



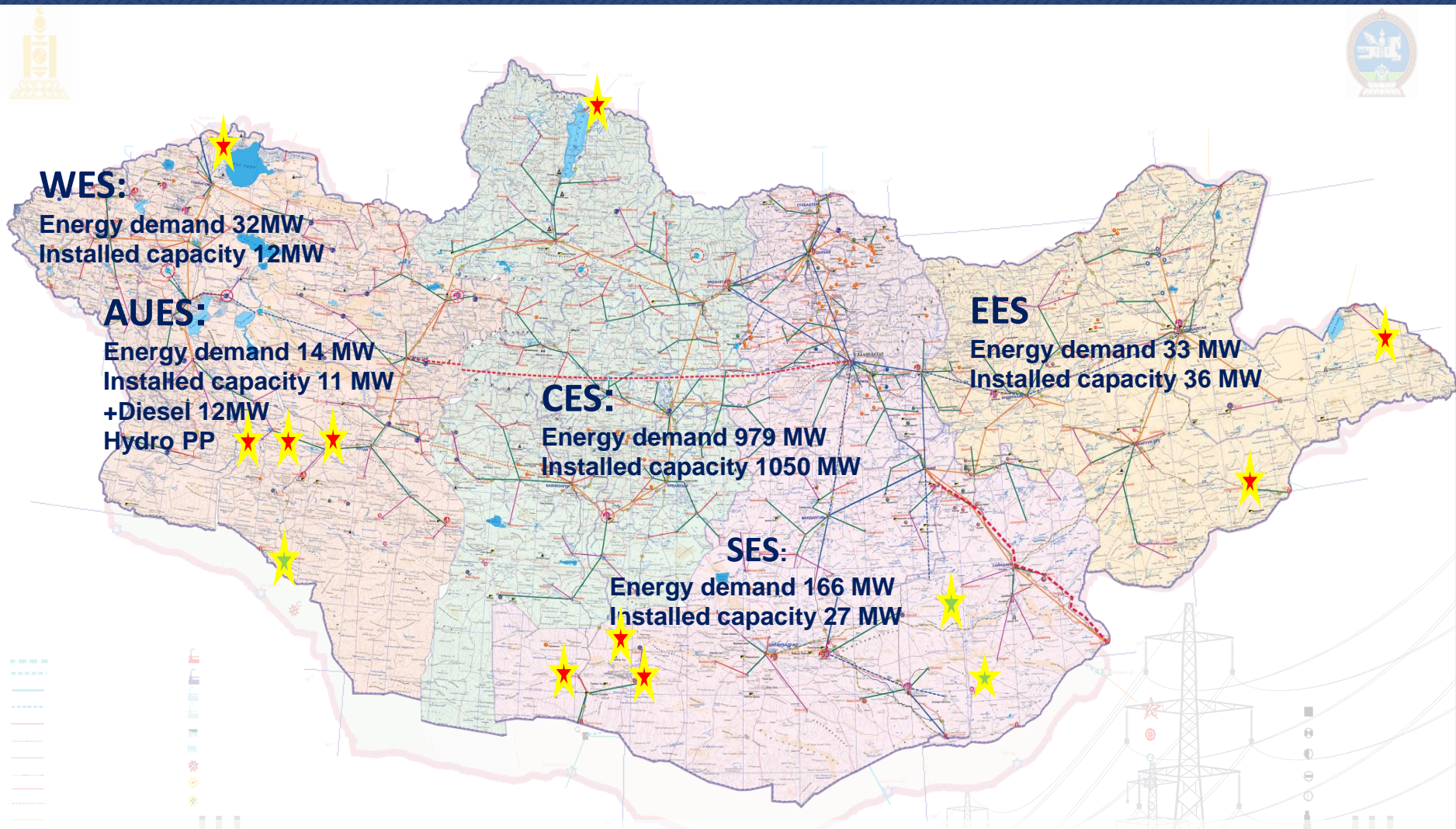
МОНГОЛ УЛСЫН ЗАСГИЙН ГАЗАР  
**ЭРЧИМ ХҮЧНИЙ ЯАМ**

# **ENERGY SECTOR CURRENT STATUS, ITS INFLUENCE IN GREENHOUSE GAS EMISSION REDUCTION**

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**2017**

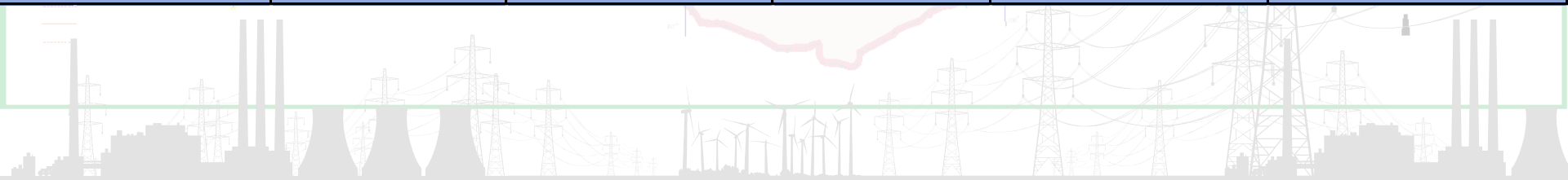
# Current status of Mongolian power sector 2015



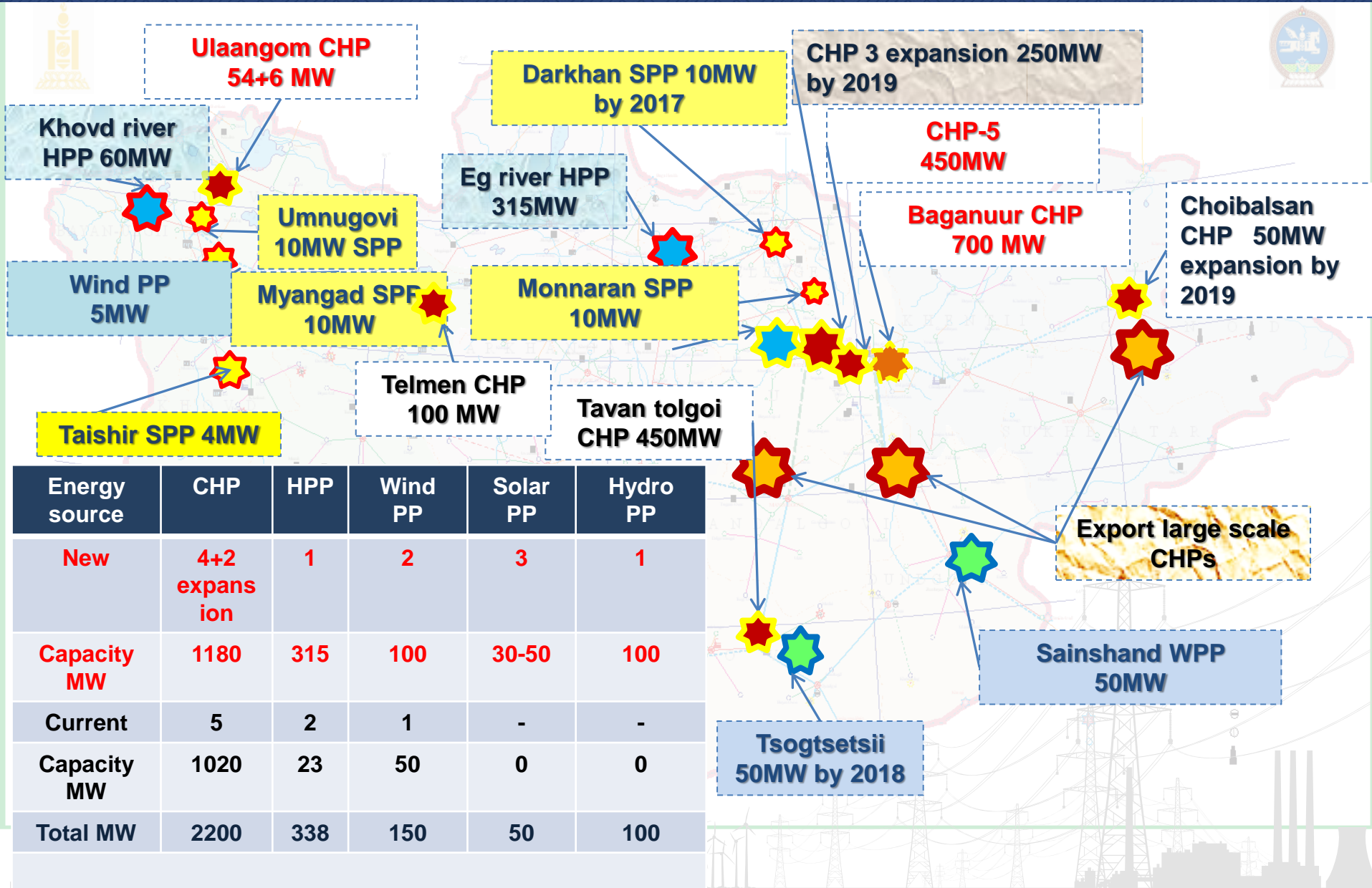
Mongolian 329 out of 330 soum centers are connected to the grid. 1 soum which isn't connected to the grid provides its electricity from renewable sources.



Name	Factories	Household		Total # of consumers	Percentage	
		Residential	Rural			
1	CES	38,493	231,608	253,107	523,208	86.2%
2	WES	3,686	2,809	22,269	28,764	4.7%
3	EES	2,192	5,953	14,852	22,997	3.8%
4	SES	1,233	1,415	8,794	11,442	1.9%
5	AUES	1,376	2,217	16,978	20,571	3.4%
<b>Total</b>		<b>46,980</b>	<b>244,002</b>	<b>316,000</b>	<b>606,982</b>	<b>100.0%</b>



# New energy sources to be installed by 2020



Energy source	CHP	HPP	Wind PP	Solar PP	Hydro PP
<b>New</b>	<b>4+2 expansion</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>
<b>Capacity MW</b>	<b>1180</b>	<b>315</b>	<b>100</b>	<b>30-50</b>	<b>100</b>
<b>Current</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>-</b>
<b>Capacity MW</b>	<b>1020</b>	<b>23</b>	<b>50</b>	<b>0</b>	<b>0</b>
<b>Total MW</b>	<b>2200</b>	<b>338</b>	<b>150</b>	<b>50</b>	<b>100</b>

## PRIORITY AREAS AND STRATEGIC GOALS

### SECURITY

4. Transform the state dominated energy sector into **private based competitive market**
5. Support innovation and advanced technology in energy sector, and implement conservation policy

1. **Ensure energy security and reliable supply**
2. Develop mutually beneficial cooperation with regional countries
3. Develop a human resource

### STATE POLICY ON ENERGY

### EFFICIENCY

### ENVIRONMENT

6. Increase the production share of **renewables and reduce negative environmental impact** from traditional power generation and greenhouse gas

Name of documents	Approved	Update and status
<b>Legal frameworks</b>		
Energy law of Mongolia	2001	2011 and 2015
Energy Efficiency Law of Mongolia	2015	
Renewable Energy Law of Mongolia	2007	2015
Exempt from customs and VAT tax on renewable energy equipment	2015	
Government plan (2016-2020)	2016	
Small scale grid connected renewable energy system integration	2017	(to be approved)
<b>Development programs</b>		
State Policy on Energy	2015	
Mid-term plan	2017	

## For grid-connected renewable energy power sources

- ✓ US\$ 0.08-0.095 per kWh of electricity generated and delivered by a wind power source,
- ✓ US\$ 0.15-0.18 per kWh of electricity generated and delivered by a solar power source,
- ✓ US\$ 0.045-0.06 per kWh of electricity generated and delivered by a hydro power plant with capacity of less than 5000 kW;

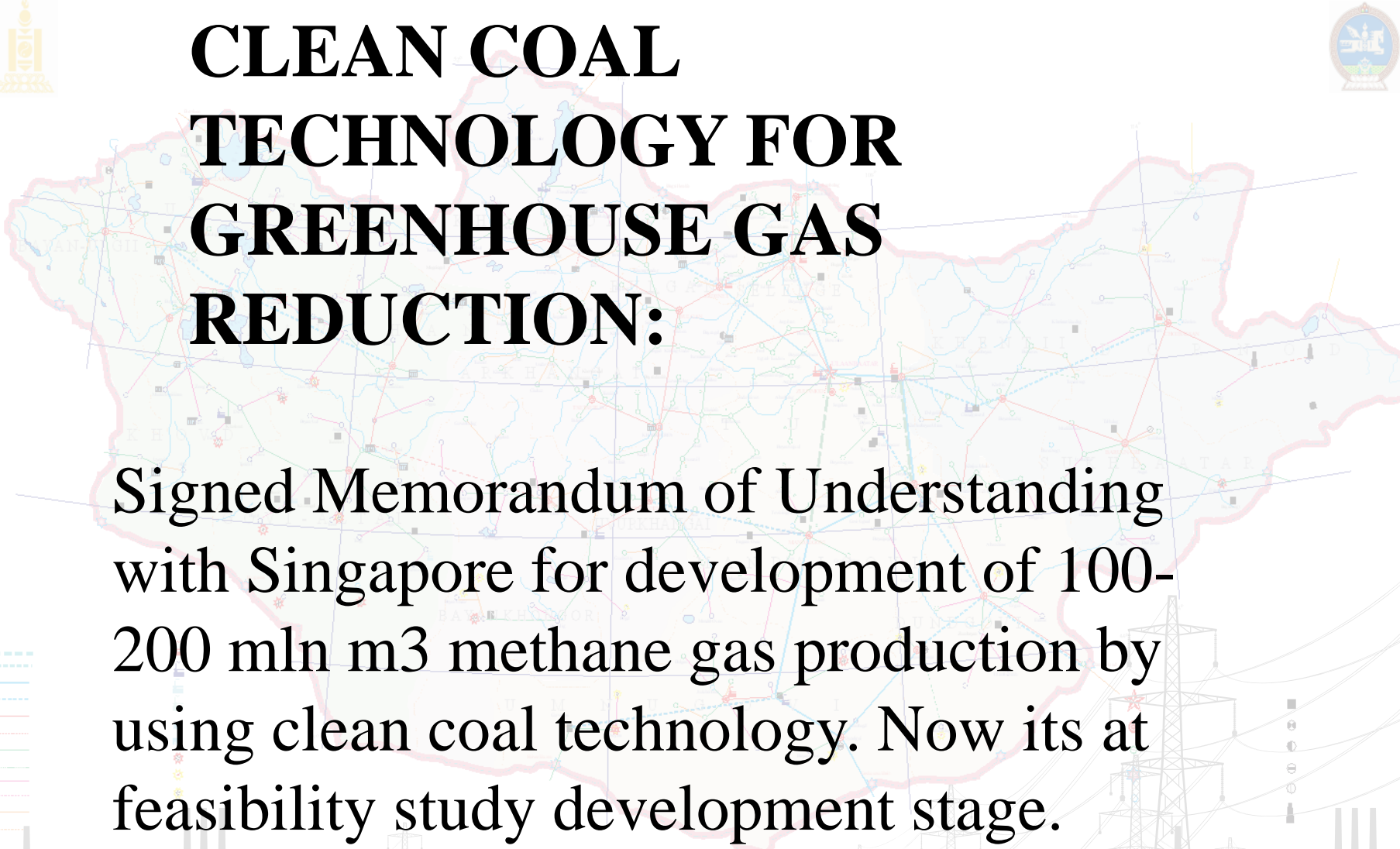
## For stand-alone renewable energy power sources

- ✓ US\$ 0.10-0.15 per kWh of electricity by a wind power source,
- ✓ US\$0.08-0.10 per kWh of electricity by a hydropower plant with capacity of less than 500 kW
- ✓ US\$0.05-0.06 per kWh of electricity by a hydropower plant with capacity of 501-2,000 kW;
- ✓ US\$0.045-0.05 per kWh of electricity by a hydropower plant with capacity of 2,001-5,000 kW;
- ✓ US\$ 0.2-0.3 per kWh of electricity by a solar power source.

## **Government initiated renewable programs**


- **Eg river 315 MW hydropower plant**
- **Erdeneburen 60MW**
- **Scaling up renewable energy program (SREP) in western region**  
**(10MW solar PP, 5MW wind PP, 1MW hydro PP**  
**(rehabilitation of Uyench HPP))**
- **National solar PV rooftop program**



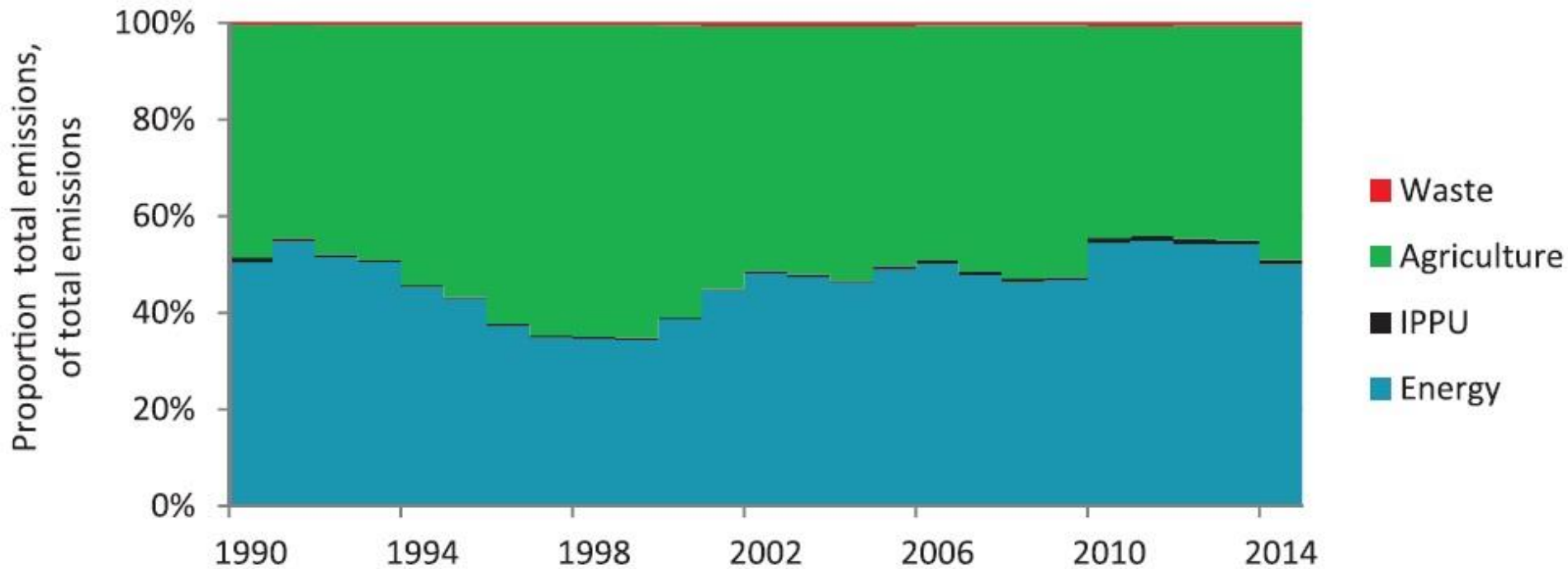


# CLEAN COAL TECHNOLOGY FOR GREENHOUSE GAS REDUCTION:

Signed Memorandum of Understanding with Singapore for development of 100-200 mln m<sup>3</sup> methane gas production by using clean coal technology. Now its at feasibility study development stage.



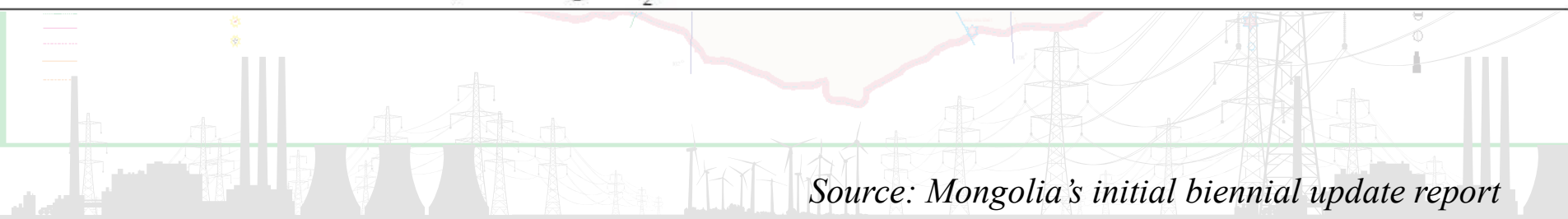
# Power sector contribution to greenhouse gas emission (1990-2014)



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# Greenhouse gas emission reduction by implementing energy efficiency programs (until 2030)

Indicators		2010	2015	2020	2025	2030
Transmission and distribution loss	Total resource electricity %	13.5	14.2	10.8		7.8
	Reduction, 1,000 Gg CO <sub>2</sub> e	-	-	0.1		0.3
Internal energy use of CHP plants	Produced electricity %	15.6	14.1	11.2		9.1
	Reduction 1,000 Gg CO <sub>2</sub> e	-	-	0.3		0.9
Insulation of building and apartment	Apartment number, %			50		90
	Reduction 1,000 Gg CO <sub>2</sub> e	-	-	0.9		1.3
Number of households with LED light	Urban households, %			60		90
	Reduction 1,000 Gg CO <sub>2</sub> e	-	-	0.1		0.1
Share of low fuel consumption vehicles in total number of vehicle, %	Hybrid, gas and electric transportation, %	-	6.5	8.7		13
	Reduction 1,000 Gg CO <sub>2</sub> e	-		0.1		0.2
Total GHG emission reduction, 1000 Gg CO <sub>2</sub> e					1.5	2.8



Source: Mongolia's initial biennial update report



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**THANK YOU**

Website: <http://www.energy.gov.mn/>

