

# JAPAN'S ELECTRICITY MARKET REFORM AND ITS IMPLICATIONS FOR ELECTRIFICATION

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# **Goals and Approaches of the Reform**

### Goals

- Secure stable supply of electricity by facilitating power interchange between regions.
- Hold down increasing tariffs as much as possible.
- Increase consumers' choice while expanding business opportunities.

### Approaches

- Comprehensive measures covering electricity, gas and heat.
- Step-by-step approach with flexibility and a verification process.
- Give due regard to energy mix, especially nuclear and renewables.

# **Electricity Market Reform Roadmap**



### **Share of New Entrants**

• The share of new entrants, which remained below 3% until last year, amounts to 11% now.



# **Switching Rates**

 As many as 4 million households, 6% of the total, have switched electricity suppliers from the incumbents to new entrants. Another 5% have switched tariffs without changing suppliers.

	Switching to	New Entrants	Switching to New Tariffs (No change of suppliers)		
Area	Number (thousand)	Ratio (%)	Number	Ratio (%)	
Hokkaido	179	6.5	7	0.3	
Tohoku	136	2.5	3 1	0.6	
Tokyo	2,005	8.7	753	3.3	
Chubu	311	4. 1	1, 114	14.6	
Hokuriku	2 3	1. 8	14	1. 1	
Kansai	805	8.0	386	3.8	
Chugoku	4 7	1.3	387	11.1	
Shikoku	4 0	2.1	6 7	3.5	
Kyushu	226	3.6	125	2.0	
Okinawa		_	1	0.2	
Total	3,769	6.0	2,885	4.6	

#### Switching Cases (as of June 2017)

### **Massive Deployment of Smart Meters**

- In accordance with the full retail market liberalization, a massive number of smart meters are scheduled to be deployed.
- The deployment will be accelerated until 2020, when as many as 67 million will be deployed.



5

### **Trading Volume on Power Exchange**

• Trading volume on the power exchange has been growing rapidly over the past year, amounting to a record high of 5% of total sales now.



# **Market Reform and Electrification**



# **Promotion of EVs**

 Setting a target of 10 million EVs and PHVs in 2030, Japan aspires to introduce EVs with a variety of measures including taxes and subsidies.

EV	& PHV	Promotion	<b>Targets</b>
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		2016		2030	
		Sales	Stock	Sales	Stock
EV• PHV	share	0.59%	0.26%	20~30%	16%
	units	25,181	160,203	-	(10 million)



- With a view to facilitating introducing EVs, Japan puts <u>a preferential tax</u> <u>treatment</u> into practice. Tax reduction on EVs accounts for 5% of the vehicle price.
- The government has decided to encourage auto manufactures to extend EV driving range by *providing subsides* according to the maximum range on a full charge.

- The Japanese government has spent more than 55 billion yen (=500 million dollars) for battery chargers. Thanks to this subsidy, there are currently about 28,000 public chargers.

### Demonstration of Power-to-gas (P2G)

- Power-to-gas, which converts electricity to hydrogen, is an effective way to make the best use of an abundant surplus renewable energy.
- For the purposes of practicing power to gas, R&D and demonstration projects are underway.

