator

- Guohua Company coal-fired units have achieved "near-zero emissions."
- The emission level is lower than the gas power plant emission standards (dust <5mg / Nm³, SO₂ <35mg / Nm³, NO_x <50mg / m³)

3. Technological Innovation and Application

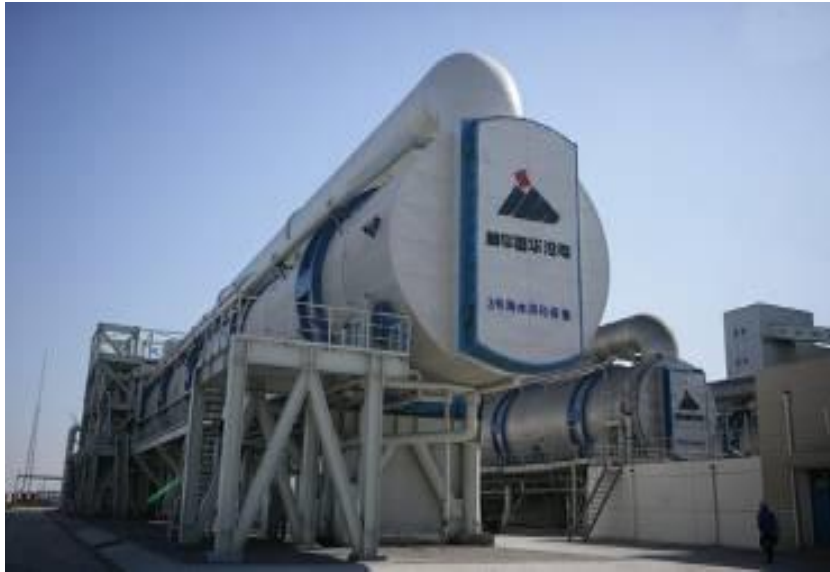
Drying of Lignite



Indonesia Simpang Belimbing project utilizes the steam drying technology of lignite and uses inferior lignite with high moisture content (raw coal with total moisture reaches 55%-60%, with calorific value of 1800kcal) in Sumatra, Indonesia as fuel, which turn the local inferior lignite hardly used with low economic value to electric power. It is the first project in which inferior lignite in Indonesia is used for generating power, as a typical demonstration project, with good spreading value.

3. Technological Innovation and Application

Research and application of low-temperature sea water desalination apparatus with multiple functions



At the end of 2008, the first set of 10,000t low-temperature sea water desalination apparatus with multiple functions, independently designed, developed and constructed across China by Guohua Power with independent technology was successfully operated in Cangdong Power Plant, which achieved advanced international level of similar products with certification from relevant authority and obtained several patent certificates.

3. Technological Innovation and Application

Cooling Tower Exhaust (Natural Draft Cooling Tower with Flue Gas Injection)



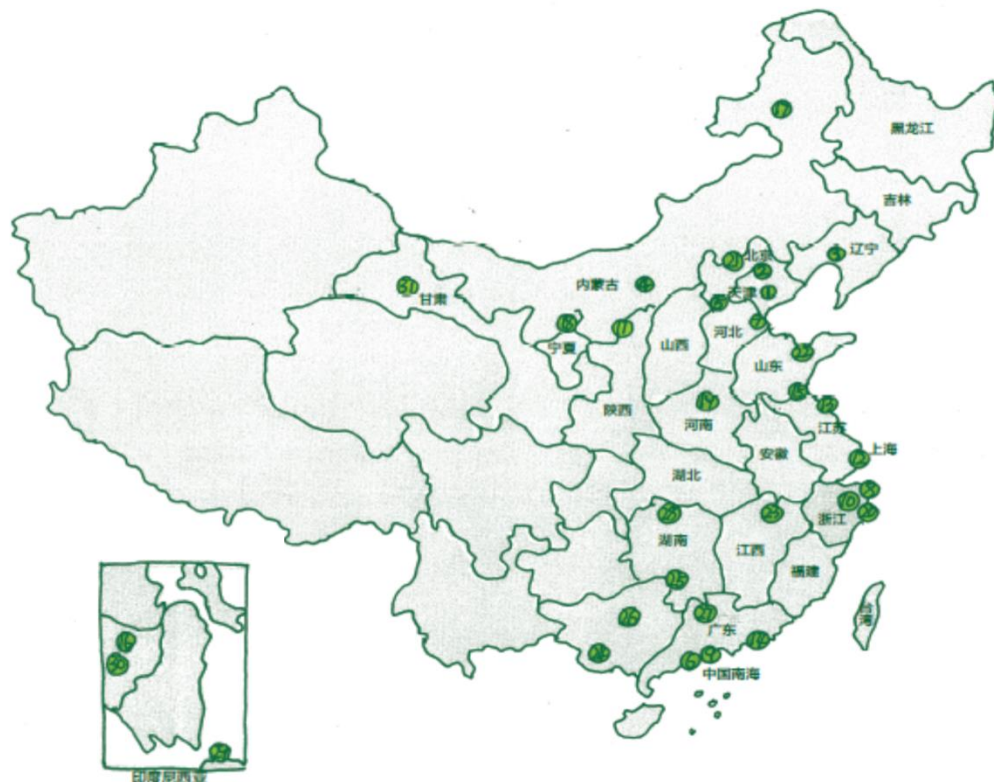
- The first cooling tower exhaust project independently researched, developed, designed and constructed in China was applied in phase II project (2x300MW) in Guohua Sanhe Power Plant.
- This technology was successfully applied in 2x1000MW unit of Guohua Xuzhou Power plant and has been put into commercial operation.

3. Technological Innovation and Application

Secondary Reheat



Beihai Power Generation Company
2x1000MW



Apply the technologies of secondary reheat 1000MW ultra super-critical unit with efficiency of 47.8%, coal consumption of 266.6g/kWh and heat consumption (LHV) of 1,866.2Kcal/kWh.

3. Technological Innovation and Application

Intelligent Power Plant Industry 4.0



Intelligent Guohua Industry 4.0 in Beijing gas thermal power plant

- Demonstration power station of worldwide first-class digital power station;
- Low-carbon, environmental, worldwide first-class digital power station with leading technologies;
- Unmanned and full-duty informational power station with one button start-up/stop.
- Values created by power generation company and cultures inherited by buildings;
- Modern industrial art of “Ecological Civilization and Beautiful Power Station”.

China Shenhua, Guohua Power company are committed to long-term operation and development in Indonesia, deep plowing the Indonesian electricity market; will actively cooperate with all parties in Indonesia. With advanced technical strength and efficient management capabilities, China Shenhua, Guohua Power company construct and operate high-quality power projects in Indonesia and provide a clean, efficient and stable green power and contribute to Indonesia's economic and social development.

Thank You ! Terima Kasih!





国家开发银行
CHINA DEVELOPMENT BANK



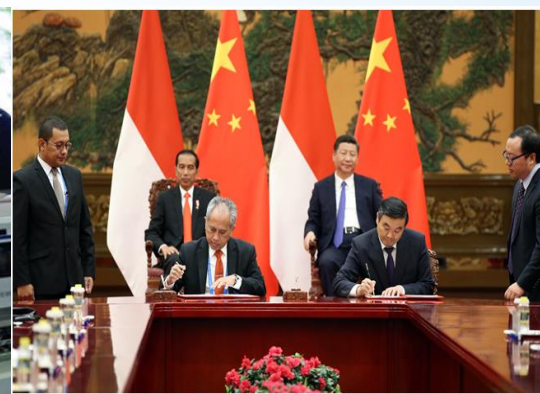
国家开发银行融资推动国际能源合作

International Energy Cooperation Promoted by China Development Bank

国家开发银行

China Development Bank

13/11/2017



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Projects Financed by CDB in Indonesia

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开行支持石油和天然气领域的相关情况和案例

Petroleum and natural gas projects financed by CDB

01

开行国际业务基本情况

Introduction to CDB's International Business

开行简介

Brief of CDB

- 国家开发银行成立于1994年，是直属中国国务院领导的政策性金融机构，注册资本4212.48亿元（约合650亿美元）。
- ✓ China Development Bank (CDB) was established in 1994. It's a finance institution directly under the leadership of the State Council. The registered capital of CDB is RMB 421.248 billion (about USD 65 billion)
- 开行是具有国际重要影响力的开发性金融机构，中国最大的对外投融资合作银行，中长期信贷银行和债券银行。2015年，开行在美国《财富》杂志世界企业500强中排名第87位。开行连续3年入选全球50家最安全银行。
- ✓ CDB is one of the most influential development finance institutions around the globe. It's also the largest Chinese bank for foreign investment and financing cooperation, medium and long-term lending bond issuance. In 2015, CDB ranked No. 87 on the Fortune Globe 500 list and it has been selected as one of the 50 safest banks around the world for 3 consecutive years.

01

开行国际业务基本情况

Introduction to CDB's International Business

开行国际业务组织架构

Organization Structure of CDB's International Business

- 10年来，开行大力推动国际业务，现已发展形成拥有1家境外分行（香港）、6家海外代表处（开罗、莫斯科、里约热内卢、加拉加斯、伦敦、万象）、54个国别工作组，覆盖197个国家和地区的海外业务网络布局。
- ✓ For over 10 years of developing, CDB has set up 1 overseas branch (Hong Kong), 6 overseas representative offices (Cairo, Moscow, Rio de Janeiro, Caracas and London, Vientiane), and 54 workgroups. The international business is now covering 197 countries and regions.



01

开行国际业务基本情况

Introduction to CDB's International Business

开行“一带一路”业务

CDB's Business under the “Belt & Road” Initiative

- 截至2016年末，开行资产总额约2.02万亿美元，贷款余额1.4万亿美元，其中国际业务贷款余额3470亿美元，不良贷款率0.89%。
 - ✓ As of the end of 2016, CDB's total asset has amounted to about USD 2.02 trillion, with the outstanding loan of around USD 1.4 trillion, among which USD 347 billion is of international business, and the rate of non-performing loan is only 0.89%.
- “一带一路”战略提出以来，开行快速响应，作出了大量富有成效的探索。截至2017年6月末，我行在“一带一路”沿线64个国家项目贷款余额1125亿美元，占全行国际业务的35%。
 - ✓ Since the announcing of the “Belt & Road” Initiative, CDB has responded immediately and has delivered a great amount of productive explorations. By the end of June 2017, CDB has an outstanding loan of USD 112.5 billion in 64 countries along the “Belt & Road” region, accounting for 35% of that of the total international business.

01

开行国际业务基本情况

Introduction to CDB's International Business

开行 “一带一路” 业务

CDB's Business under the “Belt & Road” Initiative

- 2017年5月，习近平主席在出席 “一带一路” 高峰论坛开幕式主旨演讲中宣布，开行将设立 “一带一路” 基础设施专项贷款（1000亿元等值人民币）、“一带一路” 产能合作专项贷款（1000亿元等值人民币）、“一带一路” 金融合作专项贷款（500亿元等值人民币），开行拟于2年内落实。
- ✓ During the “Belt & Road” Forum for International Cooperation in May 2017, Chinese President Mr. XI JINPING announced in his opening remarks that CDB would launch 3 “Belt & Road” Special loans, namely equivalent RMB 100 billion for infrastructure projects, equivalent RMB 100 billion for industrial capacity cooperation and equivalent RMB 50 billion for financial cooperation. CDB plans to implement the total equivalent RMB 250 billion loans within 2 years.

02

开行在印尼业务基本情况

Introduction to CDB's Business in Indonesia



印尼业务总体情况

Profile of CDB's business in Indonesia

- 开发银行高度重视与印尼的合作，早在2006年就指定工作团队，积极拓展业务，与印尼政府相关部门、金融机构和企业建立了密切的工作联系和良好的互信关系。
- ✓ CDB highly values the cooperation between Indonesia and China. We designated a workgroup for promoting the business in Indonesia early in 2006. Since then, we are dedicated to developing business in Indonesia, and now have established and maintained close communication and deep trust with relevant Indonesian governments, financial institutions and major enterprises in Indonesia.
- 截至2017年9月末，我行累计向印尼64个项目承诺贷款214亿美元，涉及金融、电力、通讯、矿产、造纸、农业等重点领域，贷款余额达106亿美元，在印尼中资银行排名第一。
- ✓ As of the end of June 2017, CDB has committed USD 20.6 billion loans to 64 projects in Indonesia, covering key sectors such as finance, electricity, telecommunication, mining, paper making and agriculture etc., with an outstanding loan amounting to USD 10.6 billion, ranking No.1 among all the Chinese banks in Indonesia.

02

开行在印尼业务基本情况

Introduction to CDB's Business in Indonesia

印尼项目分布图

Project Layout in Indonesia



Note: blue boxes represents the current projects which CDB has signed the facility agreement, green boxes represents the projects CDB is still following/developing.

03

开行业务对印尼的贡献 CDB's Contributions to Indonesia

- 2006年以来，开发银行累计支持印尼电站总装机容量超过600万千瓦，有力缓解了当地用电紧张局面；支持青山集团打造全球单体规模最大、技术最新、成本最低的不锈钢生产集群，促进当地就业和人民生活水平提升；支持金光集团南苏门答腊OKI县200万吨纸浆厂项目，充分利用印尼当地丰富的自然资源，形成现代化、大规模生产能力，大幅增加出口收入；2015年实现对印尼3家国有银行BRI、MANDIRI、BNI 30亿美元的贷款发放。2017年5月，雅万高铁项目在“一带一路”峰会期间顺利实现贷款协议签署，该项目是新时期中印尼战略合作的旗舰项目和标志性工程，项目建成后将带动沿线地区冶炼、制造、基建、电力、电子、服务、物流等配套产业发展，创造就业，增加税收，有望形成一条雅万经济走廊。
- Since 2006, CDB has provided loans to Indonesian power plants with over 6000MW installed capacity, which greatly relieves the stress of electricity supply; supported Tsingshan Group to build a stainless steel production cluster with the largest scale, cutting-edge technologies and lowest cost, improving the employment and livelihood of local people, and financed for Sinar Mas Group to build the pulp & paper making mill in OKI, south Sumatra, which helps to develop local rich natural resources, a modernized and mass production capacity and has greatly increased export incomes in Indonesia. In 2015, CDB made USD 3 billion loans to BRI, MANDIRI and BNI. In May 2017, the facility agreement of the Jakarta-Bandung High Speed Railway was signed during the “Belt & Road” forum. This project is a landmark for the Indonesia-China strategic cooperation in the new era. When completed, the HSR will boost the development of manufacturing, infrastructure, electricity, service and logistics etc., which will create more jobs and tax revenues in this region, forging a new economic corridor between Jakarta and Bandung.

03

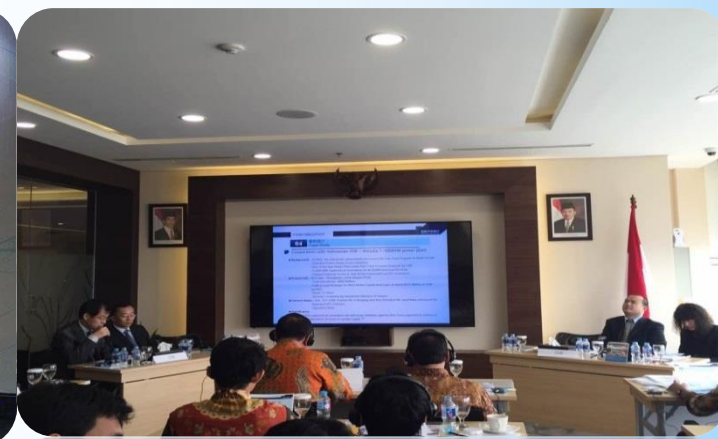
开行业务对印尼的贡献

CDB's Contributions to Indonesia

深化两国政银企间交流

Deepen Exchanges among Governments, Banks and Enterprises

- 2016年，开行分别在厦门和雅加达举办“开发性金融服务一带一路”论坛、“开发性金融支持印尼基础设施建设和产业发展”论坛以及“印尼基础设施融资公司开发性金融专题培训会”。论坛上，来自中印尼两国政府、企业代表、金融机构共计300余名嘉宾参会，印尼五位副部长到会发言致辞，进一步推动了两国政银企间的交流与合作；培训会上，开行共享了开发性金融理念与实践经验，为印尼基础设施融资公司转型为印尼开发银行提供参考和借鉴。
- In 2016 in both Xiamen and Jakarta, CDB has held two forums themed “Development Finance Supporting the Building of the Belt & Road” and “Development Finance Supporting Infrastructure Building and Industries Development in Indonesia” and a workshop for PT. SMI. In the two forums, 5 Indonesian deputy ministers made speeches and 300 people from governments, companies and financial institutions joined actively, deepening the communication and cooperation among each other. At the workshop with PT. SMI, we share our concepts and experiences of development finance, offering advices and reference for their transformation into a development finance institution.



03

开行业务对印尼的贡献 CDB's Contributions to Indonesia

■ 为进一步加大对印尼基础设施建设和产业发展的支持力度，开行提出了对印尼项目开发要实现“三个全覆盖”的工作目标（即**覆盖在印尼重点中资企业、覆盖开拓印尼业务的中国各省企业、覆盖印尼当地重点客户**），目前已覆盖中资及印尼当地重点企业445家，与**印尼投资协调委员会、国家发展规划部、国有企业部、经济统筹部、国家经济特区委员会、财政部、交通部、工业部、海事统筹部**等建立联系，对接中印尼互联互通需求、国际产能和装备制造合作需求、双边贸易和投资需求，支持中印尼两国深化全面战略合作伙伴关系。

■ In order to strengthen our support to infrastructure and industry development in Indonesia, we put forward the “3-cover” goal for project development, namely, covering key Chinese companies in Indonesia, covering Chinese provincial companies initiating their business in Indonesia and covering major local companies in Indonesia. Currently, we have covered 445 Chinese companies and local companies, and established communication relations with BKPM, BAPPENAS, Coordinating Ministry for Maritime Affairs, Coordinating Ministry for Economic Affairs, MSOE, MOF, MOT, Ministry of Industry, National Council for Special Economic Zones etc. In this way, we exchange information for interconnecting, industrial capacity, equipment manufacturing, trade and investment cooperation, so as to help deepen bilateral comprehensive strategic partnership between Indonesia and China.

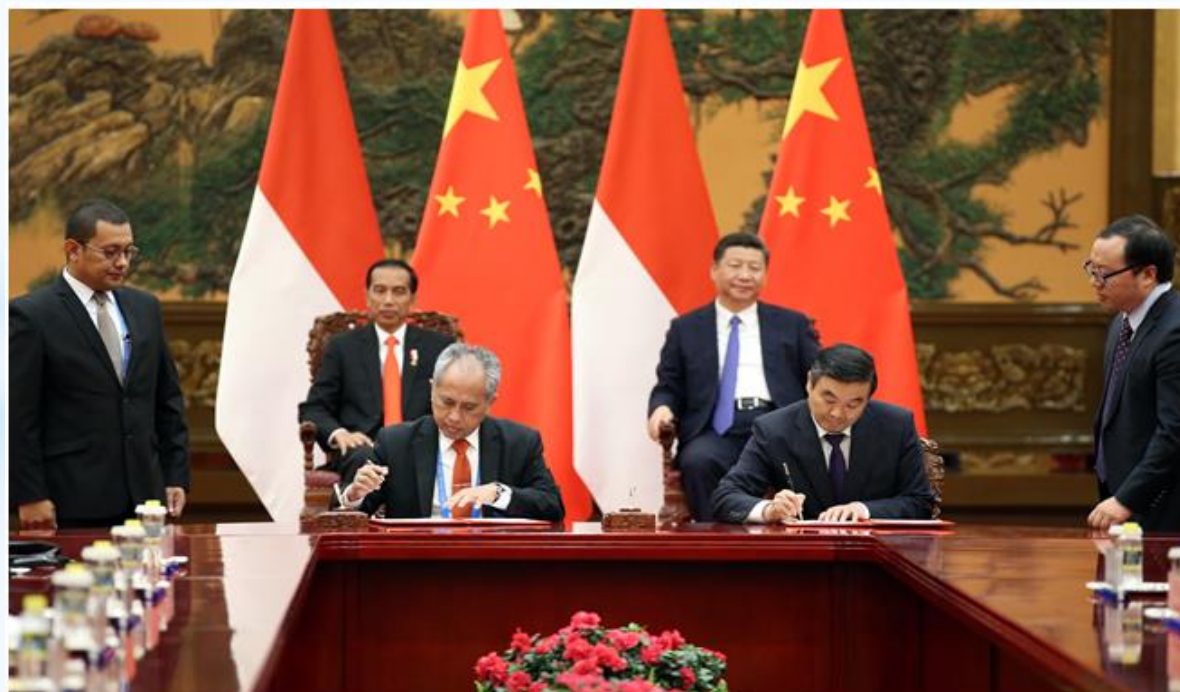
04

开行支持印尼项目概览

Projects Financed by CDB in Indonesia

雅加达-万隆高速铁路项目

Jakarta-Bandung High Speed RailWay



2017年5月，在两国元首的见证下，雅万高铁项目贷款协议顺利签署

In May 2017, the facility agreement of Jakarta-Bandung High Speed Railway was signed under the witness of President Jokowi and President Xi Jinping

04

开行支持印尼项目概览

Pictures of Projects Financed by CDB in Indonesia

支持印尼国家电力公司 (PLN) 四个快通道项目
Supporting 4 fast track power plants of PT PLN



Indramayu 3×33万千瓦电站
Indramayu 3 × 330MW power plant



Rembang 2×30-40万千瓦电站
Rembang 2×300-400MW power plant

04

开行支持印尼项目概览

Pictures of Projects Financed by CDB in Indonesia

支持印尼国家电力公司 (PLN) 四个快通道项目
Supporting 4 fast track power plants of PT PLN



Sumbar 2×11.2万千瓦电站
Sumbar 2×112MW power plant



Adipala 1 ×66万千瓦电站
Adipala 1 ×660MW power plant

04

开行在印尼项目概览 Pictures of Projects Financed by CDB in Indonesia

IPP电站项目 Independent Power Plants



华电巴厘岛3 × 14.2万千瓦电站
Huadian Bali 3 × 142 MW Power Plant

04

开行在印尼项目概览

Pictures of Projects Financed by CDB in Indonesia

IPP电站项目

Independent Power Plants



芝拉扎二期1 × 60万千瓦电站

Segara Phase 2 1 × 600 MW Power Plant



南苏5号2 × 15万千瓦电站

South Sumatra No.5 2 × 150 MW Power Plant

04

开行在印尼项目概览 Pictures of Projects Financed by CDB in Indonesia

海螺水泥年产155万吨水泥生产线项目

Anhui Conch Cement cement production lines with 1.55 million tons annual production



04

开行在印尼项目概览 Pictures of Projects Financed by CDB in Indonesia

中国印尼综合产业园区--青山钢铁工业园区

China-Indonesia industrial investment and cooperation zone Tsingshan Park in central Sulawesi



04

开行在印尼项目概览

Pictures of Projects Financed by CDB in Indonesia

中国印尼综合产业园区--青山钢铁工业园区

China-Indonesia industrial investment and cooperation zone Tsingshan park in central Sulawesi



04

开行在印尼项目概览

Pictures of Projects Financed by CDB in Indonesia

金光集团印尼南苏门答腊OKI县 200万吨纸浆厂
Sinarmas Group 2 million ton pulp&paper mills in OKI



04

开行在印尼项目概览 Pictures of Projects Financed by CDB in Indonesia

中兴能源棕榈园项目 Palmerly garden project of Zhongxing Energy



04

开行在印尼项目概览

Pictures of Projects Financed by CDB in Indonesia

印尼3家国有银行30亿美元贷款项目

USD 3 billion finance to 3 state-owned banks of Indonesia



05

开行支持石油和天然气领域的相关情况和案例 Petroleum and natural gas projects financed by CDB

支持范围及相关案例 Scope and cases

■ 支持范围

Supporting scope of business

包括石油和天然气勘探生产、储运；石油炼制与油品销售；石化产品生产与销售。具体包括：

Prospecting, producing, storing and transporting of petroleum and natural gas; Petroleum refining and product selling; Producing and selling of petrochemicals, including:

1.石油、天然气（含页岩气、页岩油、油砂、天然气水合物等非常规油气）勘探及开发；

Prospecting and exploiting of petroleum and natural gas (including The non-conventional oil and gas such as shale gas, shale oil, oil sand, natural gas hydrate etc.).

2.石油炼制及下游石化产品生产等；

Petroleum refining and production of downstream petrochemicals etc.

3.石油天然气的储运和管道输送设施及网络建设

Storing and transporting of petroleum and natural gas, building of distribution pipelines and networks.

05

开行支持石油和天然气领域的相关情况和案例 Petroleum and natural gas projects financed by CDB

支持范围及相关案例 Scope and cases

- 2013年以来，我行融资支持了中安、中委、中巴、中厄等一批石油和天然气国际合作重大项目。截至2017年6月底，累计承诺贷款1350亿美元。

Since 2013, CDB has supported many big and important international petroleum and natural gas cooperation projects between China-Angola, China-Venezuela, China-Brazil, China-Ecuador etc. By the end of June 2017, CDB has committed USD 135 Billion to projects in this field.

- 目前，我行在印尼正在跟踪两个石油领域项目：

Currently, we are following two petroleum projects in Indonesia:

1.东爪哇Turban日处理30万桶原油炼油厂及下游产业项目

East Java Turban 300 thousands barrels/day crude oil refinery and downstream industries project.

2.东加里曼丹Bontang日处理30万桶原油炼油厂项目

East Kalimantan Bontang 300 thousands barrels/day crude oil refinery project.

05

开行支持石油和天然气领域的相关情况和案例 Petroleum and natural gas projects financed by CDB

中巴石油融资项目

China-Brazil petroleum financing project

巴西国家石油公司是巴西加快经济增长的主要投资主体。2008年，受国际金融危机影响，石油价格大幅下跌，巴西国家石油公司急需大额资金支持业务发展。

Petrobras is one of the major investment bodies in rapid economic growth in Brazil. In 2008, due to international financial crisis, oil price plummeted drastically. Petrobras was in urgent need for large amount of money to support their business development.

2009年，开行向巴西国家石油公司提供了总额为100亿美元的融资，用于支持其在石油探勘、开采和炼化等领域的投资，有效缓解了资金链紧张状况，促进了该公司业务持续良性发展，带动了中巴能源合作。In 2009, CDB provided USD 10 Billion to finance Petrobras for its investment in petroleum prospecting, exploiting and refining etc. This finance has effectively release their stress in short of fund, supported the sustainable development and promoted the energy cooperation between China and Brazil.



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开行支持石油和天然气领域的相关情况和案例 Petroleum and natural gas projects financed by CDB

委内瑞拉MPE3项目

MPE3 Project Cooperation with Venezuela

2008年，中石油与委内瑞拉石油公司成立合资公司，共同开发位于委内瑞拉卡拉波波地区的MPE3油田，2013年，开行向MPE3项目公司提供了40.15亿美元项目贷款，支持MPE3油田产量从9万桶/日提升至33万桶/日。

In 2008, China National Petroleum Corporation and Petroleo De Venezuela established a Joint Venture to develop the MPE3 oil field in Carabobo, Venezuela. In 2013, CDB made USD 4.015 Billion loan to MPE3 project company to support its increase of production from 90,000 barrels/day to 330,000 barrels/day.

开行融资有力支持了委内瑞拉重油带的开发，通过中委合资开发的形式将中方设备、资金优势与委方资源优势相结合，有效提高委石油产量，进一步提升委石油产业出口创汇能力，切实将委方资源优势转化为发展优势。

This loan from CDB has supported the development of the heavy oil belt in Venezuela. By way of the joint venture, the rich resources of Venezuela have been combined with the advantage of Chinese equipment and fund, so the oil production in Venezuela has been greatly lifted. As a result, the oil exportation as well as foreign exchange is increased, and the merits of rich resource generate more advantages in further development in Venezuela.



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开行支持石油和天然气领域的相关情况和案例 Petroleum and natural gas projects financed by CDB

中亚能源有限责任公司吉尔吉斯年产80万吨炼油厂项目 800,000 tons Oil Refinery by Central Asia Energy in Kyrgyzstan

该项目是吉尔吉斯斯坦的重要工业项目，建成后将有效促进当地经济发展，对提高政府财政收入、改善当地就业具有积极意义。项目总投资4.31亿美元，我行承诺贷款2亿美元。

This refinery is an important industrial factory in Kyrgyzstan. After it is put into operation, it will help boost economic development, increase fiscal revenue, and improve employment, exerting great positive effects to the society. The total investment of this refinery is USD 431 Million, and CDB committed USD 200 Million finance to it.



05

开行支持石油和天然气领域的相关情况和案例 Petroleum and natural gas projects financed by CDB

亚马尔液化天然气项目 Yamal Liquefied Natural Gas (LNG) project

亚马尔液化天然气项目是全球在建最大的液化天然气项目。该项目位于亚马尔半岛,建设内容为三条550万吨/年液化天然气生产线及120万吨/年凝析油生产设施。项目总投资约360亿美元。

Yamal LNG project is the largest LNG factory under construction in the world. Located in Yamal Peninsula, the project includes three 5.5 Million tons/year LNG production line and 1.2 Million oil condensation facilities . The total investment of this project is USD 36 Billion.

自2014年开始,开行作为财务顾问参与该项目,历时三年,克服了油价大幅下跌等困难,在2016年6月成功实现融资关闭,并作为牵头行为该项目提供65亿美元等值欧元和人民币贷款支持。

Since 2014,CDB has joined as a financial consultancy. After 3years, by overcoming difficulties such as oil price jumping, this project reached financial close in June 2016. CDB as the mandate bank provided euro loans and RMB loans with total amount equivalent to USD 6.5 billion.

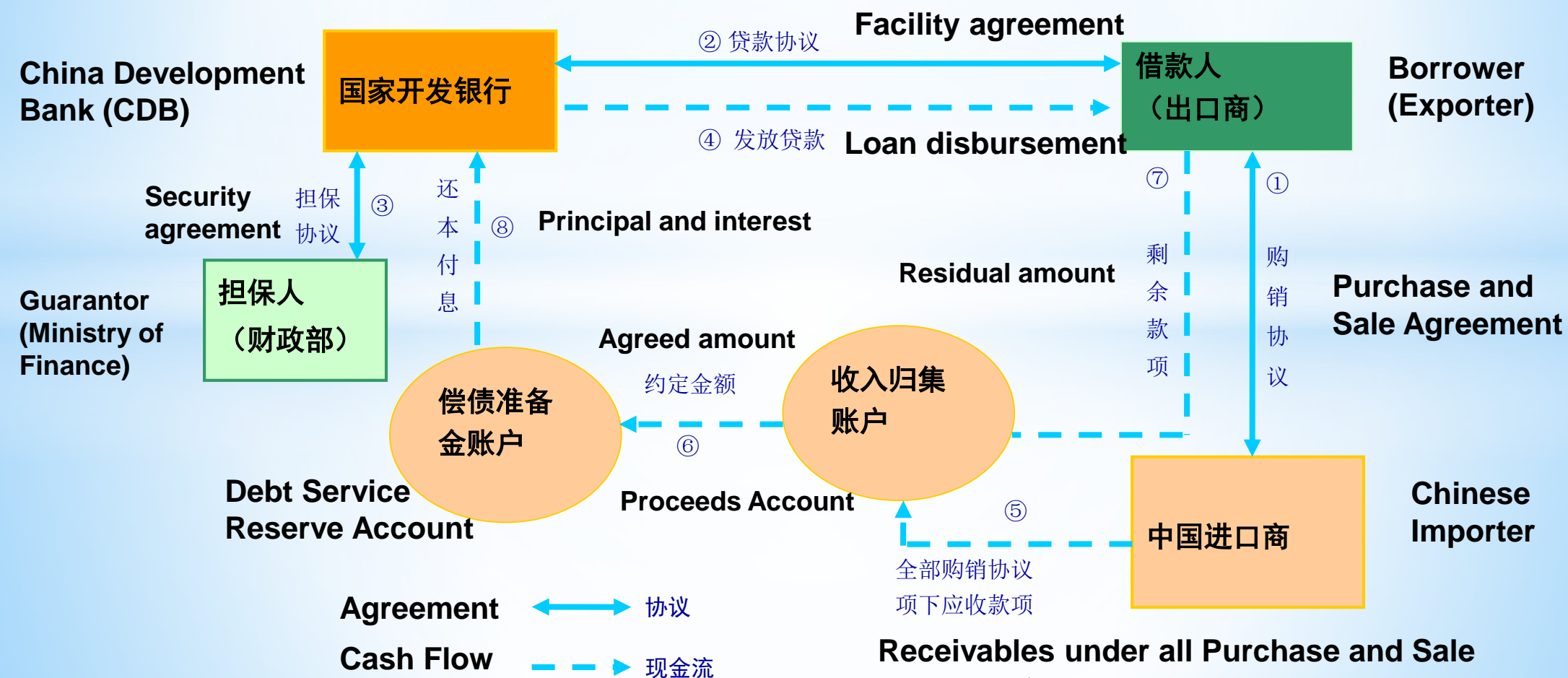


05

开行支持石油和天然气领域的相关政策和案例
Petroleum and natural gas projects financed by CDB

主要模式和协议结构
Main mechanisms and agreement structure

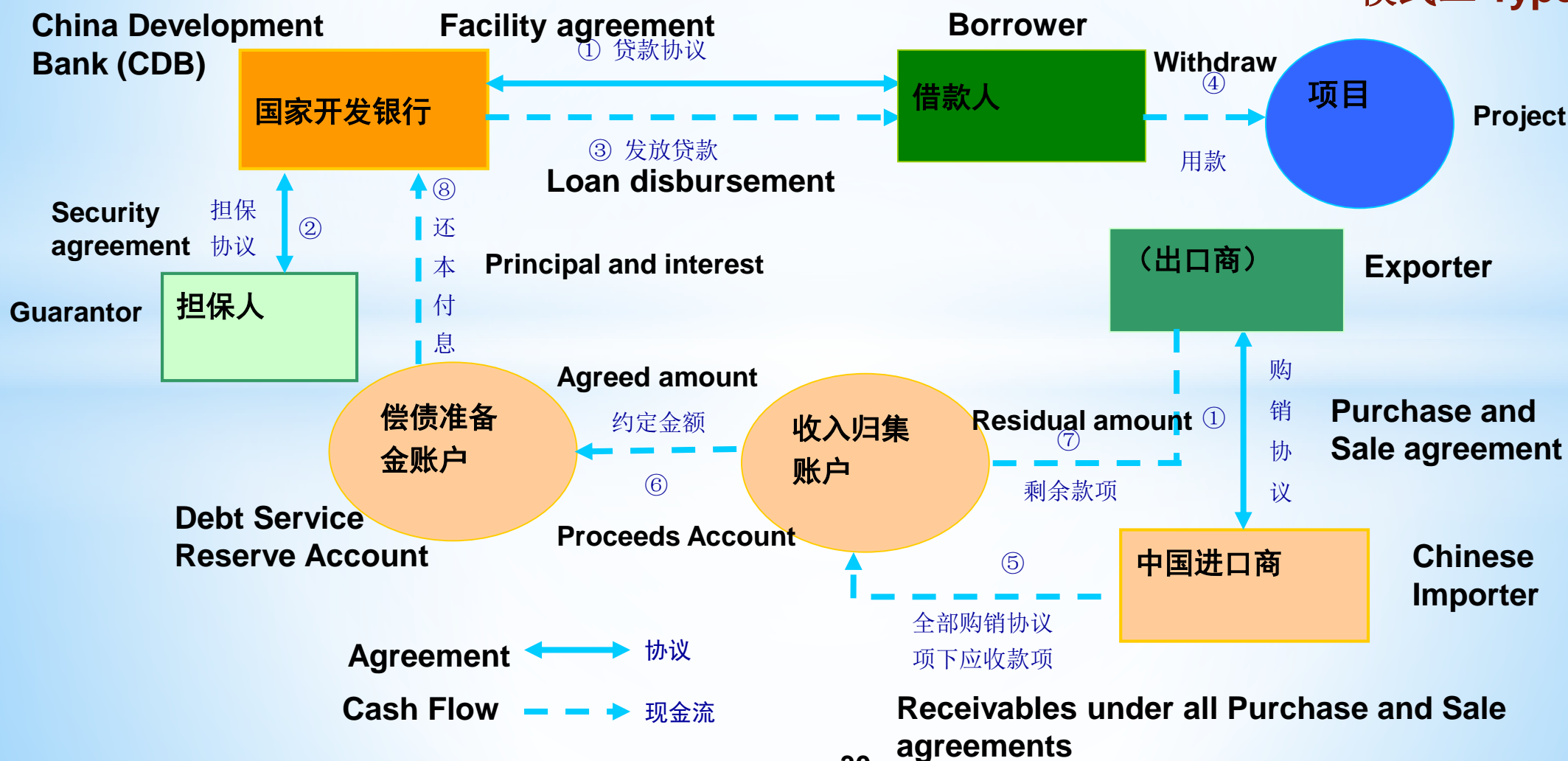
模式一 Type 1



05

开行支持石油和天然气领域的相关政策和案例
Petroleum and natural gas projects financed by CDB

模式二 Type 2



- 下一步，开行将继续担当“一带一路”倡议先行者和主力行，积极落实“一带一路”峰会成果，切实推动中印尼两国间的政策沟通、设施联通、贸易畅通、资金融通和民心相通，以开发性金融助力中国“一带一路”倡议和印尼“海上强国”战略的对接与融合。
- ✓ CDB will continue to play a leading role under the “Belt & Road” Initiative, implement the results of the “Belt & Road” Forum, help promote the policy consultation, trade promotion, infrastructure connectivity, financial cooperation and people-to-people exchanges between Indonesia and China, so as to promote the synergy of the “Belt & Road” Initiative and the “Global Maritime Fulcrum”.





国家开发银行
CHINA DEVELOPMENT BANK

Thank You !



www.sinosure.com.cn

A BRIEF INTRODUCTION OF SINOSURE

Nov. 2017, Jakarta



中国出口信用保险公司
CHINA EXPORT & CREDIT INSURANCE CORPORATION

I. About Sinosure
关于中国信保

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中国信保在印尼



CHINA EXPORT & CREDIT INSURANCE
CORPORATION

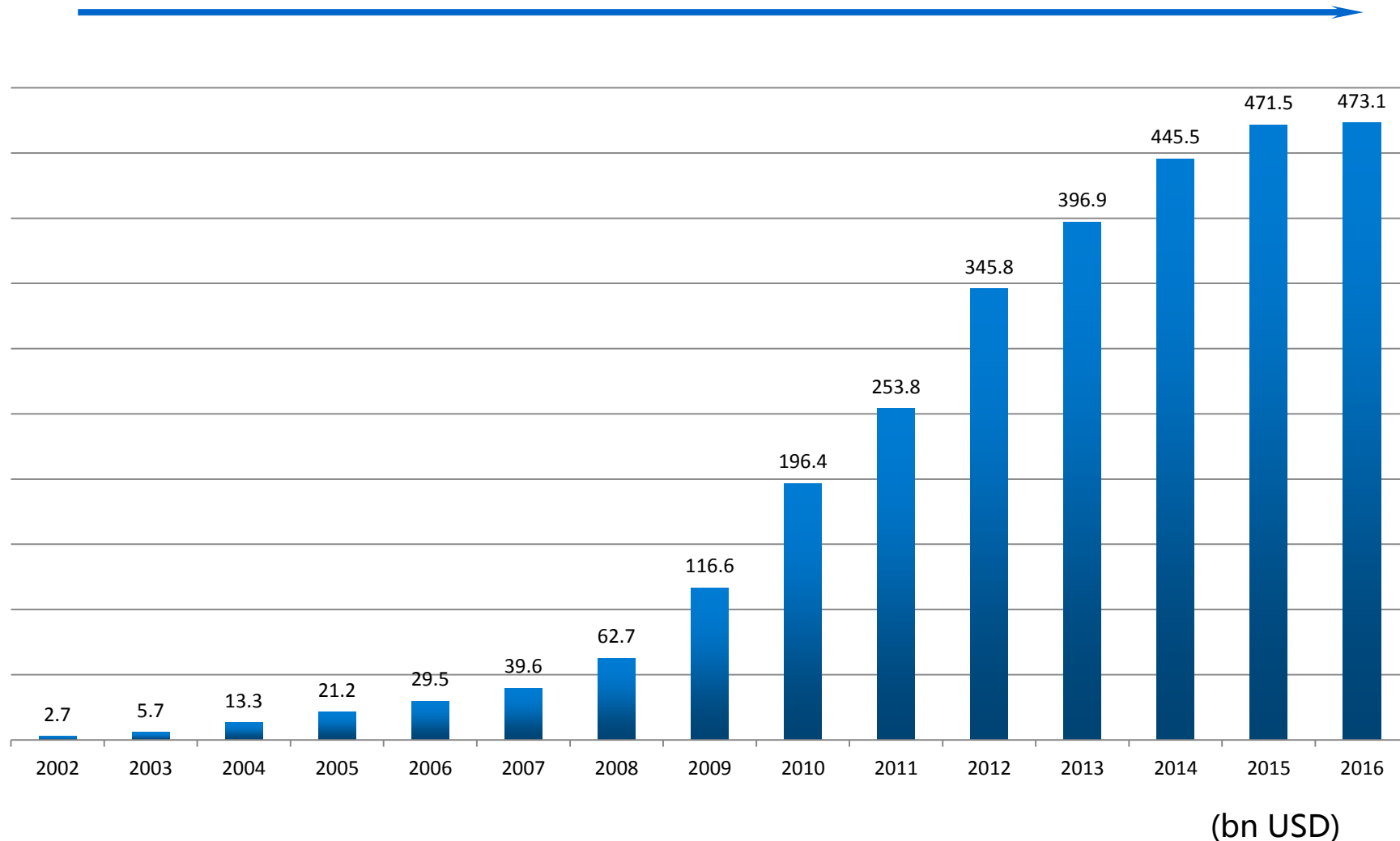
- China Export & Credit Insurance Corporation (Sinosure) is a state-funded policy-oriented insurance company.
- 中国出口信用保险公司是一家国有的政策性保险公司。
- It is directly managed by the central government of China. Chinese Ministry of Finance and Central Huijin Investment Co.Ltd jointly hold all the shares of Sinosure.
- 中国信保直接由中国中央政府管理，由国家财政部和中央汇金公司控股。
- It began operation on 18th December, 2001. with the same level as Chinese sovereignty ratings.
- 中国信保成立于2001年12月18日，与中国主权评级一致。



CHINA EXPORT & CREDIT INSURANCE CORPORATION

- Sinosure is mandated, in accordance with the Chinese government's diplomatic, international trade, industrial, fiscal and financial policies, to promote Chinese exports of goods, technologies and service, by means of export credit insurance against non-payment risks.
- 中国信保旨在服务中国政府的外交、国际贸易、产业升级、财政和金融政策，履行其政策性职能，通过承保信保保险支持中国企业货物、技术和服务出口。

Total Insured/guaranteed Amount From 2002 to 2016 2002年至2016年承保金额



About Sinasure 关于中国信保



The color in this slide from deep to shallow means the outstanding insured amount of Sinasure from much to little

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Products

Credit Insurance

➤ Short-term Export Credit Insurance

- Comprehensive Cover Insurance
- Whole Turnover Insurance
- L/C Insurance
- Specific Buyer Insurance
- Specific Contract Insurance
- Insurance against Buyer's Breach of Contract

➤ Medium & Long-term Export Credit Insurance

- **Buyer's Credit Insurance**
- Supplier's Credit Insurance
- Refinance Insurance
- Leasing Insurance

➤ Investment Insurance

- Overseas Investment (Equity) Insurance
- Overseas Investment (Debt) Insurance

➤ Bond and Guarantee

- Financial Guarantee
- Non-financial Guarantee

Services

➤ Debt Collection

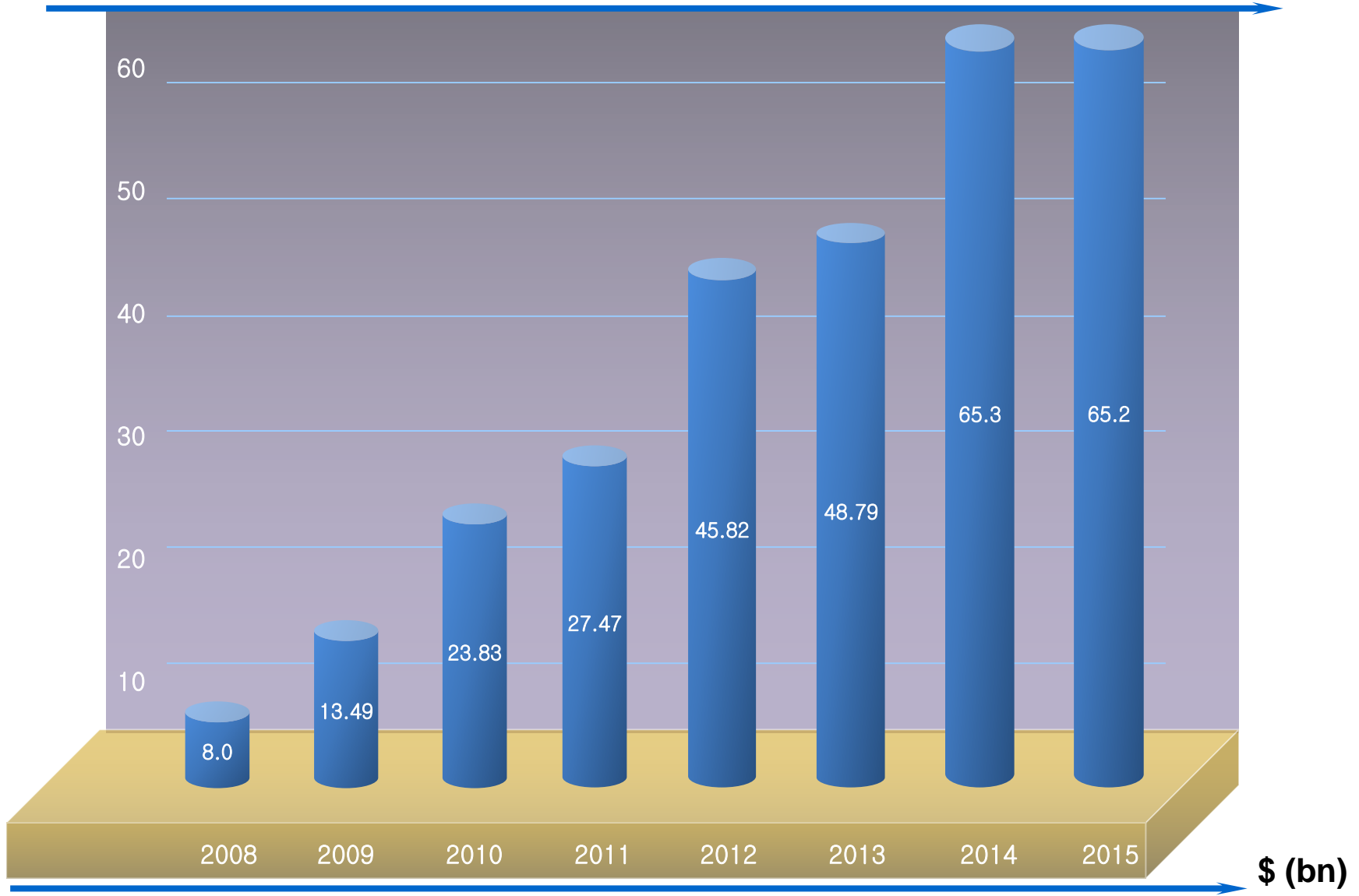
- Domestic Collection
- Oversea Collection

➤ SinoRating

- Country Risk Analysis
- Business Credit Information Report

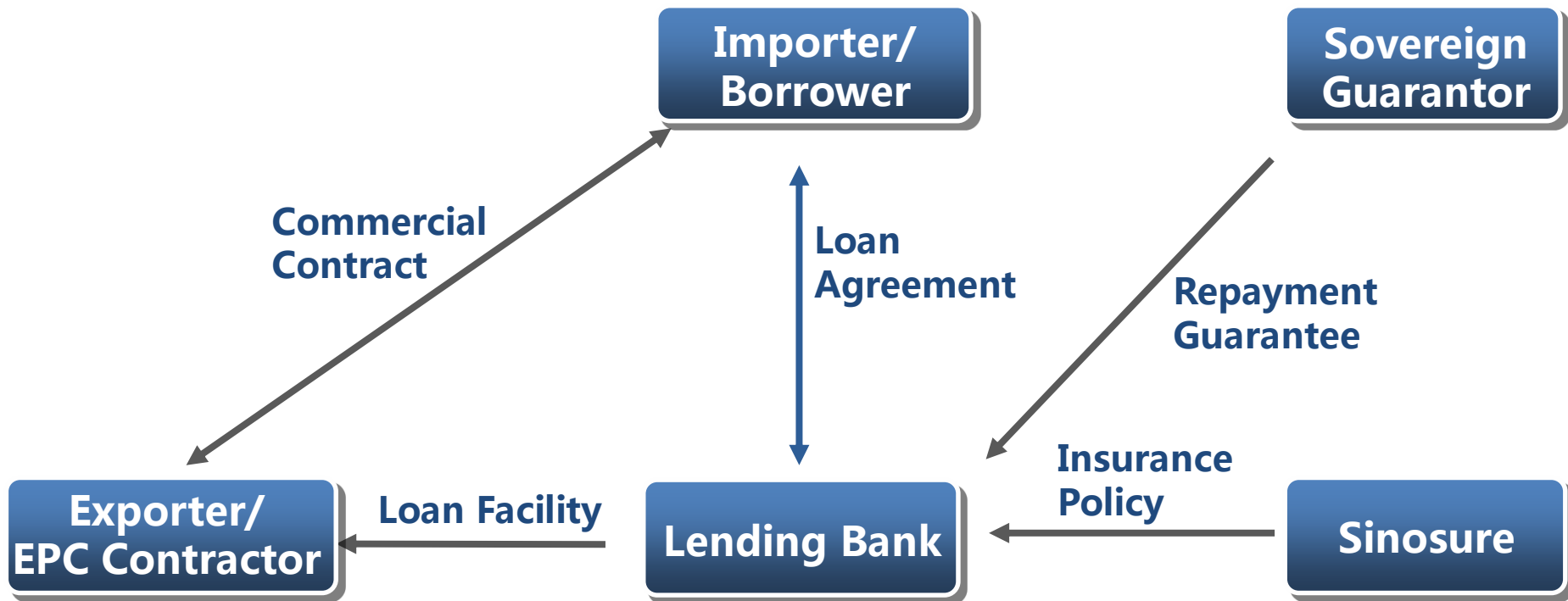
Products and Services 产品及服务介绍

Insured/guaranteed Amount Under Project Business From 2008 to 2015
2008年至2015年项目险承保金额



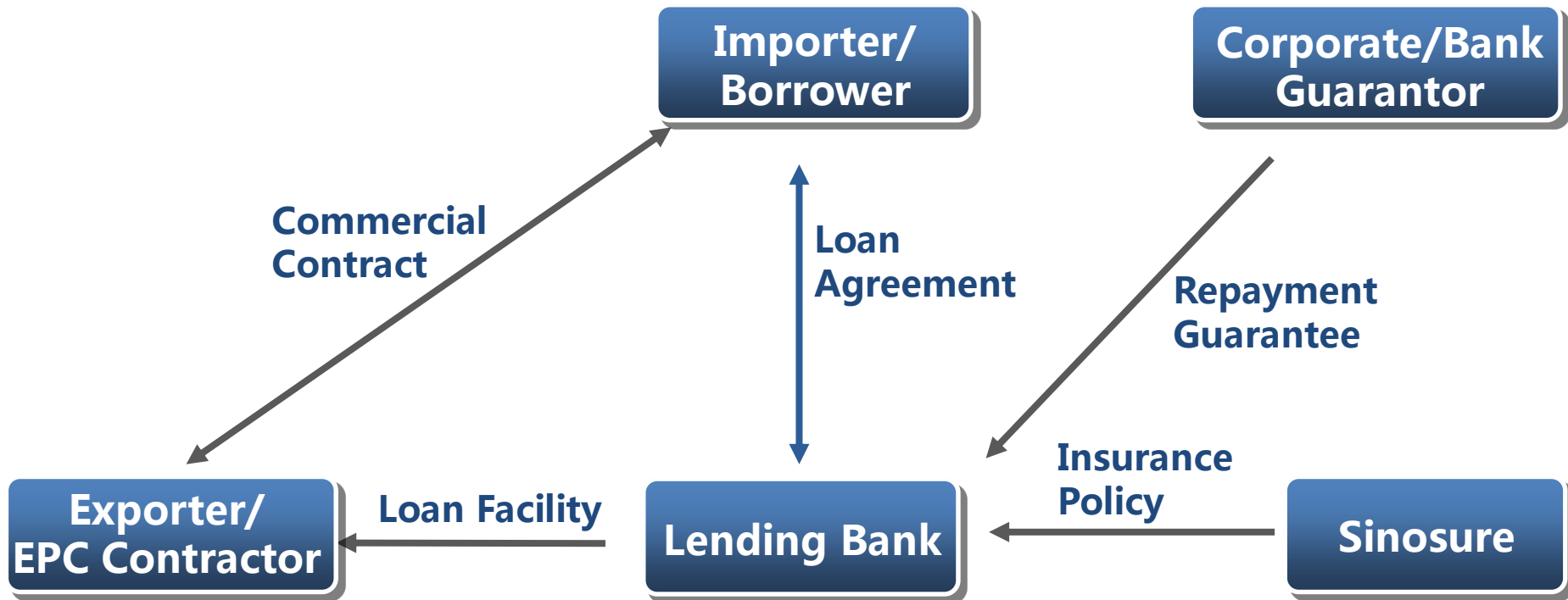
Medium & Long Term Export Credit Insurance - Buyer's Credit 中长期出口买方信贷保险

1. Sovereign Guarantee / Sovereign Borrower 主权担保/主权借款模式



Medium & Long Term Export Credit Insurance - Buyer's Credit 中长期出口买方信贷保险

2. Corporate Guarantee / Bank Guarantee 公司担保/银行担保模式



Products and Services 产品及服务介绍

Borrower Guarantor

- Government, banks, public and private-sector organizations and companies, including vehicles used in structured project-finance transactions.

Insured Risk

- Credit risks which the Borrower does not repay the loan to the bank, due to commercial or political events (plus breach of contract).

Tenor

- Door to door, up to **15 years** (postponed + payable period)

Insured Amount

- Loan Principle + Interest

Cash Down Payment

- Not below **15%** of the CCV (Commercial Contract Value), and the financed amount percentage should not exceed **85%** of CCV.

Coverage Percentage

- up to **95%** of financed amount.

Chinese Content

- Not below **35%** of the CCV for civil works; not below **40%** for ship-building; not below **60%** for complete equipment export.

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CHINA EXPORT & CREDIT INSURANCE CORPORATION

➤ By the end of October 2017, Sinosure has supported around 350 energy projects all over the world, amounting over 90 billion USD, involving over 60 countries, in which the coverage for both political risks and commercial risks have been provided.

➤ 截止2017年10月，中国信保已在全世界超过60个国家承保了约350个能源项目，具体涉及电力、油气、矿产等子行业，保险金额超过900亿美元。中国信保为这些项目提供了政治风险和商业风险的双重保障。

- **A refinery project in Kazakhstan (2012)**

- Description: A petroleum refinery project promoted by the government of Kazakhstan. Sinosure provided a Buyer's Credit Insurance for the project.
- Project Amount: More than 2 billion USD
- Insured Amount: 1.7 billion USD (Loan Principle + Interest)
- Borrower: The joint venture company;
- EPC Contractor: SEG;
- Lending Bank: China exim bank;
- Loan Tenor: 15 Years;
- Guarantor: Ministry of Finance.



- **An open-cast coal mine in Pakistan(2015)**
 - Description: An open-cast coal mine with the scale of 3.8 million tonnage per annual. Sinosure provided a Buyer's Credit Insurance for the project.
 - Project Amount: More than 500 million USD;
 - Insured Amount: 298 million USD (Loan Principle + Interest);
 - Borrower: The coal mining company;
 - EPC Contractor: CMEC;
 - Lending Bank: A consortium consisting of 3 Chinese banks;
 - Loan Tenor: 14 Years;
 - Guarantor: Ministry of Finance.

Our Achievements in Energy Sector 能源领域承保情况



Kirchner Saipan Nick
hydropower station
(Argentina, 2014)



Coca Codo- Sinclair
hydropower station
(Ecuador, 2010)



Maamba coal-fired
power station
(Zambia, 2014, 535m)



Memve'ele hydropower
station (Cameroon, 2011,
869m)



nam ngum 5
hydropower station
(Laos, 2011)



Soyo-Kapary 400KV
ultra-high voltage
Power Transmission
(Angola, 2014)

Our Achievements in Energy Sector 能源领域承保情况



Suki Kinari hydropower station (Pakistan, 2015)



Shahiwal coal-fired power station (Pakistan, 2016)



Mariveles thermal power station (Philippine, 2010)



Vinh Tan power station (Vietnam)



Vinh Hung coal-fired power station BOT project (Vietnam, 2014)



Xeset2 hydropower station (Laos, 2010)

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➤ Over the recent years, Sinosure has already insured over **200** projects in Indonesia with a total amount around **10 billion USD**, which includes 4.4 billion USD medium & long-term export credit insurance and 5.5 billion USD investment insurance.

➤近年来，中国信保已经在印尼承保了超过200个项目，保险金额约100亿美元。其中包括44亿美元中长期出口信用保险项目和55亿美元海外投资保险项目。

Our New Measures in Indonesia 中国信保在印尼

- Cooperation with BKPM
- 与印尼投资协调委员会建立合作伙伴关系



- Cooperation with ASEI
- 与印尼官方出口信用机构合作

Memorandum of Understanding

between



China Export & Credit Insurance Corporation
(SINOSURE)

Signed in : Beijing

And



PT. Asuransi Asei Indonesia
(Asuransi Asei)

Signed in : Jakarta

www.sinosure.com.cn

Thanks !
感谢聆听 !



中国出口信用保险公司
CHINA EXPORT & CREDIT INSURANCE CORPORATION