

Energy project financing 能源项目融资

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Singapore

新加坡





- Population ~5.8 million
 (人口~580 万)
- GDP per capita ~USD63,000 (人均国内生产总值~USD6万3千元)
- Peak Demand ~7GW/day (高峰需求~7 吉瓦)
- Installed Capacity~12GW/day (装机容量~ 12 吉瓦)

Southeast Asia



东南亚



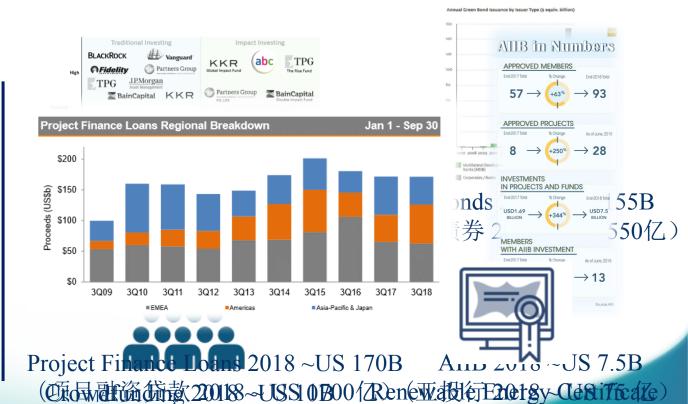
- Population ~641 million
 (人口~6.41 亿)
- No Access to Electricity~45 million (无电力供应~450 万)
- Total Power Generation ~240 GW/day (总发电~ 240 吉瓦)
 - Renewable Generation ~41GW/day (可再生能源发电~ 41 吉瓦)

Sources of Finance

资金来源

Traditional 传统来源

New 新资金来源



(可再生能源证书)

(众筹 2018~US 100 亿)

SOUTCE: TEGERSON REGITALS

Uses of Finance

资金用途

3. Environmental and social focus 着重环境与 社会影响

4. Project and Investment Size 项目与资金规模



Over 100 Major Financial Institutions Now Have Coal Finance Restrictions

To date, over 100 globally significant financial institutions including public development banks, national development finance institutions, export credit agencies, private banks and insurance companies have developed formal thermal coal mining and/or coal-fired power plant exclusion policies.

- World Bank announces first restrictions: No new project finance except in 'rare circumstances'
- 2 Multilateral Development Banks,
 9 Development Finance Institutions follow World Bank adopting coal finance restrictions

- Asian Infrastructure Investment Bank proposes coal restrictions
- AXA becomes first global insurer to restrict project underwriting and insurance for new projects
- ING first global bank to set phaseout date for coal in power sector by 2025

2017

2016

2013 2014 2015

 Norwegian Sovereign Wealth Fund divests: Companies generating 30% revenue from coal excluded; estimated \$8 billion divested from coal

- First private bank coal restrictions announced by Bank of America
- Export Credit Arrangement coal restrictions cover 35 ECAs

• International Finance Corporation closes financial intermediary loopholes: 95% of lending "ringfenced" to avoid coal and promote clean energy

2018

- Standard Chartered announces end to new coal plant investment
- Royal Bank of Scotland coal restrictions improved: tightens general lending to companies involved in coal

Source: IEEFA.org

4.8GW Kusile Coal Power Plant (SA) SPgroup

库塞尔煤发电厂-兴建中(南非)



- US\$16 Billion* (\$160亿美元)
- Multiple parties (多方融资)
 - 17 Commercial Banks (商业银行)
 - **3 ECAs** (出口信贷机构)
- Planning started from 2007 (2007开始筹划)

96MW Jasper Solar Farm (SA)



碧玉光伏发电厂 (南非)

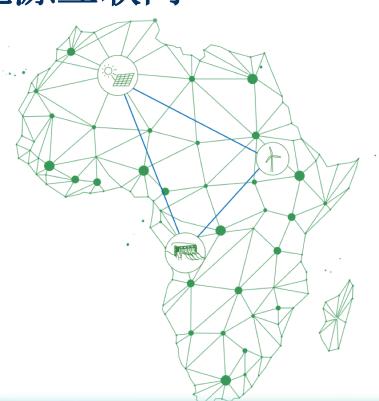


- US\$260 Million* (\$2.6亿美元)
- 1 bank involved (一家银行)
 - Rand Merchant Bank (兰特商人银行)
 - US\$150 Million (\$1.5亿美元)

Interconnect

SPgroup

能源互联网



 Electricity, Mining, Metallurgy, Manufacturing, Trade

(电矿治工业)



powering the nation