

# Presentation on Business Opportunities

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# Energy Sector Priorities in China

• Scaled up energy efficiency

• Demonstrate new and immature renewable

• Urban environment improvement

• Cleaner coal and gas

• Intensify sector reforms

- Contribute to energy intensity reduction in selected industries and provinces
- Support early demonstration and deployment of new but relevant renewable technologies (i.e. concentrated solar thermal, off-shore wind)
- Low carbon and low emission heat and power supplies to urban areas
- Carbon capture and storage (CCS) pilot and demonstration and natural gas-based CCS ready plant development
- Develop technology road maps, trial market-based instruments, policy advice

# Energy Sector Priorities in Mongolia

- **Energy efficiency and environment improvement**
- **Access to energy for all**
- **Regional energy development**
- **Sector capacity building**
- **Private sector participation**

- New energy efficient combined heat and power (CHP) plants in major cities and renewable based power generation
- Rehabilitation of heating systems in medium and small towns and potential application of solar-coal hybrid heating systems
- Facilitating power trading and regional grid interconnectivity
- Capacity building on regulatory side
- Public-private partnerships (PPP) for new CHP plant and potential coal gasification plant in coal mine areas

# 2012-2013 Approved Loan Projects in China

1. Heilongjiang Energy Efficient District Heating Project
  - Upgrading and expanding district heating systems in 8 cities of Heilongjiang province.
  - \$1.2 million of consulting services for project management and supervision under the loan.
2. Shanxi Energy Efficiency and Environment Improvement Project
  - Expanding district heating systems in 5 cities, and coal-mine methane (CMM) gas supply in 1 city of Shanxi province.
  - \$2 million of consulting services for project management and supervision under the loan.
3. Qinghai Delingha Concentrated Solar Thermal Project
  - Expanding district heating systems in 5 cities, and coal-mine methane (CMM) gas supply in 1 city of Shanxi province.
  - \$2 million of consulting services for project management and supervision under the loan.

# EARD Lending Pipeline, 2014-2016

Project Name	Country	Type	Amount (US\$ M)	Contact
<b>2014</b>				
Gansu Jinta Concentrated Solar Power	PRC	Loan	100.00	W. Y. Lee
Chemical Industry Energy Efficiency and Emission Reduction	PRC	Loan	100.00	A. Seiler
<b>2015</b>				
Low-Carbon District Heating Supply in Huhhot in Inner Mongolia Autonomous Region	PRC	Loan	150.00	N. W. Kim
Qingdao Smart Low-Carbon District Energy	PRC	Loan	130.00	T. Oi
<b>2016</b>				
Energy Efficiency and Urban Environment Improvement I	Mongolia	Loan	60.00	T. Oi

Note: Projects are indicative, pending ADB Management and Board approval, and approval timelines are subject to change.



# EARD Nonlending Pipeline, 2014-2015

Project Name	Country	Type	Amount (US\$ M)	Contact
<b>2014</b>				
Qingdao Smart Low-Carbon District Energy	PRC	PPTA	130.00	T. Oi
Energy Efficiency and Urban Environmental Improvement	Mongolia	PPTA JFPR	2.00	T. Oi
Innovation Financing Mechanism Study and Application for DSM Pilot City Investment	PRC	PATA	0.60	PRCM
Utilization of Cleaner Fuel for Heating Supply in Ger District and Gas-Based Power Generation	Mongolia	PATA	0.80	S. Yamamura
Power Trade Strategy for Mongolia	Mongolia	PATA	1.50	T. Oi
Solar District Heating Supply in Rural Remote Areas	Mongolia	Project Grant	2.50	T. Oi
Research on Piloting National Recycle Economy in Qinghai	PRC	PATA	0.35	PRCM
<b>2015</b>				
Research of Cleaner Production Encouragement Policy in Hainan	PRC	PATA	0.35	W. Lee
Research on the Zone Mode and Typical Technology Evaluation Method of Low-Carbon Agricultural	PRC	PATA	0.40	A. Seiler
Development Strategies of Low-Carbon Distributed Energy in Gathering-Type Communities in Qinghai City	PRC	PATA	0.80	W. Lee

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# Concentrated Solar Power

## *Qinghai Delinha CSP Project*

50 MW first of the kind CSP project using parabolic trough solar field and 7 hour thermal storage.

- supply of solar field
- heat transfer fuel and heat exchanger
- molten salt thermal storage
- 50 MW steam turbine power bloc

## *Gansu Jinta CSP Project*

50 MW CSP project with parabolic trough solar field with natural gas back up.

- supply of solar field
- heat transfer fuel and heat exchanger
- molten salt thermal storage
- 50 MW steam turbine power bloc

# **Industrial Energy Efficiency**

## ***Chemical Industry Energy Efficiency Project***

- Sustainable financing mechanism for EE in Chem China group using industry specific ESCO model.
- Initially focusing on EE in PVC industry using proprietary technologies.

## ***Hebei Energy Efficiency Improvement Grant***

- Promote EE in iron and steel industry through technology transfer, capacity-building and equipment for M&V in EE.
- SCADA system for real-time DSM of industrial electricity consumption.



# **Low Carbon District Heating**

## ***Low Carbon District Heating Project in Inner Mongolia***

- Demonstrates use of excess wind power capacity for district heating
- Electric & coal fired boilers
- Heat supply network, heat exchangers and SCADA systems

## ***Low Carbon Smart District Heating Project in Qingdao***

- Natural gas-based distributed heat supply system
- Thermal insulation for heat supply network
- Absorption chillers and other heat recovery equipment.

# Thank You

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