

**Deepening Green Partnership Agenda  
among Korea, Japan and China  
(at the CJK Dialogue 2016)  
:From the Fine Dusts to the Asia Super Grid**

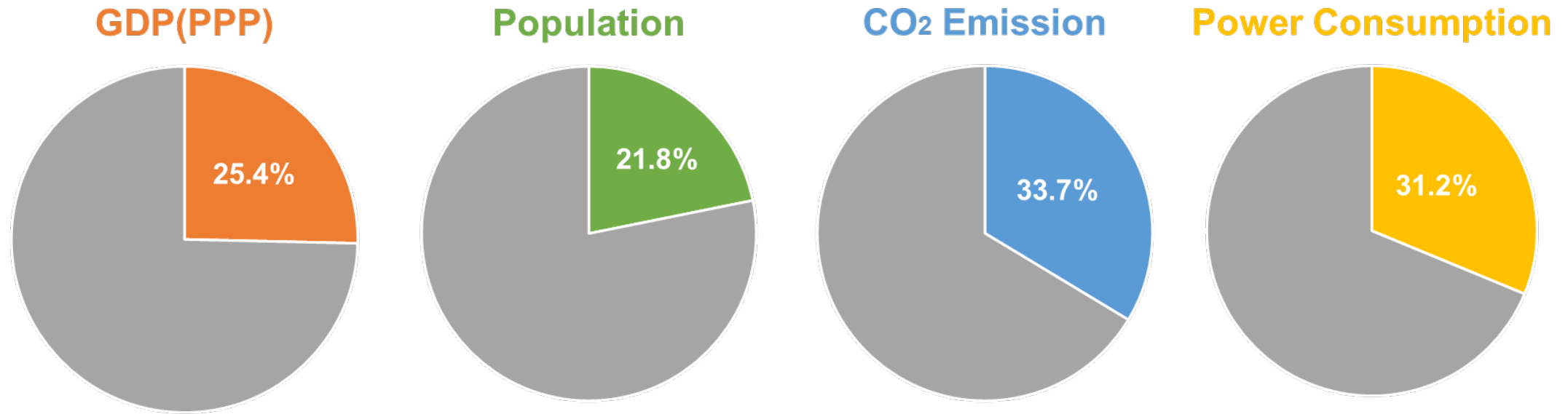
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# Current CO2 and Energy Status of CJK



Source : Statistics Times(GDP 2016), OECD Statistics(Population 2013),  
IEA Statistics(CO2 emission, power consumption 2014)

**China, Japan and Korea share about 22% of world population but account for 34% of global CO2 emission and 31% of global power consumption.**

# INDC of CJK



- intends to reduce CO2 emissions by 37% (BAU) by 2030
- estimates that BAU emissions in 2030 will be 850.6 megatons of CO2 equivalent
- Intends to use international market mechanisms (carbon credits) to achieve its target



- intends to peak carbon dioxide emissions (CO2) by around 2030
- lowers CO2 emissions per unit of GDP by 60-65% from 2005 levels by 2030
- increase the share of non-fossil fuels in its primary energy consumption to around 20% by 2030



- intends to achieve 26% reductions in GHG emissions by 2030 compared to 2013 levels

Source : INDC(Intended nationally determined contributions) to the UNFCCC

# Environment and Climate-Energy : Broadened Framework in Need (ex: SDG)

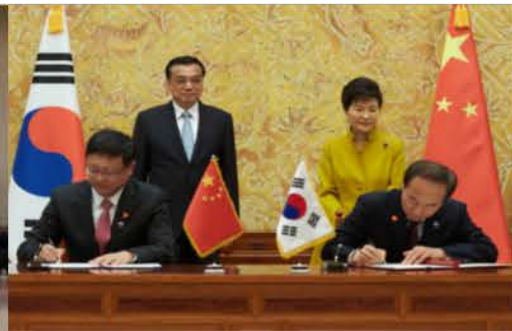
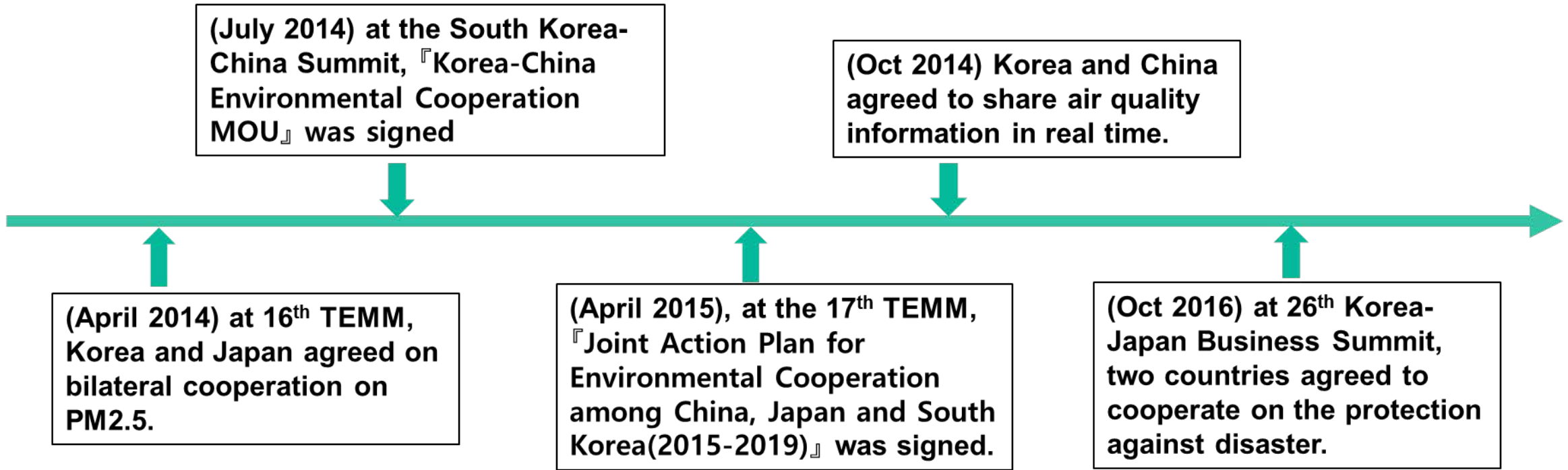


**Environment cooperation in Northeast Asia must be broadly discussed in terms of sustainable development including climate and energy issues.**

Even though most of environmental problems within the region is connected to climate-energy issues, not much approaches have been considered through this angle. We need new thinking on green cooperation in the CJK.



# Evolution of Regional Efforts for Green Cooperation



# Growing Concerns and Interests on Green Cooperation in CJK

Two main agendas are arising to be discussed at the CJK meeting:  
One is **fine dusts**(also known as Particulate Matters) issue,  
the other is **Asia Super Grid** which is now being visualized at last.



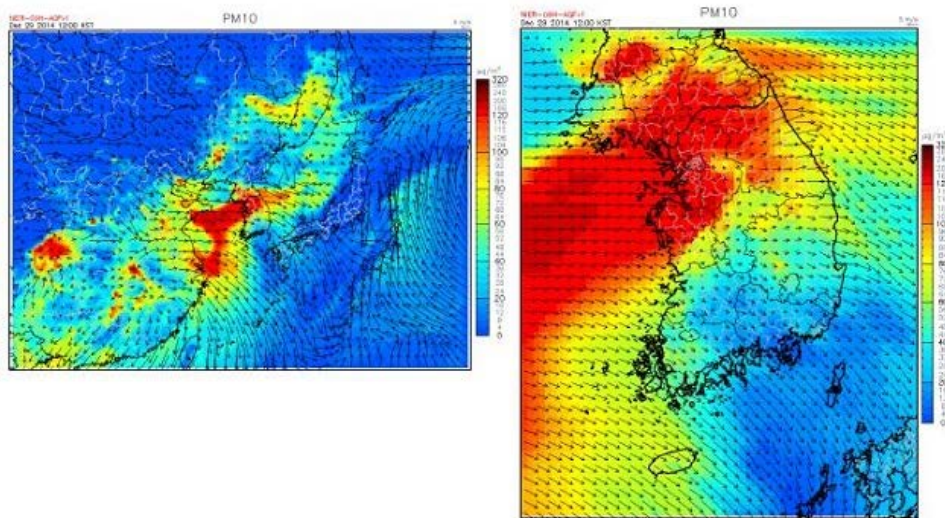
Source : Korean Ministry of Environment



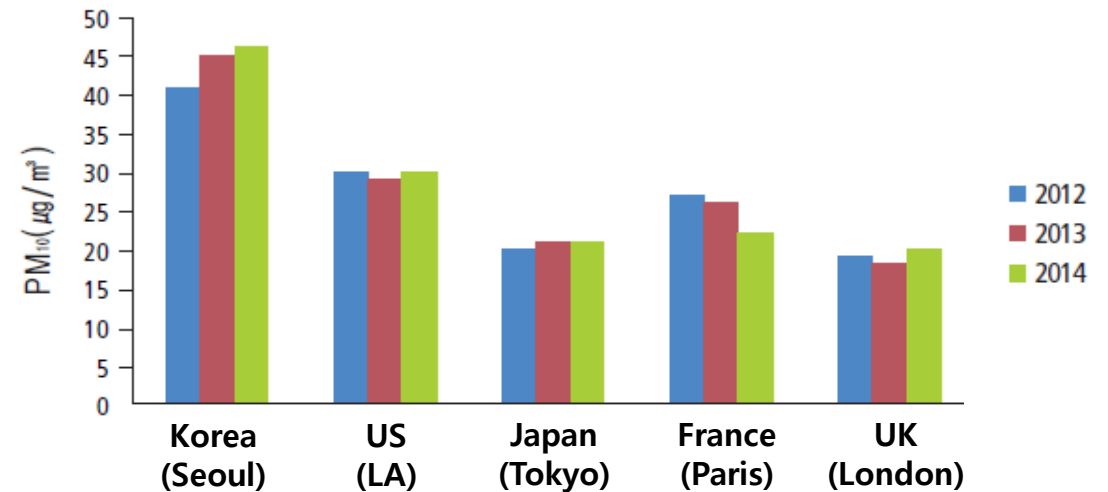
Source : Asia Super Grid

# Imminent Agenda: Fine Dusts (PM)

The problem of fine dust is getting severe in Northeast Asia, especially in South Korea.



Source : National Institute of Environmental Research, South Korea



Source : Korean Ministry of Environment

China, Japan and South Korea are all located on the latitude where the Westerlies affect, so both South Korea and Japan are directly influenced by air condition and attributes in China.

In 2014, the level of PM in Seoul was 1.5 times higher than one in LA, 2.1 and 2.3 times than in Paris and London respectively.



# Imminent Agenda: Fine Dusts (PM)

**Fine dusts problems are directly felt by the citizens in the CJK and therefore can create mutually beneficial platform for deepening green cooperation within a rather short period of time.**



**We need scientific cooperation first for the CJK to build-up mutually reliable fact finding mechanism as soon as possible.**



# Rising Agenda: Asia Super Grid

**Asia Super Grid based upon clean and green energy sources is currently being revealed to the public at last as a feasible way to achieve national emission target and transform towards green economy. (Tokyo Conference in August 2016)**



Source : Shigeki Miwa(2016), "SoftBank's Energy Business and Asia Super Grid".

## New Climate-Energy Era

After Paris Agreement, global communities explicitly and implicitly agreed to reduce CO2 emission and end fossil fuel era.

## 4-Party MOU to promote ASG

SoftBank(Japan), State Grid(China), KEPCO(Korea), Rosseti(Russia) signed 4-party MOU to proceed feasibility study of Asia Super Grid in March 2016.

# The Plan of First Asia Super Grid Project

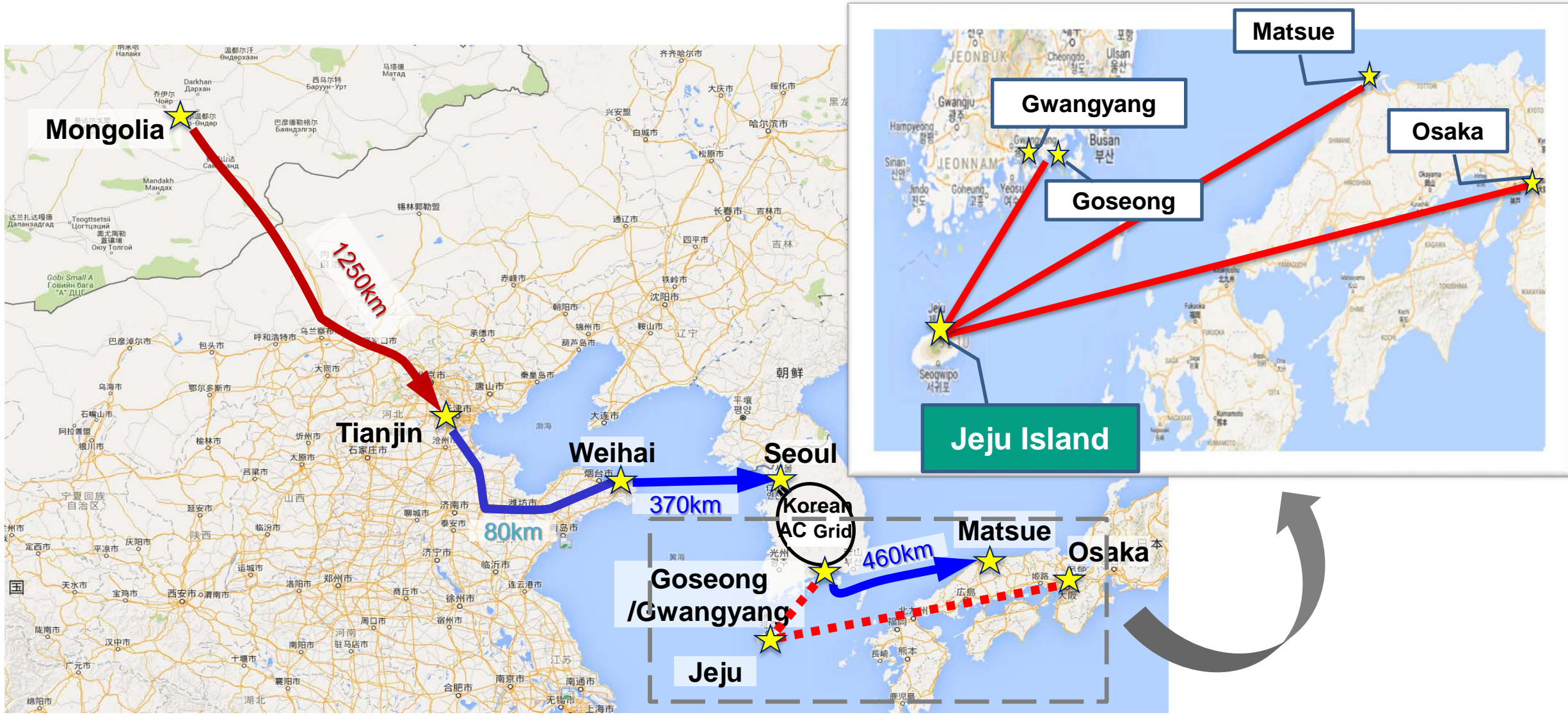
At the World Knowledge Forum in Oct 2016, the plan of first Asia Super Grid project was revealed to link a 2GW electricity grid from Mongolia to Japan via China and Korea.



Source : Yuxiang Yuan(2016). "Building Global Energy Interconnection and Accelerating Construction of Green Asia



# From Mongolia to Jeju Green Big Bang

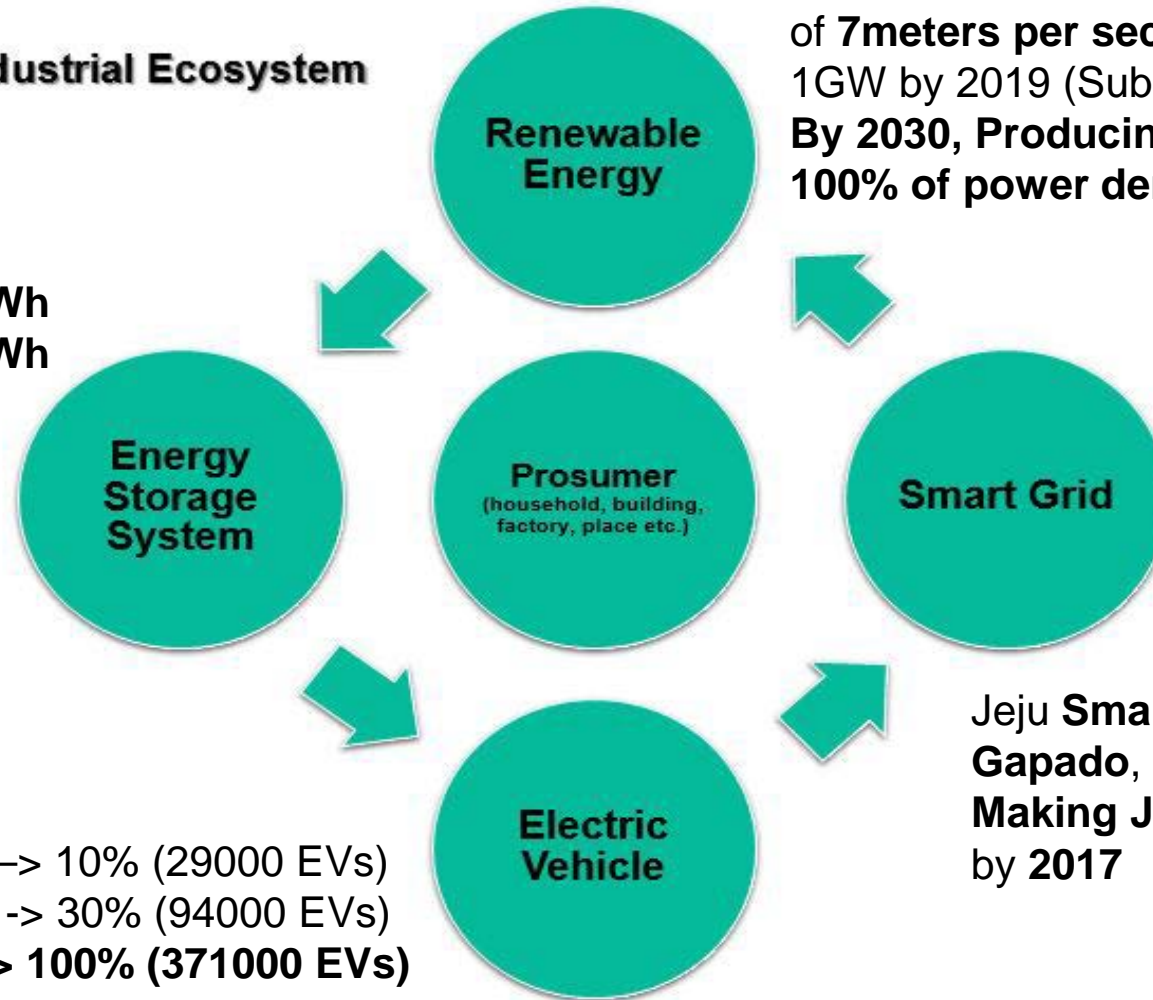


# Jeju Green Big Bang

**New Industrial Ecosystem**

Chocheon Substation -> 8MWh  
Gapado, micro lead ->1MWh

**Offshore Wind Power:** Wind blows at a speed of 7meters per second in average Producing 1GW by 2019 (Substitute 50% power demand)  
**By 2030, Producing 2.3GW & substitute 100% of power demand**



**Best place as EVs test-bed with 183km coastal road**  
**EVs for Public Sector by 2017 -> 10% (29000 EVs)**  
**Public Transportation by 2020 -> 30% (94000 EVs)**  
**Commercial Vehicle by 2030 -> 100% (371000 EVs)**

Jeju **Smart Grid Test-Bed** in 2013  
**Gapado, Jeju Island 'Carbon Free Island'**  
**Making Jeju as center city of smart grid by 2017**



# Trilateral Summit in December 2016

**Asia Super Grid and Green Big Bang can bring about new rapprochement in the region and deserves to be a meaningful agenda at the Trilateral Summit among CJK which will be held this December.**



Chinese President Xi Jinping proposed to “discuss the construction of Global Energy Interconnection(GEI)” at the UN Sustainable Development Summit in 2015.



Japanese Prime Minister Shinzo Abe tries to reinforce the economic partnership with Russia and Mongolia to promote mutual trade and investment.



Korean President Park Geun-hye proposed “the Eurasia Initiative” and emphasized the importance of climate-energy cooperation.

President Park recently met with Masayoshi Son, the chairman of SoftBank, and discussed future cooperation.

**THANK YOU**