

Korean PV Market & Policy

April 28th, 2017
48th PVPS Task 1

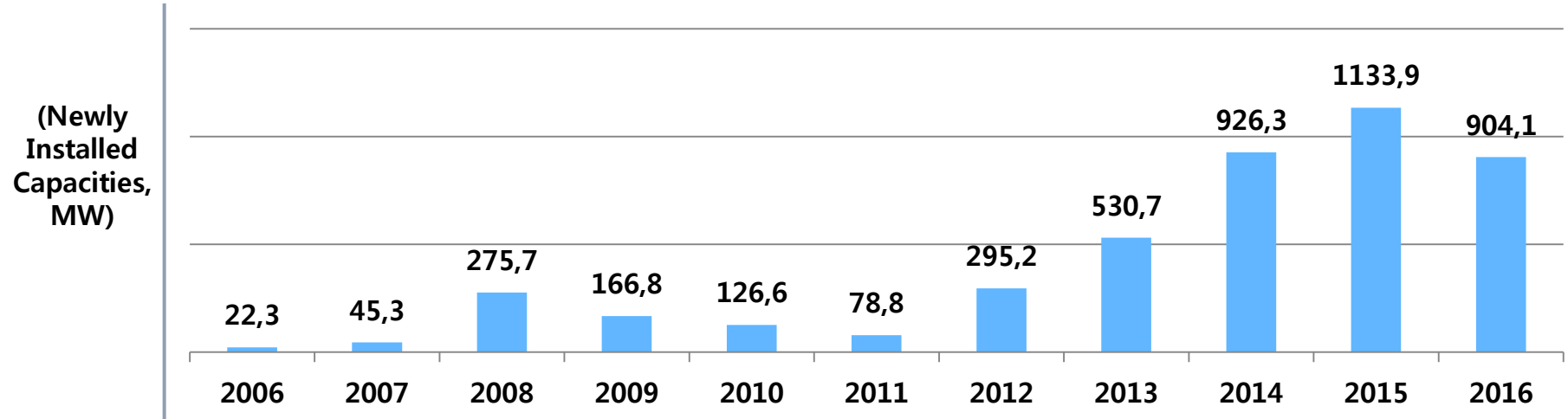
Inchul HWANG

1. PV Market

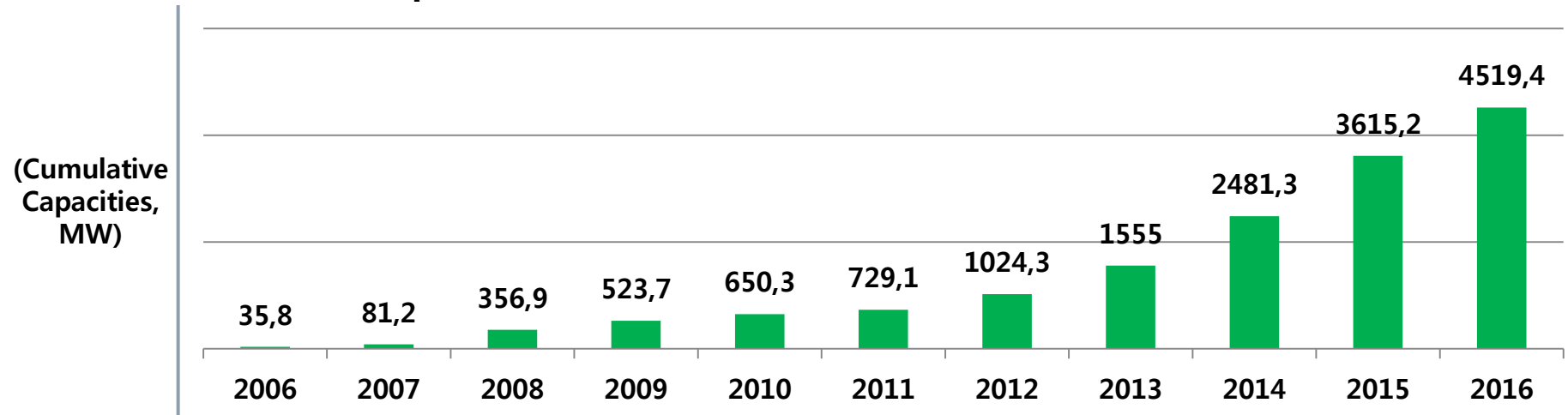


PV Installation

◆ Annual Installation



◆ Cumulative PV Capacities

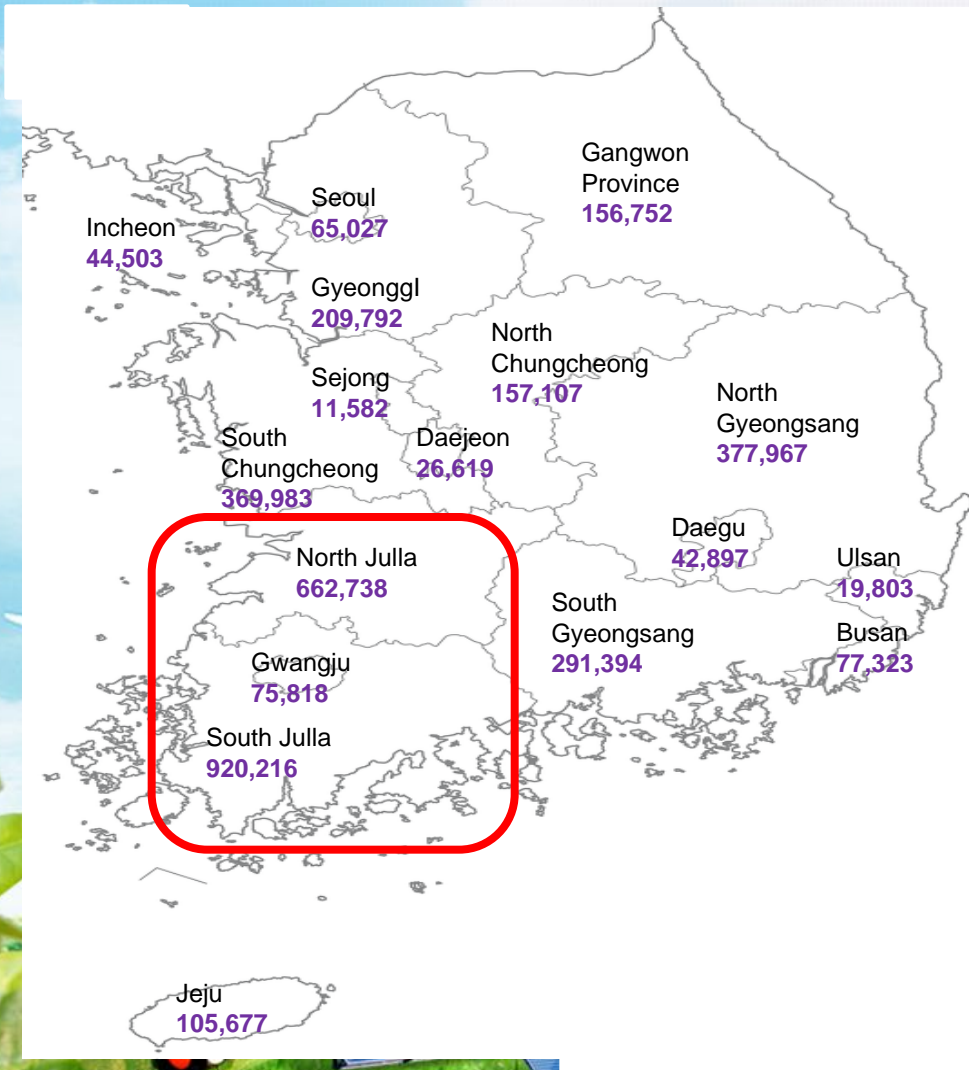


Installed Capacity by Policy Schemes

Policy Schemes	Installed Capacity (MW)		
	2014	2015	2016
Subsidies for Residential Installation	22.4	26.8	27.5
Subsidies for Building Installation	5.1	6.0	6.3
Subsidies to Local Governments	11.0	14	11.6
Subsidies for Hybrid Installation	5.6	6	7.1
Public Building Obligation	16.0	33	39.8
PV Lease	1.0	8.0	8.0
RPS(Renewable Portfolio Standards)	865.2	1,040.1	803.8
Total Capacity(MW)	926.3	1,133.9	904.1

Geographical Distribution of PV Installation

[kW, 2015]



- ◆ Jeolla Province(North Jeolla+South Julla) accounts for 45% of Korean PV installation in terms of accumulated capacities by 2015.
- ◆ North Gyeongsang & South Chungcheng have been emerging as 3rd or 4th places to install PV systems.

[Source: Korea Photovoltaic Industry Association]

2. PV Policy

Long-term PV Plan

◆ RPS Goal

	PV	Wind	Hydro	Ocean	Bio	Waste	Fuel Cell	By-product Gas	IGCC	Sum
Cumulative Installation by 2029(MW)	16,565	8,064	1,824	1,025	193	168	1,351	2,800	900	32,890
Power Generation (GWh)	21,210	16,663	6,957	1,819	847	331	8,081	20,873	6,307	83,088
Share in RE Generation (%)	26	20	8	2	1	-	10	25	8	100

Fixed Tariff Bidding in RPS

<Long-term Fixed Tariff Contract>

	Before	After
Subject Capacity	Less than 3MW	No restriction
Bidding	REC	SMP+REC
Contract Term	12 years	20 years

* REC: Renewable Energy Certificate, SMP: System Marginal Price

◆ Introduced in 2017 to ensure the predictability of PV profits

◆ PV Tariff

[unit: KRW/kWh]

	2012	2013	2014	2015	2016
SMP	160.83	152.10	142.26	101.76	77.06
REC	170.65	131.39	112.59	72.08	99.89
Sum	331.48	283.49	254.85	173.84	176.95

* USD 1 \approx 1,150 KRW

Promotion of Community-driven PV Projects

Objective	Promote PV projects in which community residents invest
Subject PV	▶ Bigger than 1MW
Qualification	Registered inhabitants within a radius of 1km from PV site
Investor Composition	Minimum investors(5) + Maximum investment per person (30%)
Incentive	<ul style="list-style-type: none">▶ Weighted value is added to REC of Community-driven PV<ul style="list-style-type: none">- Residents' participation (10% ↑) + Residents' investment (2% ↑) ⇒ 0.1 is added to REC- Residents' participation (20% ↑) + Residents' investment (4% ↑) ⇒ 0.2 is added to REC

◆ Korean ESS Market

- ESS capacity was 239 MWh in 2015 and it was mainly for Frequency Regulation and Peak Shaving

* ESS: Energy Storage System

- ESS for RE was 96 MWh in 2015 and its share will be increased

◆ RPS Incentive

- Weighted value(0.5) is added to REC of PV+ ESS system

◆ Public Procurement

- Public buildings with power contract of more than 1MW are required to install ESS with capacity of more than 5% of their power contract

◆ Power Tariff Discount

- 50% discount for charging ESS

Thank you