

One Belt One Road Strategy: Energy Transit Risks



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September 25, 2015 Kyrghyzstan



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Based on personal research

Outline

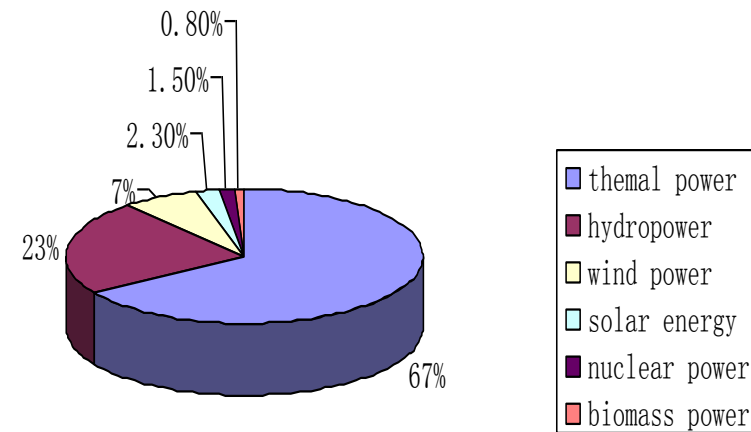
- Energy industry in China
- OBOR initiative
- Current energy and electricity
Cooperation between China and
Central Asia
- Energy transit risks
- Dispute settlement mechanism
- China and Energy Charter

Energy Industry in China

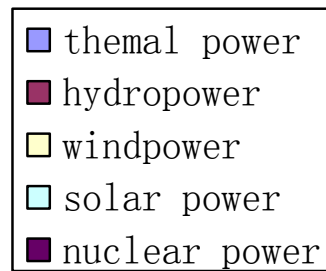
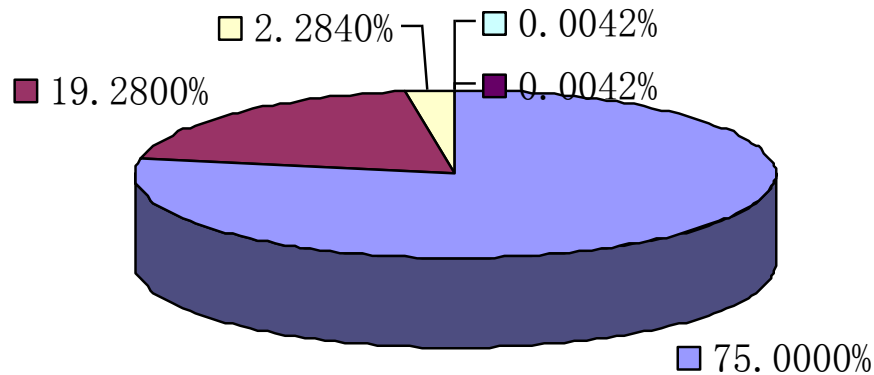


Electricity(2014)

- **Installed capacity: 1.36 Tera watt**
 - **Thermal power: 900 GW, 67%**
 - **Hydropower: 300 GW, 23%**
 - **Wind power: 90GW, 7%**
 - **Solar power: 30GW, 2.3%**
 - **Nuclear power: 19GW, 1.5%**
 - **Biomass power: 10GW, 0.8%**



- Generating capacity: 5.5 Tera kwh
 - Thermal power: 75%
 - Hydropower: 19.28%
 - Wind power: 2.284%
 - Nuclear power: 0.0047%
 - Solar power: 0.0042%



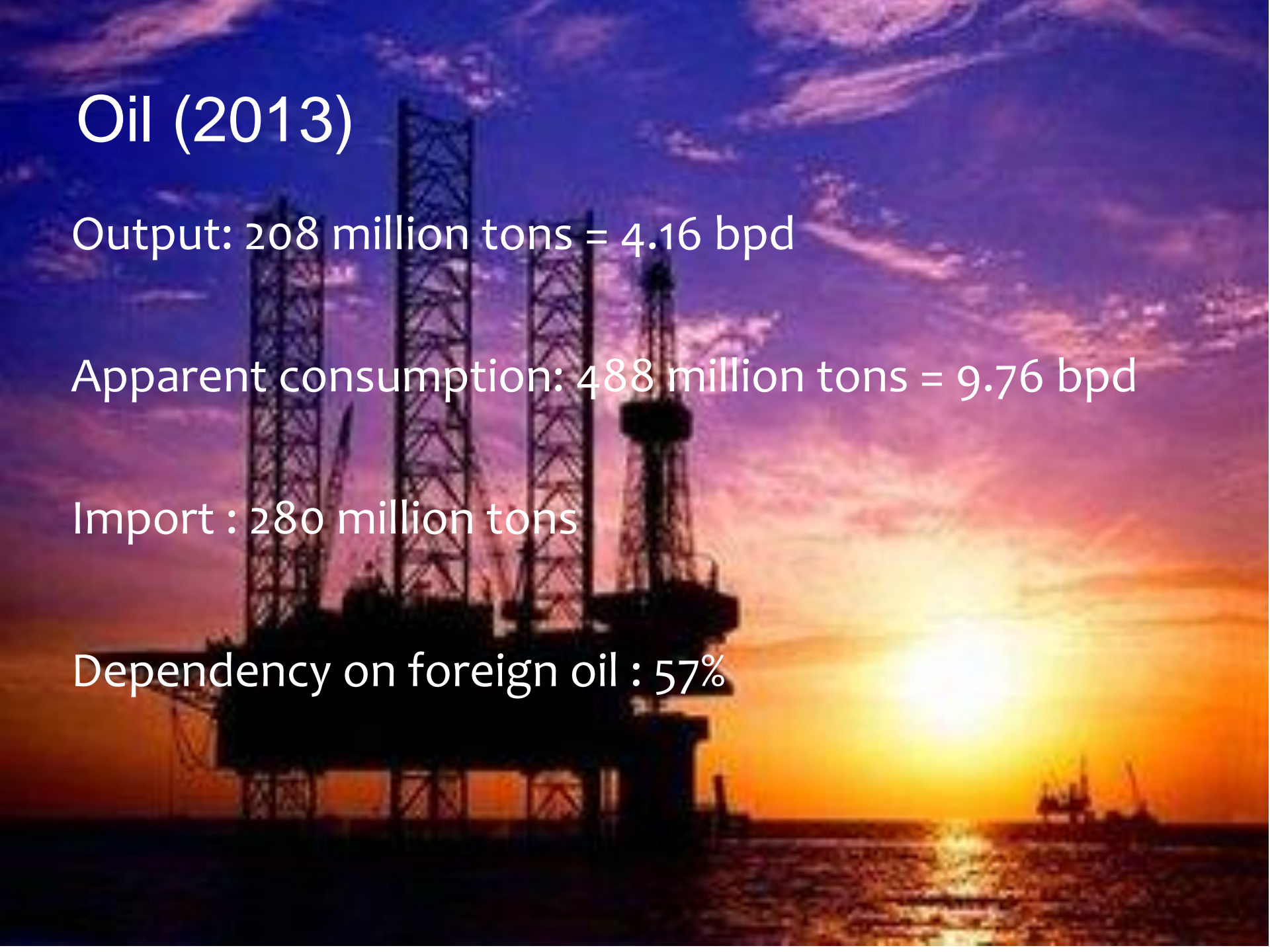
Oil (2013)

Output: 208 million tons = 4.16 bpd

Apparent consumption: 488 million tons = 9.76 bpd

Import : 280 million tons

Dependency on foreign oil : 57%



Gas (2014)

Output : 130.8 bcm

Apparent consumption : 181.6 bcm

Dependency on foreign gas : over 30%

One Belt One Road (OBOR) initiative



What is the One Belt One Road initiative?

The Silk Road is the oldest overland trade route in the world, dating back to 500 B.C.

Chinese President Xi Jinping is bringing it to the 20th century in the form of the One Belt One Road Initiative which will begin in Xi'an, China.

When President Xi Jinping visited Kazakhstan and Indonesia in September 2013, he promoted for the first time, with various other countries, the "Silk Road Economic Belt" and the "21st Century Maritime Silk Road".

One Belt One Road



One Belt One Road

Silk Road Economic Belt and Maritime Silk Road in the making



Source: xinhuanet.com, and Barclays Research

Who is involved in OBOR?

65 countries are involved in OBOR.

Asia 43, Mid East 16, CIS 4, Africa 1:

- Southeast Asia (11): Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Vietnam, Laos, Myanmar, Cambodia, east Timor;
- South Asia (7): Nippur, Bhutan, India, Pakistan, Bangladesh, Sri Lanka, Maldives;
- Central Asia (6): Kazakhstan, Turkmenistan, Kyrgyzstan, Uzbekistan, Tajikistan, Afghanistan;
- West Asia (18): Iran, Iraq, Georgia, Armenia, Azerbaijan, Turkey, Syria, Jordan, Israel, Saudi Arabic, Bahrain, Qatar, Yemen, Oman, the United Arab Emirates, Kuwait, Lebanon;
- Mid-east (16): Albania , Bosnia and Herzegovina , Bulgaria, Croatia , Czech Republic, Estonia , Hungary , Latvia , Lithuania , Macedonia, Montenegro , Romania, Poland , Serbia , Slovakia , Slovenia;
- CIS (4): Russia , Belarus, Ukraine , Moldova;
- Mongolia Egypt

Opportunity for China Central Asia energy cooperation?

- Industry: Energy is the priority of OBOR construction
- Region: Central Asia is the priority of OBOR construction



**Current energy and electricity
Cooperation between China and
Central Asia**

Pivotal hinge in Euroasian continent

The Central Asian along with Caspian Regions, once hailed as “the second Persian Gulf”, is buttressed by considerable wealth in energy resources, especially with a preponderant bonanza in hydrocarbons.

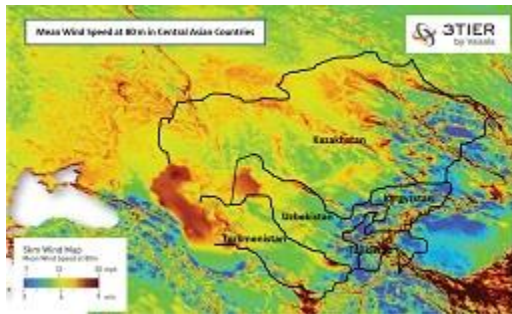


1 Rich in fossil and renewable energy endowment

2 Diversification of energy supply



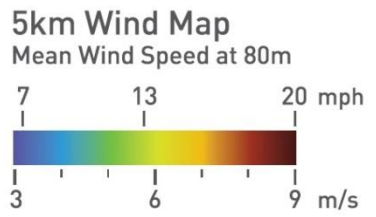
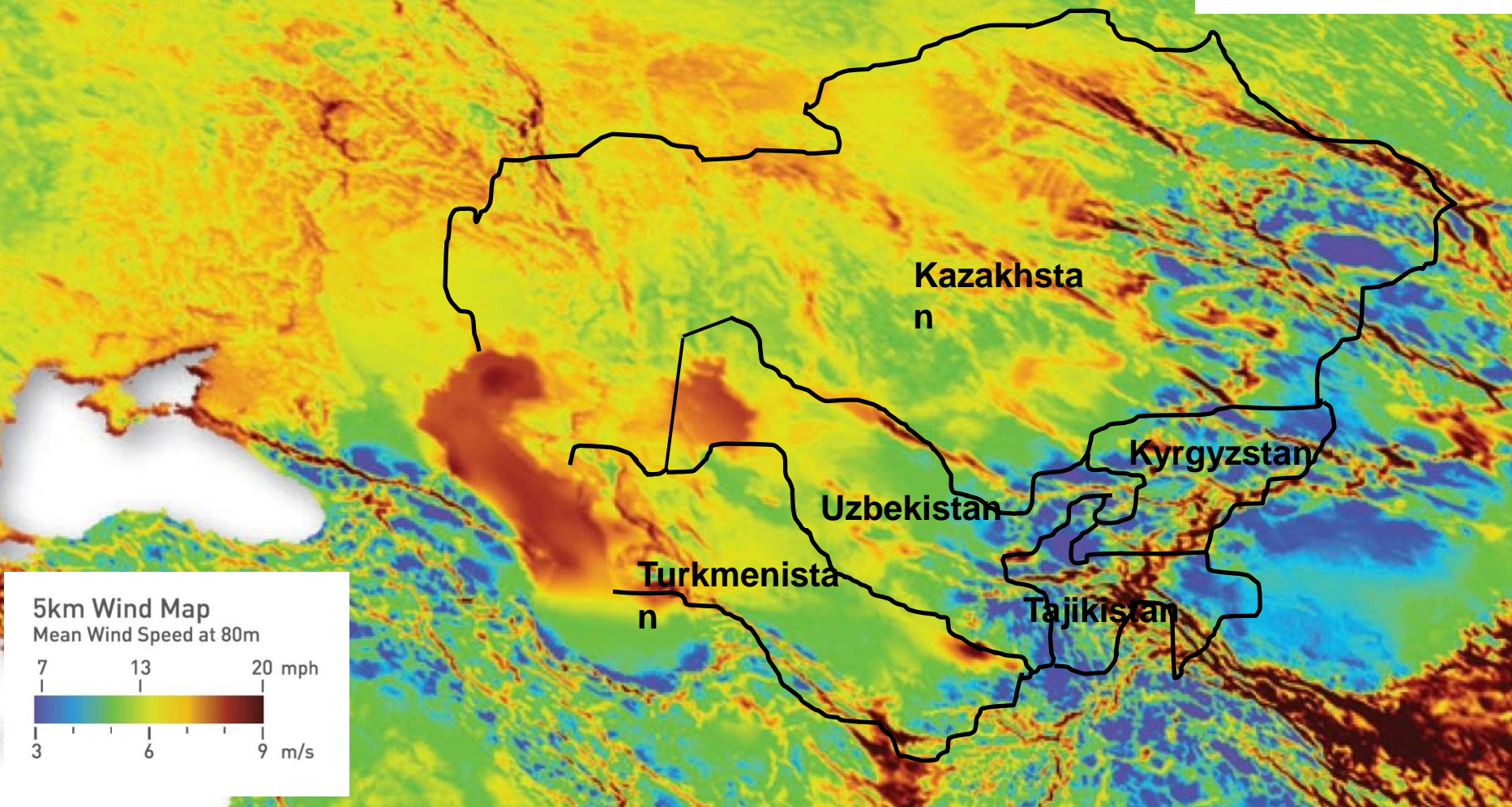
3 Close proximity to China borders



Wind map in Central Asian countries

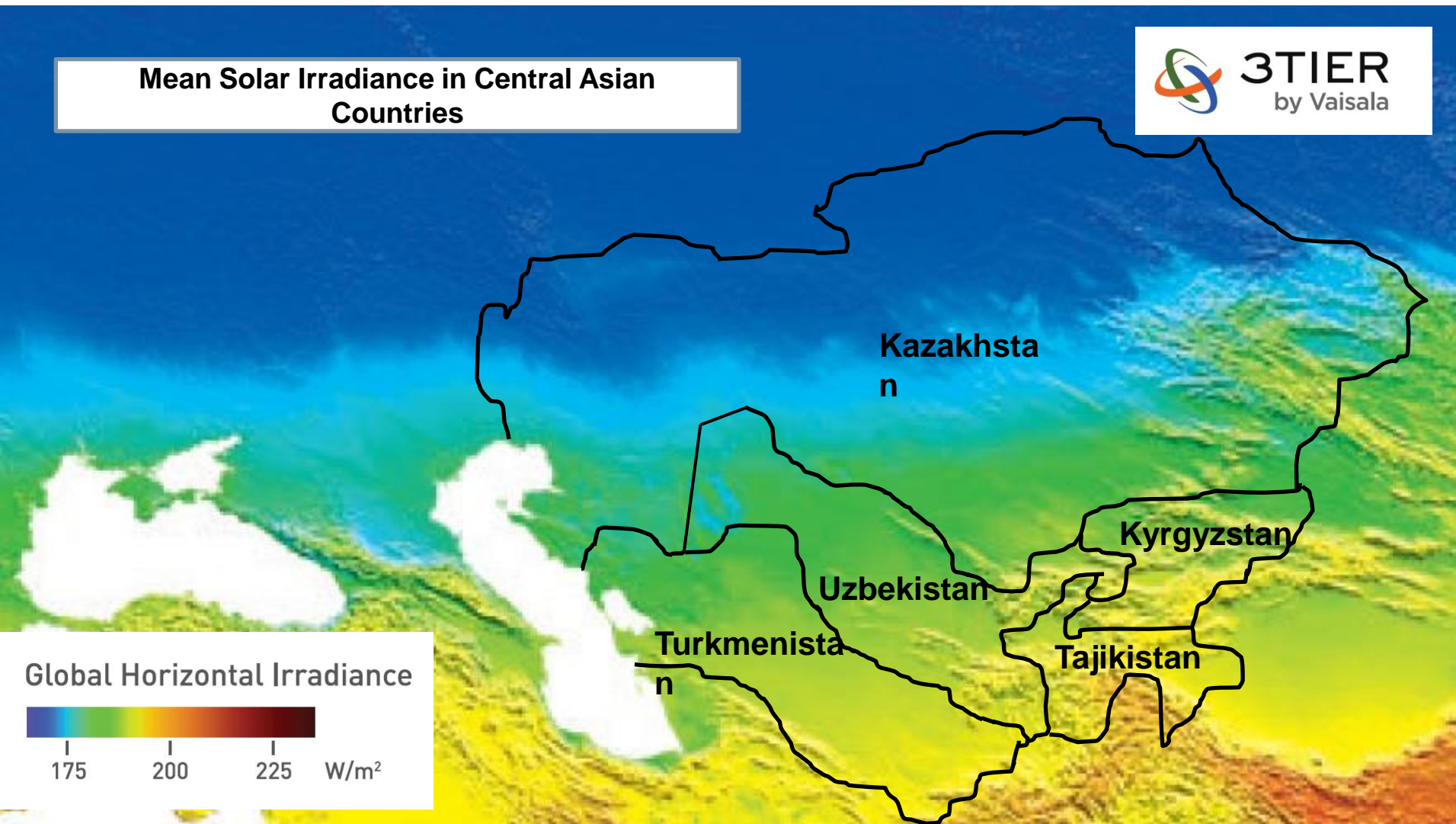


Mean Wind Speed at 80 m in Central Asian Countries



Solar irradiance map in Central Asian countries

Mean Solar Irradiance in Central Asian Countries



Global Horizontal Irradiance



Energy cooperation in Central Asian Countries

After a period of experiment and light collaboration in the last two decades, the energy cooperation between China and Central Asia countries has now entered a more stable and mature phase

The relationship could be characterized by following:

- Extension and diversification of value chain
- More diverse energy cooperation in terms of ownership and contractual structures
- The emergence of multi-dimensional frameworks and mechanism for cooperation
- A growing tendency for Chinese enterprises to seek western partnership in energy investment

1

Oil and Natural Gas Exploitation

- **CNPC: Leading role in Central Asian Countries**
- **Sinopec and CNOOC are also active in downstream**
- **Breakthrough in Uzbekistan, Kyrgyzstan and Tajikistan**

2

Pipelines

- **China-Kazakhstan Oil Pipeline**
- **China-Central Asia Gas Pipeline Phase 2**
- **China-Central Asia Gas Pipeline A, B,C**
- **China-Central Asia Gas Pipeline D (under construction)**

3

Hydropower and Power Grid

- **Most are EPC contracts**
- **Securing electricity supply in Xinjiang**
- **Tajikistan and Kyrgyzstan**

4

Uranium Exploration and

- **Mainly in Kazakhstan and Uzbekistan**

5

Wind and Photovoltaic

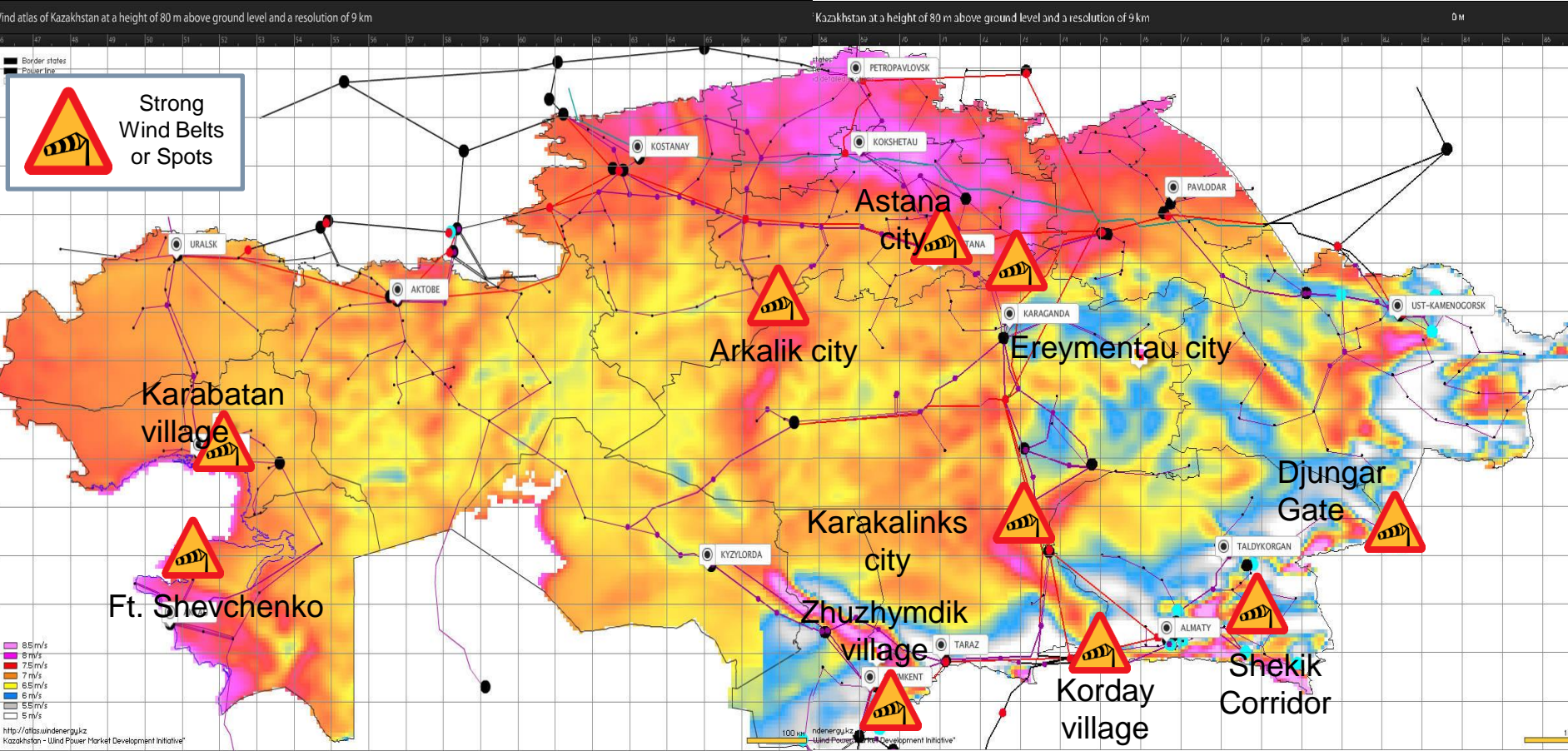
- **Kazakh leading role in wind power**
- **Turkmen and Uzbek leading role in PV**

6

Thermal Power

- **MoU and EPC (Engineering Procurement Construction)**

Chinese investment in strong wind belts in Kazakhstan



Electricity corporation in Central Asia

- RE:
 - Wind
 - Kazakhstan: abundant resource per capita
 - Chinese partner:
 - CGNPC
 - Datang Samruk Mou
 - Jinfeng industry ministry Mou
 - Photovoltaic power
 - Kazakhstan, Turkmenistan and Uzbekistan abundant resource
 - TBEA 500kw project
 - Hydropower
 - Tajikistan ranks 2nd per capita potential, Kyrgyzstan 10% exploited, winter shortage
 - Strategic partner between China Kazak 2005

Electricity corporation in Central Asia

- Grid:
 - TBEA (Tebian Electric Apparatus) 500kV 350km transmission line connect Tajikistan
- Thermal:
 - Kazakhstan:
 - Datang Mou R&D involvement
 - China power engineering consulting group constructed 180MW plant
 - Tajikistan:
 - TBEA 200MW combined cycle power plant
 - Kyrgyzstan:
 - TBEA invest \$386 to modernize Bishkek thermal power plant to 60 MW

Electricity corporation between China and Central Asia

Huge Potential

Energy Transit Risks



Energy cooperation risks

- Political:
 - High sensitivity
 - Every country pays great political attention to energy projects, and are screening domestic energy investments.
 - Can make energy projects chips for political negotiation and that cause a great influence on commercial.
- Economic:
 - High investment risks
 - Exploration, exploitation, transit and deep processing of energy resources are capital intensive.
 - The return period of investment and are long.

Energy cooperation risks in Central Asia

The high risks of energy cooperation are reflected clearly especially in Central Asia.

- In terms of economics
 - Central Asia's private investments are not enough, investment in energy field is mainly from SOEs. Among all of those foreign direct investors, China is the biggest.
 - After the economic crises, the price fluctuation in international energy market influences the stability of Central Asia's energy supply.

Energy cooperation risks in Central Asia

- In terms of politics

Central Asia's geopolitical situation is complicated.

- Internally

- Security situation is severe, there are international and national splittism
- Political and religious extremism
- Terrorists is also a threat to energy cooperation

- Externally

- Russia: backyard
- America: mass military presence (for cracking down Taliban and al-Qaeda)
- The relationships between major countries (China-America, China-Russia etc.) deeply influenced the political and economic process in Central Asia

Energy transit regulation risks

- Core interest of related stakeholders is different
 - Import countries has already invested a lot in energy export and transit countries, want stable supply of energy products. Will undertake the highest risk and have the most concern over stable energy transit.
 - Transit countries don't have enough interest in maintaining energy transit pipelines, unless they can benefit from energy transit projects.
 - Export countries pay more attention to stable export and influx of foreign capital. Aborigines and local communities of resource countries concern more about whether energy investment can bring them benefit.
 - Potential and existed cooperation countries are in competitive position, possibly a cutthroat competition will be formed among importing countries.

Legal framework between China and Central Asia

- There are inter-governmental agreement between China and Central Asia, but without differentiation of disputes, and negotiation is the only way of settlement. (there are commercial agreement between enterprises)
- WTO mechanism can be applied to energy, including transit, but Kyrgyzstan, Turkmenistan, Uzbekistan are not member of WTO.
- There are BITs between China and Central Asia countries, but are old with low protection, arbitration is only for amount of compensation.
- Central Asia countries are all contracting parties of ECT, but China not. Transit article under ECT and dispute settlement mechanism does not apply to China.

China and Central Asia countries legal relation on trade, investment and energy

Central Asia countries	Time of signing ECT (1994)	WTO member or not	BIT with China or not
Kazakhstan	17/12/1994	Observer	10/08/1992
Kyrgyzstan	17/12/1994	20/12/1998	14/05/1992
Tajikistan	17/12/1994	2/03/2013	09/03/1993
Turkmenistan	17/12/1994	No	21/11/1992
Uzbekistan	05/04/1995	Observer	13/03/1992, 19/04/2011

Examples on inter-governmental agreement between China and Central Asia

- China Kazakhstan:
 - agreement on cooperation in oil and gas field
 - agreement on cooperation of gas pipeline construction and operation between Peoples Republic of China and The Republic of Kazakhstan government
 - Double taxation agreement
- China Turkmenistan:
 - General agreement on implementation of China Turkmenistan gas project and Turkmenistan natural gas sales to China
 - The joint statement on further consolidate and develop friendly cooperative relations
- China and Uzbekistan
 - Principle agreement of the people's Republic of China and Uzbekistan on the construction and operation of the Ukrainian gas pipeline

Examples on enterprises agreement between China and Central Asia

- CNPC (China Petroleum and Natural Gas Group Corporation) and Kazakhstan National Petroleum and Natural Gas Co
 - Basic principle agreement on construction and operation of China Kazakhstan natural gas pipeline
 - Basic principle agreement of oil pipeline construction from Atasu in Republic of Kazakhstan to Alashankou in People's Republic of China
- CNPC and Uzbekistan national oil and gas company
 - Principle agreement of the construction and operation of the natural gas pipeline from China to Uzbekistan
- Exceptions: agreement between enterprises and government
 - CNPC and Turkmenistan oil and gas industry and mineral resources Ministry: “Principle agreement on natural gas pipeline construction of China and Turkmenistan”

Deferent energy transit disputes

- Political
- Technical
- Social group conflict
- Environmental
- Safety

Deferent energy transit disputes settlement mechanism

- Local remedy
- Diplomatic negotiation
- Mediation
- International arbitration
- International adjudication

Establish Multilayer dispute settlement mechanism

A multilayer and differently focused energy transit dispute settlement system can meet the policy demand of different parties, and promote the peaceful settlement of energy disputes systematically.

For example: Energy Charter Treaty

- Treaty encourages contracting parties to settle disputes friendly by diplomacy and negotiation (Article 27(1)).
- Treaty stipulates mediation mechanism in which conciliators appointed by secretary-general can facilitate all parties of dispute, and can decide provisional measures (including customs duties and other transit conditions) (Article 7 energy transit (7)©).
- Treaty's inter-state dispute settlement mechanism, (inter-state arbitration), applies to energy transit disputes (Article 27(2)).
- Scope of energy transit disputes probably overlaps with of energy investment disputes. Treaty also stipulates investor-state dispute settlement mechanism, under which private investors can resort the investment disputes against host country (Article 26(1)), including investment disputes of investment contract (Article 10(1)), to international arbitral tribunal.



Cooperation history between Energy Charter and China

Milestones of cooperation between China and Energy Charter

1998

▶ First contact with NDRC

2001

▶ China was invited to become a non-signatory observer country.

2003

▶ First secondee from CNPC arrived at the ECS

2012

▶ NEA delegation headed by Vice Administrator of NEA represented at the 23rd Energy Charter Conference in Poland.

2013-2014

- ▶ 3 visits of SG to China, constructive bilateral meetings with NDRC, NEA, MFA, CNPC, State Grid, ERI and CASS.
- ▶ Approval for CNPC's application for the membership of Industry Advisory Panel.

May 20th, 2015

▶ China signed the International Energy Charter at Hague Conference, becoming a veritable signatory observer

Welcome to the forthcoming event in China

Thank you for your attention!

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