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Speech on the Annual Meeting of China- Brazil Entrepreneurs Committee

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Today, entrepreneurs from China and Brazil are gathering together for future collaboration and growth. It is of great significance to further progress of the comprehensive strategic partnership entered between the two nations, and to the advancement of the bilateral economic ties.



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1. New Breakthroughs in China-Brazil Electricity Cooperation

2. The Promising Future of UHV Power Grid

1. New Breakthroughs in China-Brazil Electricity Cooperation

Energy and electricity are key areas in the cooperation between China and Brazil

- started in 1980s, and prospered in the new century
- covers electricity construction, operation, investment, R&D and etc.
- focuses on large hydro-station development and long-distance transmission





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Major Projects of SGCC in Brazil



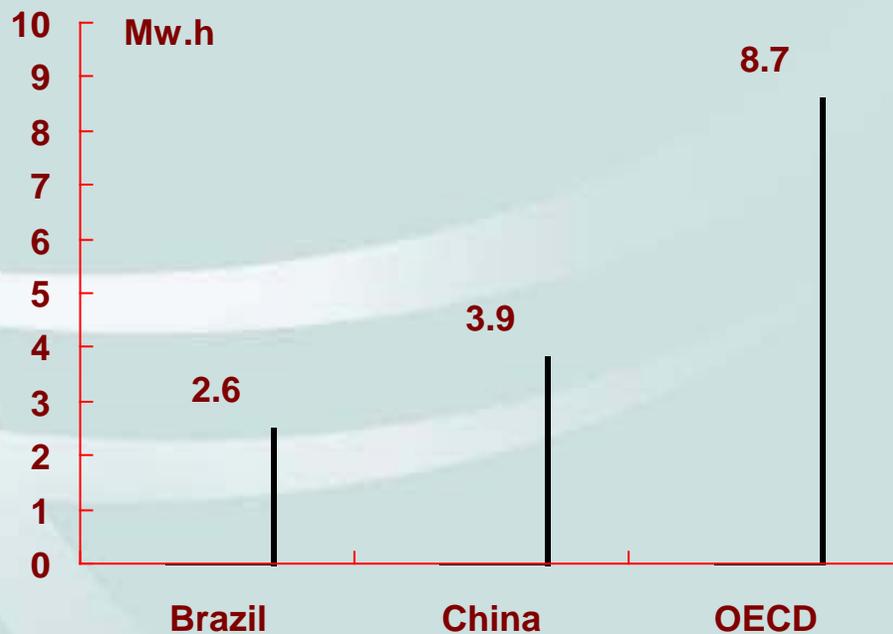
Belo Monte Project is a new milestone for China-Brazil Electric Power Cooperation



Two similar challenges in electricity development between China and Brazil:

- to continuously improve power supply capability
- to continuously optimize resources allocation in a large territory

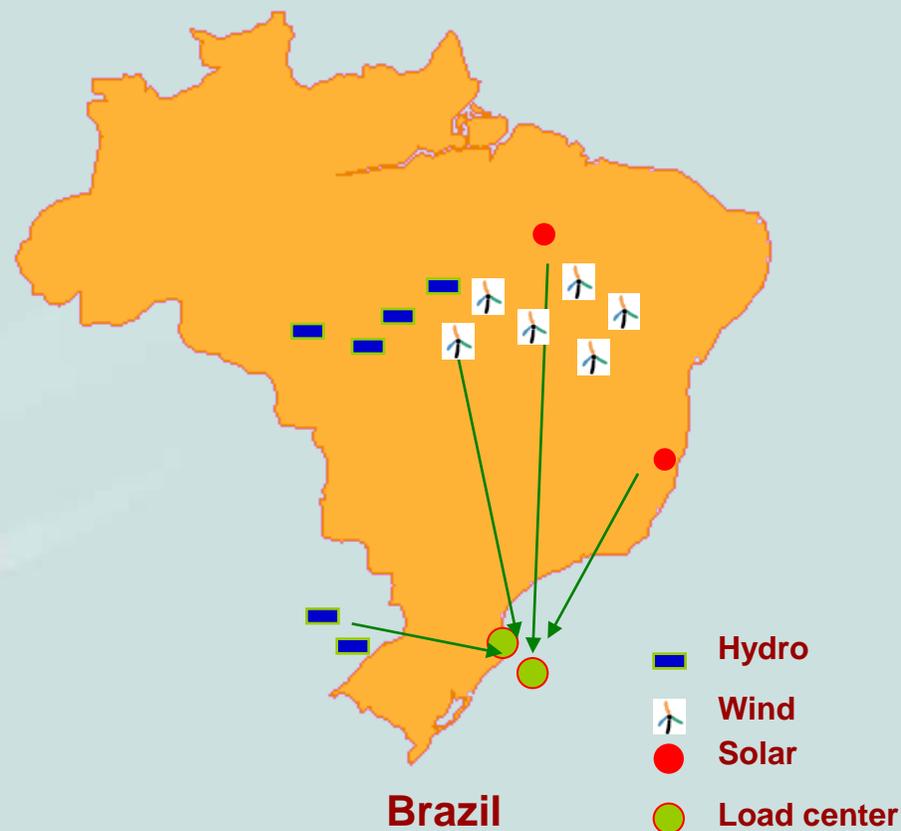
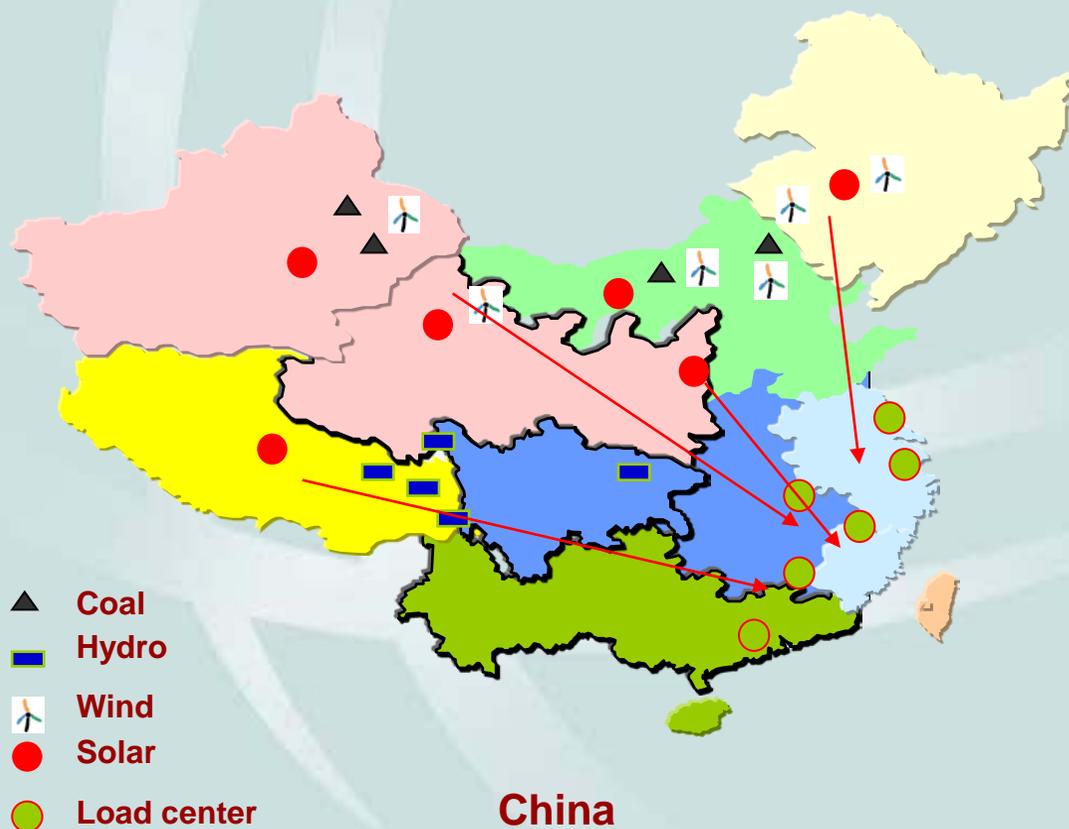
- A great potential for electricity consumption in China and Brazil



Per capita household electricity consumption in 2013

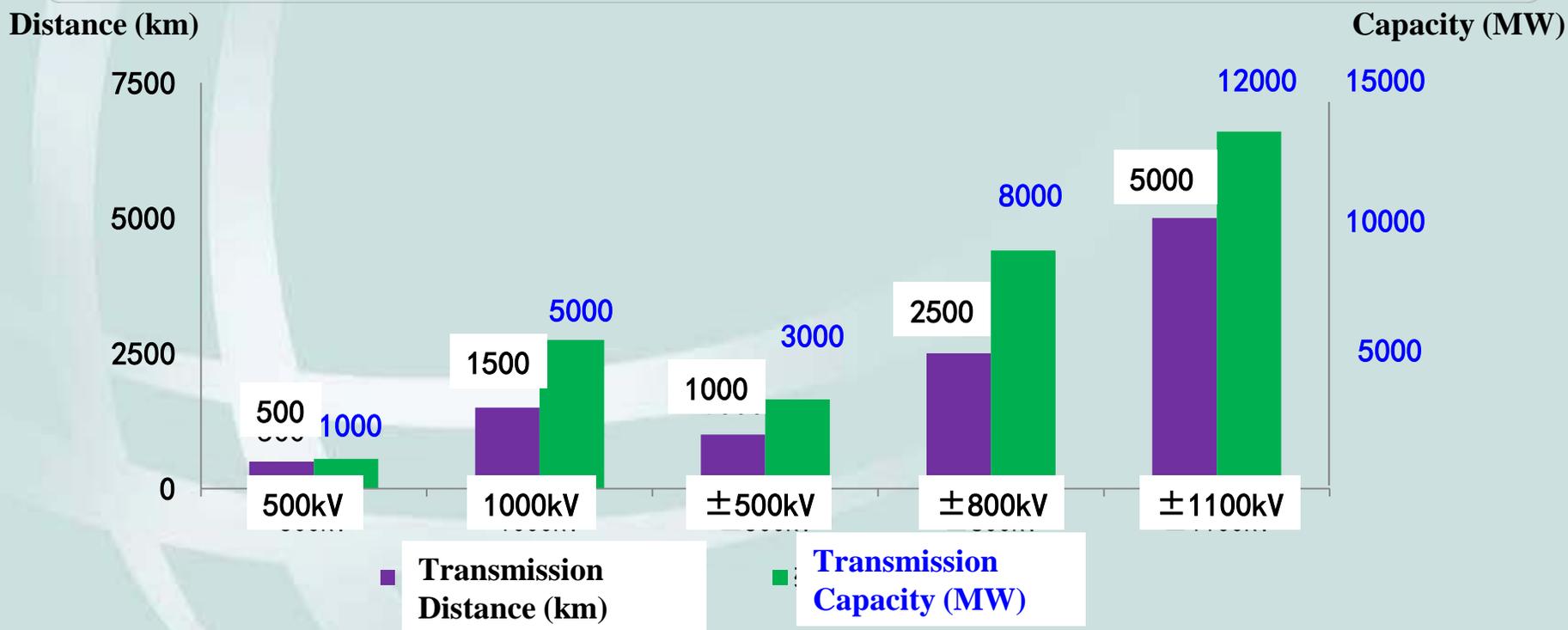


- **Brazil has rich clean energy, but the resource center and the load center are always 1,000-3,000 km apart**





- Both China and Brazil turn to UHV technology
- UHV is an advanced technology for long-distance and large-capacity transmission



Comparison between Transmission Distance and Capacity of UHV

1. New Breakthroughs in China-Brazil Electricity Cooperation

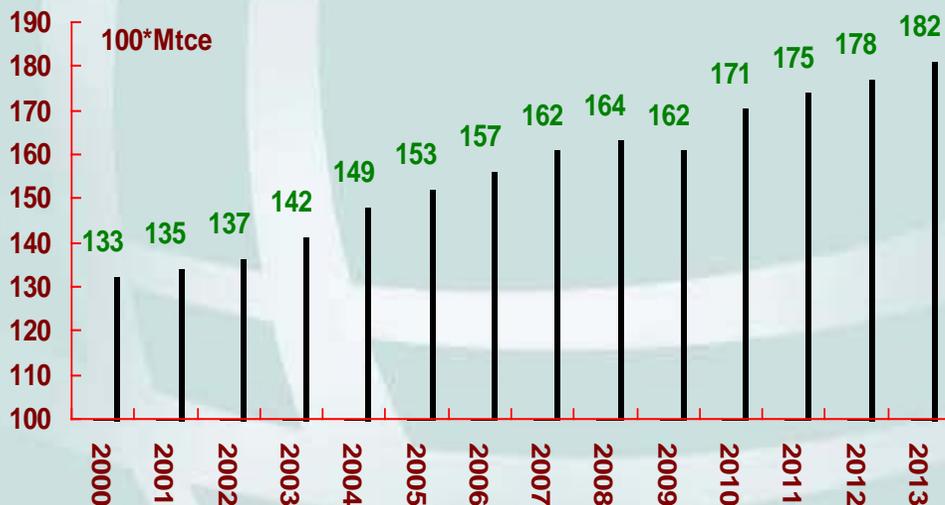
With construction of the UHV power grid, hydro power in the Amazon basin, wind and solar power in northeast Brazil can be transmitted directly to load centers in southwest and east Brazil, and hydro power in southwest China, wind, solar and coal power in north and west China can be sent in large scale to east and central China, effectively achieving a large capacity transmission of clean energy and resources allocation optimization in a big territory like China and Brazil.



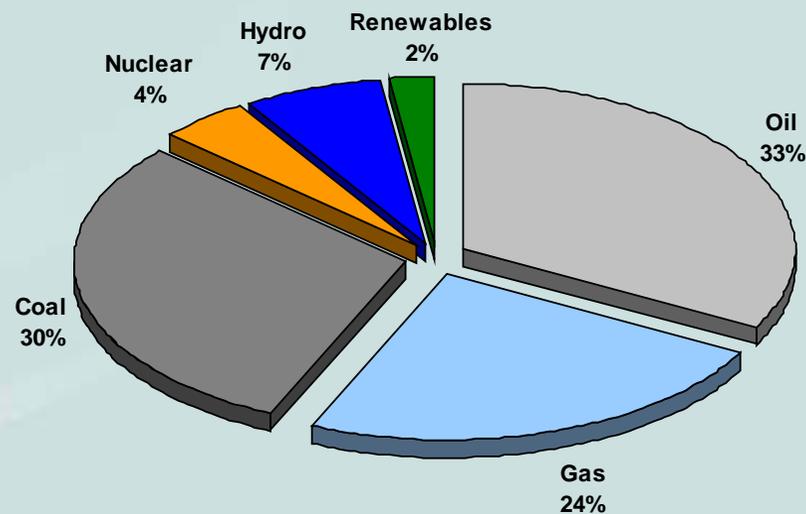
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2. The Promising Future of UHV Power Grid

The energy and environmental issues are getting worse globally in the new century



Global primary energy consumption since 2000



Global primary energy consumption structure in 2013



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Problems caused by large-scale fossil energy exploitation pose a severe threat to the survival and development of our society

large-scale fossil energy exploitation

Resources shortage

Starved supply

Ecological damage

Climate change





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To develop UHV—To promote energy transformation

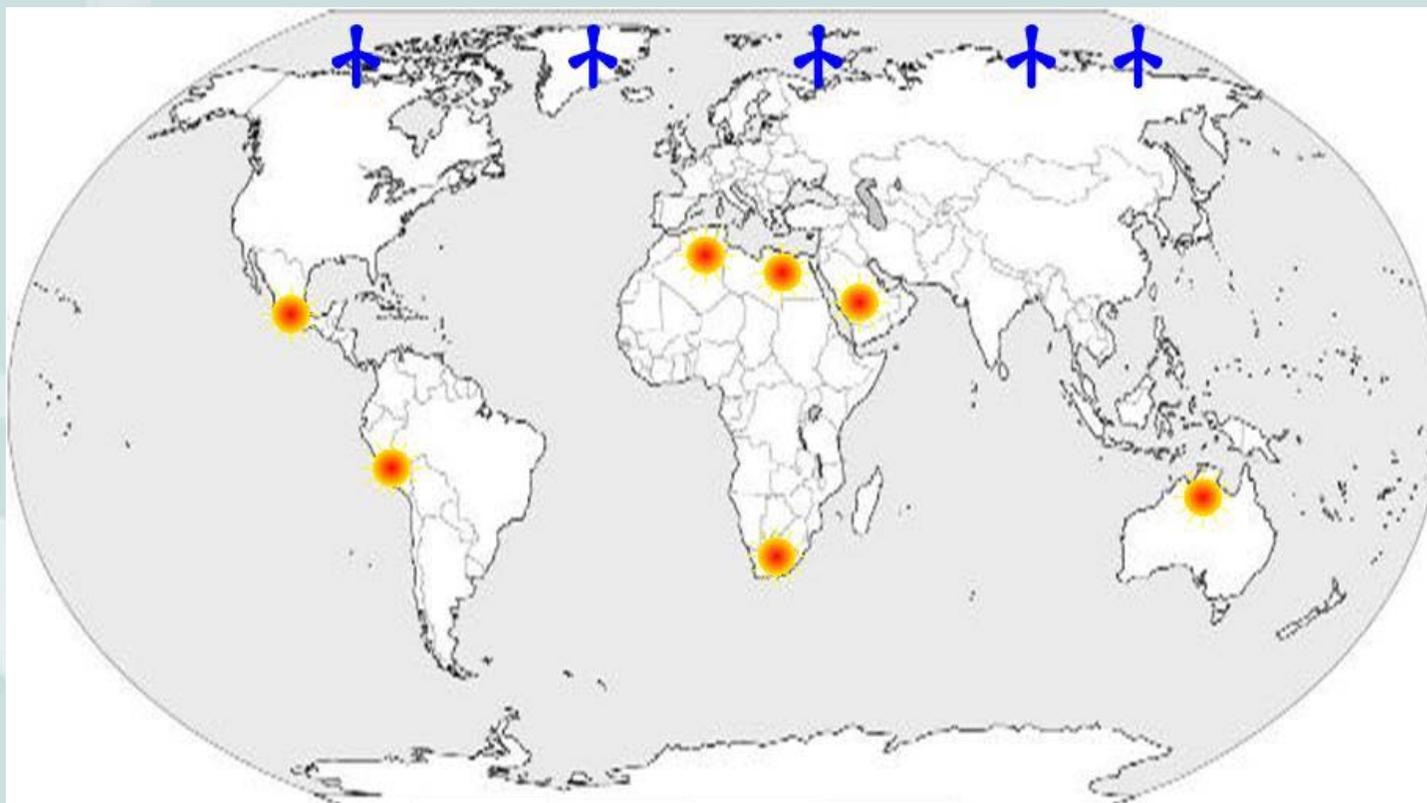
- Push forward a transformation of energy production, allocation and consumption, centering around the development of electricity
- Develop clean energy vigorously
- Optimize energy structure, improve energy efficiency and build a better ecological environment
- Achieve clean development target





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Looking around the world, energy centers of wind and solar power are mainly located in the cold or hot regions and are far away from the load centers—so we need UHV





UHV Development Practice of SGCC

➤ **“1U4L” strategy:** to facilitate the development of UHV and to enhance the intensive growth of large coal, hydro, nuclear and renewable energy bases.

1
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4
L

Electricity
Replacement



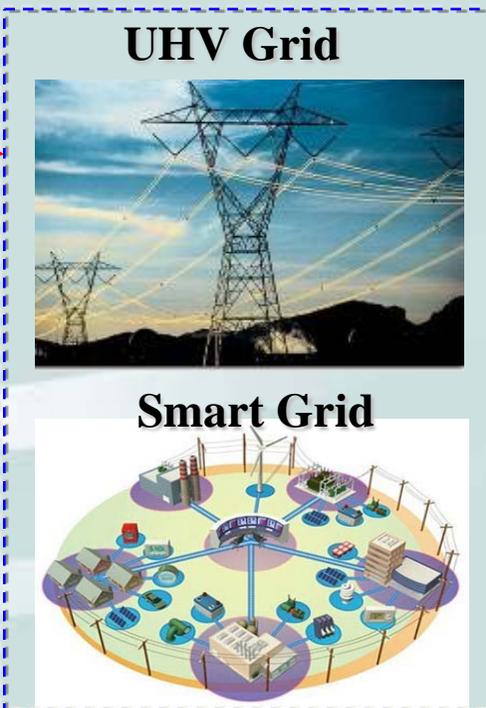
Large coal base



Large hydro base



Electricity replacing Coal



Strong Smart Grid

Large nuclear Base



Large renewable Base



Electricity replacing Gas



Electricity replacing Gas



•Comprehensive Breakthroughs of UHV



•“2-AC & 4-DC”UHV projects

Projects	Voltage Level	Length (km)	Transform Capacity (MVA)
Jindongnan-Jinmen	1000kV	640	18000
Xiangjiaba-Shanghai	±800kV	1907	12800
Jinping-Sunan	±800kV	2059	14400
Huainan-Zhebei-Shanghai	1000kV	2×648.7	21000
Haminan-Zhengzhou	±800kV	2210	16000
Xiluodu-Zhexi	±800kV	1669	16000
Total		9782	98200





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To establish a **“5 Vertical and 5 Horizontal”** UHV AC grid network and **23 circuits** UHV DC lines by 2020





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SGBH is the 4th largest transmission operator in Brazil, serving as a sound foundation for further Sino-Brazilian electricity cooperation

About SGBH

Network Scale	6,748 km transmission lines at 230 kV and above
Staffs	415 in total , and 386 of them are local employees
Total assets	as of June 2014, 7.2 billion BRL, or 3.2 billion USD
Awards	<ul style="list-style-type: none">• “the best enterprise in Brazilian power industry of year 2012” by <i>Valor Econmico</i>• “the best practices of social responsibility management of year 2013” from United Nations Global Compact



Rio Tower, SGHB



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SGCC constructively involves in Brazil power infrastructure construction, striving to provide safe and reliable electricity supply services with good quality, and have fulfilled the task of “FIFA World Cup Security Power”; complying with the Brazilian laws and regulations, respecting the local customs and culture, promoting localization operation, and creating jobs by employing 386 Brazilian staff.





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SGCC actively participates in philanthropy, funding the Brazilian youth program “Road of Culture”, establishing “Male Symphony Orchestra” which volunteers music training for slum children; funding Ping-Pong projects of 10 schools in Rio de Janeiro, building Luneng Sport Base Brazil, to facilitate sport culture exchange between China and Brazil.





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Brazil owns abundant clean energy which is of good quality and big potential. UHV technology is going to enjoy a very promising future here. As for the next step, we shall leverage on the Belo Monte HVDC transmission project and further enhance the growth of UHV in the country. We are looking forward to a wider, more comprehensive and more profound cooperation with our Brazilian counterpart based on a win-win principle, so as to promote a safe, clean and efficient energy development in China and Brazil, and to make greater contribution to a sustainable social and economic development of both countries.



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Thank You!

