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Economic Cooperation

Operation Technology of Solar Photovoltaic Power Station Roof and Policy Framework

Expert Group on
New and Renewable Energy Technologies (EGNRET)
Of Energy Working Group (EWG)

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1 Introduction

1.1 Background

The 2011 APEC Economic Leaders' Declaration called on economies to speed up the transition towards a global low-carbon economy in a way that enhances energy security and supports APEC's aspiration to reduce aggregate energy intensity by 45 percent by 2035.

The 2012 Leaders' Declaration also recognized the need to further promote energy efficiency and cleaner energy supplies.

The 2013 APEC Ministerial Meeting Statements mentioned actions to facilitate the development of clean, renewable and sustainable energy use through (i) Boosting Investments in Clean Energy and Renewables, (ii) Capacity Building and Technical Cooperation, (iii) Fostering Cooperation on Clean and Renewable Energy Development Projects, and (iv) Enhancing Energy Efficiency to Support Sustainable Cities, Communities and Industries.

The photovoltaic industry develops very fast during the past several years and plays more and more important role in APEC region, to boost sustainable development and energy security, and reduce carbon emissions.

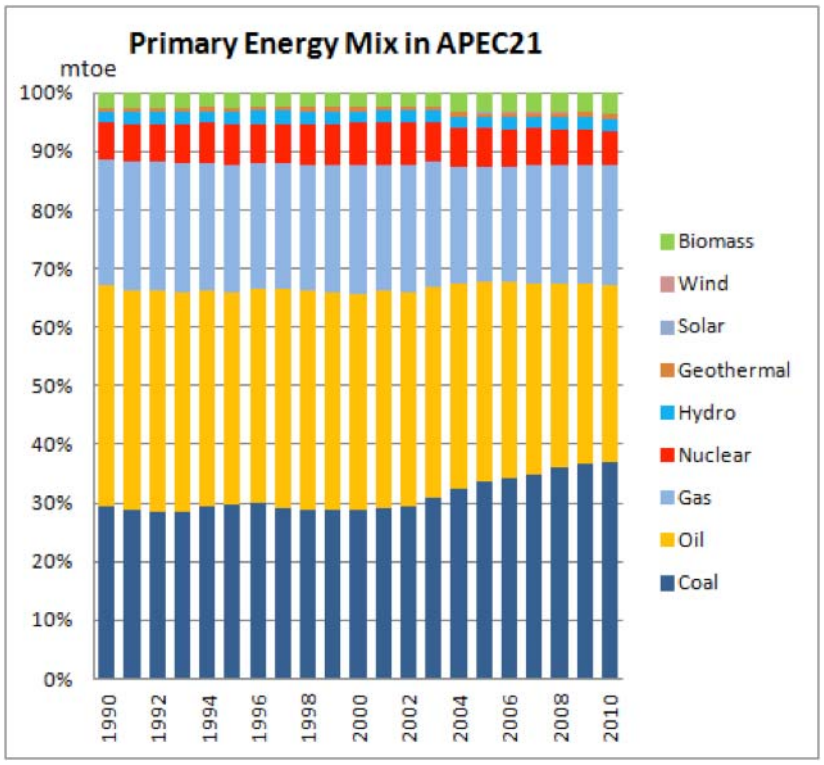

Fig. 1 Primary Energy Mix in APEC 21

Source: EDMC (The Energy Date and Modeling Center), The Institute of Energy Economics, Japan.

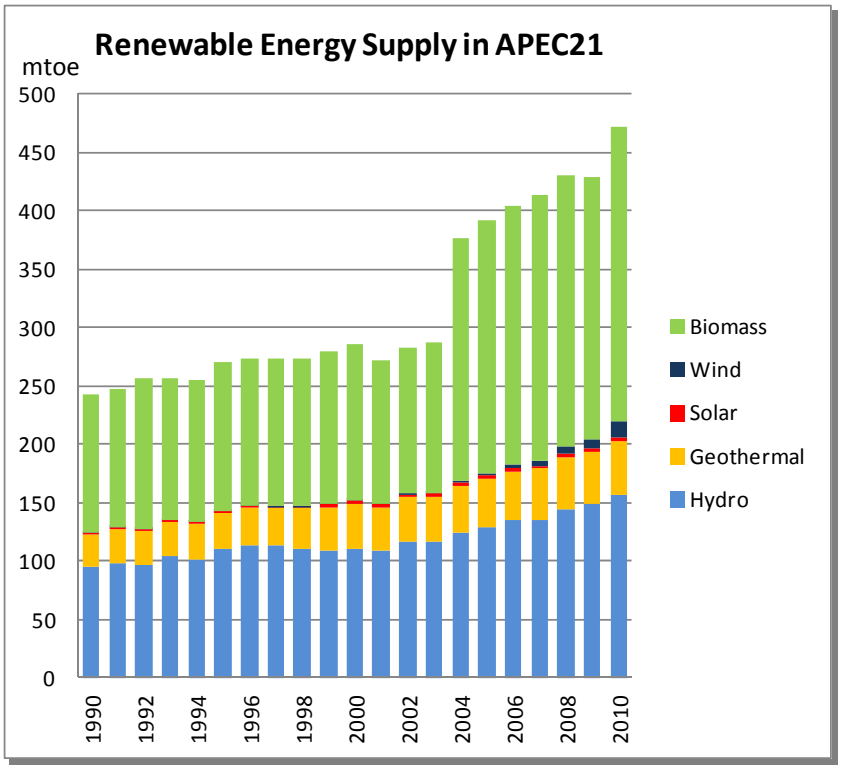

Fig. 2 Renewable Energy Supply in APEC 21 Economies (2010)

Source: EDMC (The Energy Date and Modeling Center), The Institute of Energy Economics, Japan.

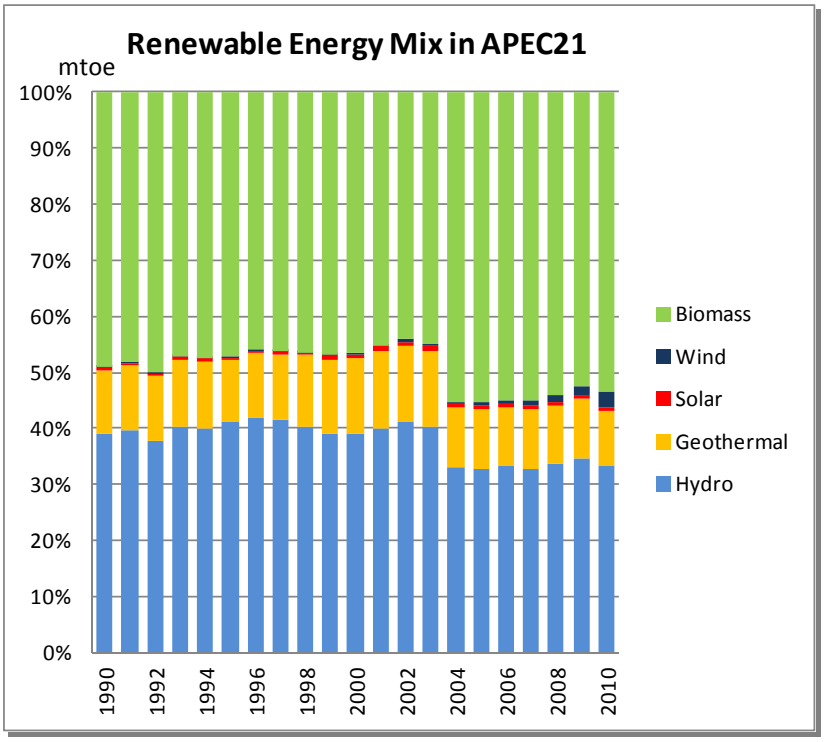

Fig. 3 Renewable Energy Mix in APEC 21 Economies (2010)

Source: EDMC (The Energy Date and Modeling Center), The Institute of Energy Economics, Japan.

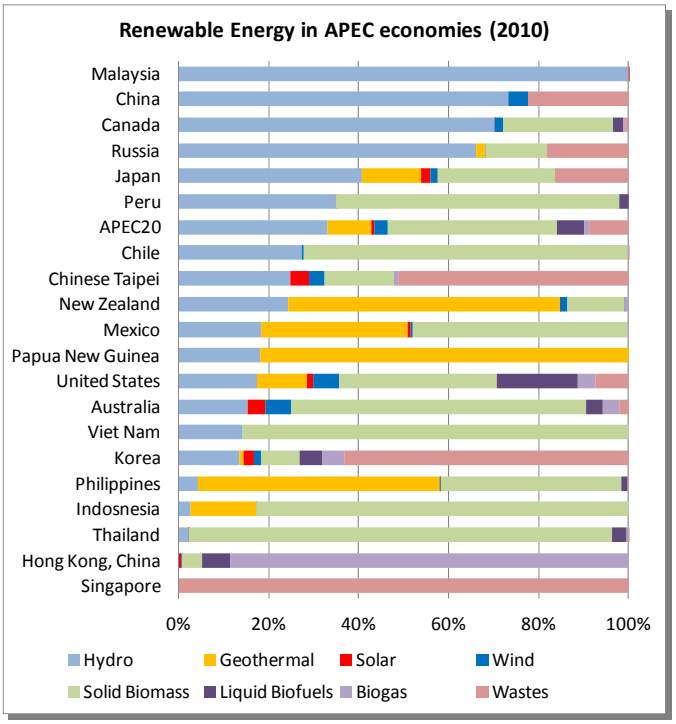

Fig. 4 Renewable Energy in APEC 21Economies (2010)

Source: EDMC (The Energy Date and Modeling Center), The Institute of Energy Economics, Japan.

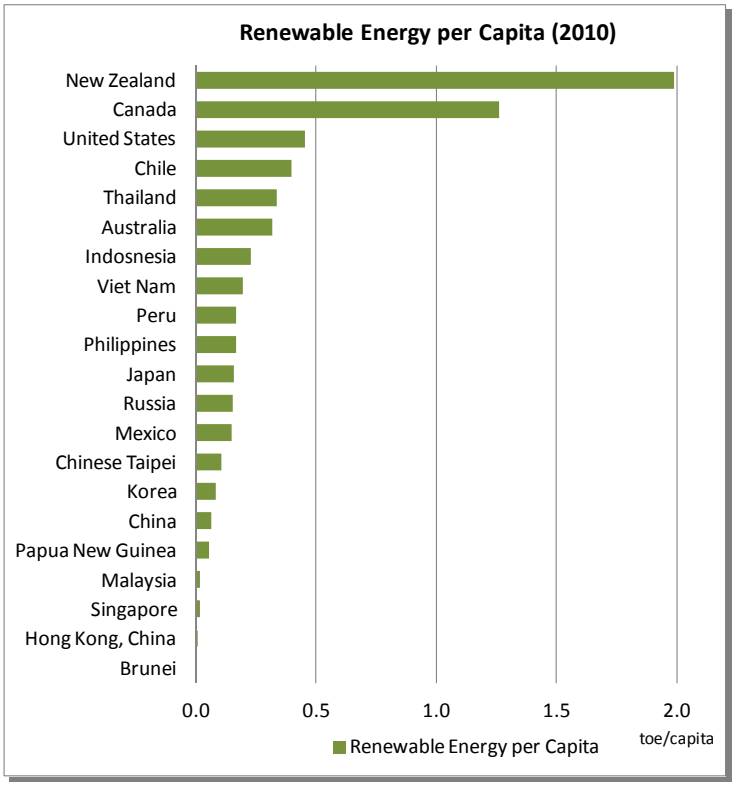

Fig. 5 Renewable Energy per Capita in APEC 21 Economies (2010)

Source: EDMC (The Energy Date and Modeling Center), The Institute of Energy Economics, Japan.

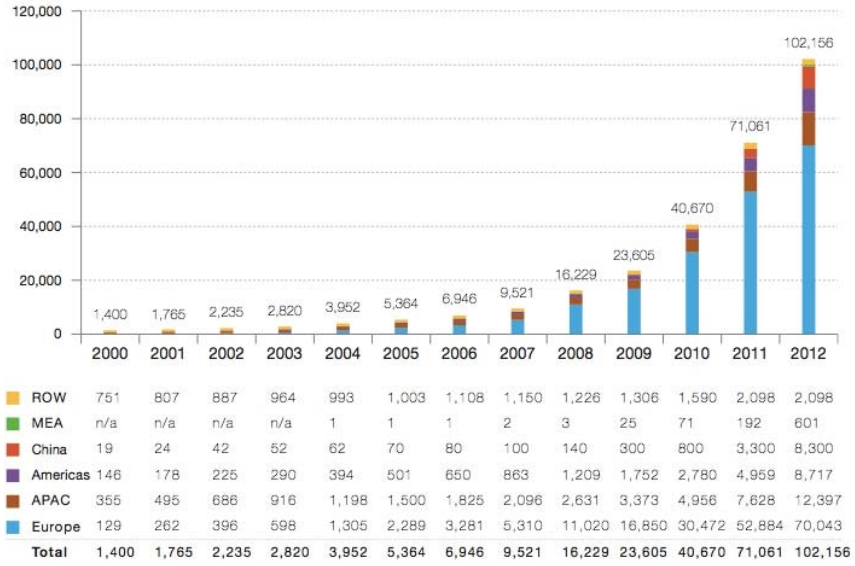

Fig. 6 Evolution of Global PV Cumulative Installed Capacity 2000-2012 (MW)

Source: European Photovoltaic Industry Association（EPIA）

1.2 Project Goal

The solar resources, energy structure, energy policy and photovoltaic industry status are quite different among different APEC member economies, as well as the prospects and outcomes of photovoltaic (PV) application.

Most APEC member economies are at the beginning or early stage of PV large scale application, it is very valuable and important to learn from each other concerning the PV related policy, business model, financing model and technical solutions.

The main contents of this report including:

1.2.1 Solar Resources Analysis

The solar resource is one of the most important factors related to the PV project power generation capacity and investment profitability. But not all the investors or developers pay enough attention to how to get qualified solar resources data.

Due to the meteorological infrastructure limitation, the proper solar resources data might be provided from international institutions or professional researchers, instead of domestic partners.

The report provides some basic solar resources information among APEC region, and some leading research and commercial stakeholders that could help in this field.

Considering the latest air pollution in some economies, it will be very important to evaluate the potential negative influence caused by frog and haze in long term.

1.2.2 PV Technology Development

The report briefly reviewed the PV cell, module and system technology development. Especially in the PV system level, the combination of PV and IT technology, smart grid, Energy Management System (EMS), those combinations will lead a brand new future for PV application with the characters like modularization, standardization, serialization, etc.

1.2.3 Policy Review

The PV policies of three main APEC member economies, China, Japan and USA, which

have the largest PV installation, are introduced in details. These three economies' case study including both developed and developing economies, and could be reference to most of APEC member economies.

1.2.4 PV Project Database

There are more than 2200 PV projects were listed in the following attached APEC PV project database. Those projects mainly located in Australia, Canada, China, Japan, Singapore, and USA. The huge amount and wide spread of different type of PV project in the database also shows fast development and different preference of PV application among APEC member economies.

1.2.5 PV Project Evaluation Scheme

There are several valuable PV project evaluation software and tools have been developed by Canada, USA and other APEC member economies, including System Advisory Model (SAM), RETScreen, etc.

Recently, it is very important to the whole PV industry that the truSolar project developed in USA by some leading institutions including Standard & Poor's, the Rocky Mountain Institute, the U.S. National Labs NREL and Sandia, Underwriter Laboratories, etc.

The report also provides a general proposal for the PV project evaluation scheme for whole APEC region.

1.2.6 Best Practices

The innovation and best practices are very valuable knowledge for all APEC member economies, including the application on residential rooftop, industry and commercial rooftop, agriculture greenhouse, and other solutions.

2 Review of PV Policy

2.1 The Role of Government

The PV industry in most APEC economies is at early stage and heavily influenced by the government policy. Lots of APEC member economies are facing the challenges that how to design efficient PV policies according to the facts of different economies, and promptly improve and adjust the PV policy.

2.2 PV Policy of China, Japan and USA

Compared with the traditional energy and electric power technology, PV in many APEC economies has not achieved grid parity yet. Many APEC economies have adopted powerful PV support policies, including Feed-in Tariff (FIT), Renewable Portfolio Standard (RPS), Tax Incentives, Grant Programs, etc. Effective PV policies could quickly stimulate the business model and financing pattern innovation, and healthy development of the PV industry.

2.2.1 China's PV Policy

China's PV subsidy policies mainly including initial construction subsidies and FIT, mostly initial construction subsidies for rooftop project, and FIT for large-scale ground-mounted PV power station.

The general framework of China's PV policy is as follow:

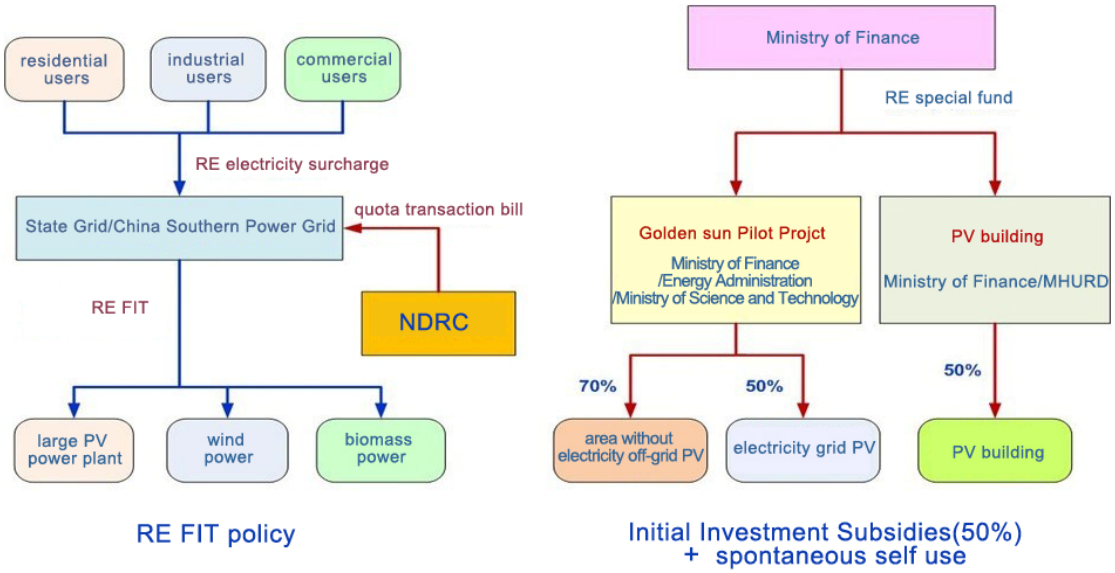

Fig. 7 Feed-In Tariffs and Initial Investment Subsidies Specific Ways

By the end of 2013, China's total PV installation reached over 18.6GW, among which 11.3GW was newly added in 2013.

China has introduced a series of PV policies in recent years, a list of specific policies as shown in **Tab.1**.

Tab. 1 China's PV Policies and Regulations in 2013

Time	National Ministries	Policies
Mar. 1, 2013	State Grid	Solutions to improve grid connection service to distributed power system
June. 6, 2013	National Energy Administration	Work program about the distributed photovoltaic demonstration zone
July. 15, 2013	State Council	Promoting the photovoltaic industry development
July. 18, 2013	National Development and Reform Commission	Interim measures on of distributed power generation system management
July. 24, 2013	Ministry of Finance	Notice of the distributed PV system subsidy
Aug. 9, 2013	National Energy Administration	Notice of carrying out the construction of distributed PV system pilot zone

Time	National Ministries	Policies
Aug. 22, 2013	National Energy Administration, China Development Bank	Solutions to promote financial service for distributed PV system
Aug. 26, 2013	National Development and Reform Commission	Price issues related to the healthy development of photovoltaic industry
Aug. 27, 2013	National Development and Reform Commission	Notice about the adjustment of renewable energy tariff standards
Sept. 24, 2013	National Energy Administration	Interim measures about the project management of photovoltaic power plant
Sept. 29, 2013	Ministry of Finance	Notice of photovoltaic power plant value-added tax policy
Sept., 2013	Ministry of Industry and Information Technology	Photovoltaic manufacturing industry regulation
Oct. 11, 2013	Ministry of Industry and Information Technology	Interim measures of PV manufacturing industry regulation
Oct. 29, 2013	National Energy Administration	Suggestion concerning photovoltaic installation plan in 2013 and 2014
Nov. 18, 2013	National Energy Administration	Interim measures of the photovoltaic power plant project management
Nov. 19, 2013	Ministry of Finance	Taxation encouragement solutions to self-consumption of distributed PV projects

Current PV power plant Feed-In Tariffs in China are listed as following:

Tab. 2 PV Power Plant Feed-In Tariffs in China

Category of Solar Energy Resource	PV power plant	Distributed PV project	
	FIT （RMB/kWh）	Self-consumption （RMB/kWh）	Extra Electricity beyond Self-consumption （RMB/kWh）
I	0.90	Grid retail price, plus 0.42	Coal electricity sale price plus 0.42
II	0.95		
III	1.00		

Source: Professor Wang Sicheng.

According to current construction cost of PV system, the Internal Rate of Return (IRR) of a typical power plant in Western China like Gansu province, Qinghai province, could be higher than a distributed PV project in Eastern China like Shandong province, Jiangsu province. Thus lots of newly added PV projects are located in Western China in 2013, although those areas are quite far away from the energy consumption centers and existing grid connection limitation.

2.2.2 Japan’s PV Policy

The Japanese government pays great attention to the PV promotion, especially after the Fukushima earthquake on March 11, 2011, with the reduction of the dependence on nuclear energy. Those PV policies including:

Tab. 3 PV Policies of Japan's Major Ministries

<table>
<tr><th>Ministries</th><th>Policy</th><th colspan="5">The Content of Policy</th></tr>
<tr><td rowspan="6">Ministry of Economy Trade and Industry（METI）</td><td>Subsidy of support the introduction of residential PV power system</td><td colspan="5">In 2012, prices in the 35000 - 475000 yen/kW, get 35000 yen/kW subsidy; price in 475000 - 550000 yen/kW could get 30000 yen/kW subsidy. PV power system get the subsidy must meet certain conditions, for example, <10 kW</td></tr>
<tr><td rowspan="5">Renewable energy feed-in tariff policy（FIT）（2014.4.1 began to implement ）</td><td></td><td colspan="2">>10KW (Excluding tax, non-residential)</td><td colspan="2"><10KW (Excluding tax, residential)</td></tr>
<tr><td>Online time</td><td>Subsidy Period</td><td>The amount of subsidy</td><td>Subsidy Period</td><td>The amount of subsidy</td></tr>
<tr><td>2014.4.1-2015.3.31</td><td>20 years</td><td>32 yen/kWh</td><td>10 years</td><td>37 yen/kWh</td></tr>
<tr><td>2013.4.1-2014.3.31</td><td>25 years</td><td>36 yen/kWh</td><td>12.5 years</td><td>38 yen/kWh</td></tr>
<tr><td>2012.4.1-2013.3.31</td><td>25 years</td><td>42 yen/kWh</td><td>12.5 years</td><td>42 yen/kWh</td></tr>
<tr><td>Renewable energy generation systems subsidy program</td><td colspan="5">PV power system output capacity requirements should be ≥ 10 kilowatts, or multiple sites combined output capacity ≥ 10 kilowatts.</td></tr>
<tr><td>Ministry of Environment（MOE）</td><td>Introduction of the independent and distributed renewable energy community demonstration projects</td><td colspan="5">2012 began implementation, support industry, academia and government to use renewable energy, install independent and distributed energy systems.</td></tr>
</table>

Ministry of Land Infrastructure Transport and Tourism （MLIT）	Building green government buildings	For national institutions and government agencies install PV power system and other renewable energy systems.
	Subsidy Program	Help supplement a part of the fixed amount's maintenance costs
Ministry of Agriculture, Forestry and Fisheries （MAFF）	Early establishment of village renewable energy supply model project	Aimed at achieving the applications of independent and distributed energy systems.

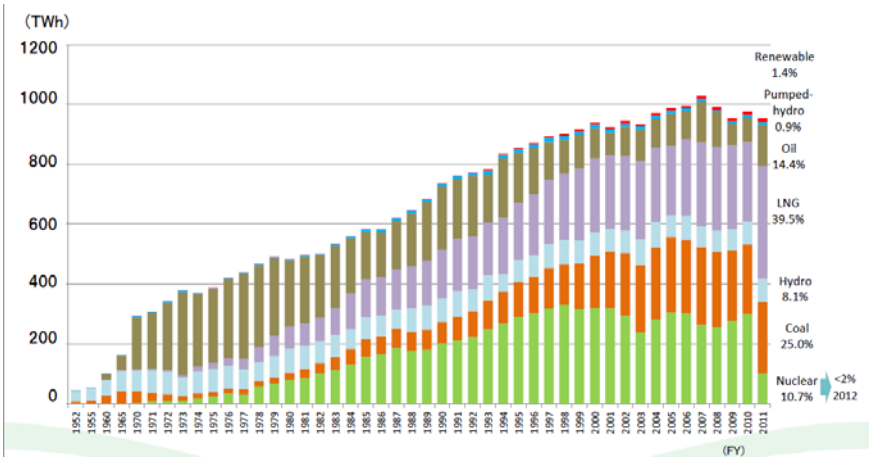

Fig. 8 Japan Cumulative Renewable Power Generation Capacity Certified by FIT Regime

Source: METI Renewable Power Plant Certification Status

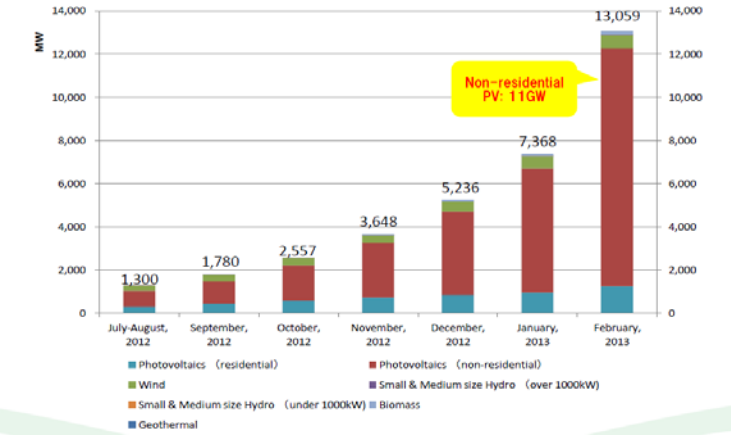

Fig. 9 Japan Cumulative Renewable Power Generation Capacity Certified by FIT Regime

Source: METI Renewable Power Plant Certification Status

In August 2011, Japanese government enacted compulsory tariff for PV, requires the 10 national electric power companies to buy surplus solar electricity. Its goal is to reach 100GW PV by 2030, and 50% of the electricity consumed by the residents.

	PV		Wind		Geothermal		Small&Medium Scale Hydro		
Plant Type	10kW≤	<10kW	20kW≤	<20kW	15MW≤	<15MW	1MW≤ <30MW	200kW≤ <1MW	<200kW
Tariff Incl. tax (yen)	37.8	38	23.1	57.75	27.3	42	25.2	30.45	35.7
Purchase period (years)	20	10	20	20	15	15	20	20	20

	Biomass				
Plant Type	Biogass	Wood fired power plant (Timber from forest thinning)	Wood fired power plant (Other wcody material)	Waste (excludin g woody wastes)	Wood fired power plant (recycled wood)
Tariff incl. tax (yen)	40.95	33.6	25.2	17.85	13.65
Purchase period (years)	20	20	20	20	20

Fig. 10 Japan Tariffs and Duration

Source: METI

The clear goal, policy framework and efficient implementation system of Japan's PV development, could be a very valuable sample to the whole APEC region. As one of the important developed economies, 100GW PV installation by 2030 will not only improve Japan's energy structure and form an advanced modern PV cluster, but also could

accumulate lots of valuable experiences and innovations in technology, financing and policies, and lower the PV cost like what Japanese industries have done in car and electrical household appliances sectors years ago.

2.2.3 USA PV Policy

USA is one the earliest economies to develop specific PV support law and policy. In 1974, USA began to build legal framework to promote sustainable energy, including the *Tax Reform Act of 1986 (TRA) (Pub.L. 99–514, 100 Stat. 2085, enacted October 22, 1986)*, *Energy Policy Act (102nd Congress H.R.776.ENR, abbreviated as EPACT92)*, Energy Policy Act of 2005 (Pub.L. 109–58), etc., to support PV technology and industry development from development goals, funding and research step by step. USA Department of Energy proposed to gradually increase the development programs of green electricity, developed a technology roadmap of solar power, including PV, account for about 15 percent of American power generation capacity increment by 2020.

USA has introduced lots of effective PV support policies including *Net Metering Rules, Sales Tax Incentives, Property Tax Incentives, Grant Programs, Loan Programs, Rebate Programs, Million Solar Roofs Initiative (MSR)*, etc. Detailed American PV policies are listed as below:

Tab. 4 American PV Policies

Policy	Explanation
Net Metering	43 states have implemented, allowing PV electricity sales
Initial Investment Subsidies	Subsidy $1.5 - $ 5.0/W
Price Subsidies	Subsidy $0.05 - $ 0.46/kWh
Green Power Certificate Policy （REC）	Power 1000 degrees every hair get a REC, issued by an independent third-party certification, and may be traded, prices are determined by supply and demand in the auction mechanism
1603 Act	After completion of renewable energy projects, the U.S. Department of Treasury must be returned 30% of the project cost in the form of cash within 60 days, 2011 has expired and do not

Policy	Explanation
	have an extension
Investment Tax Credit（ITC）	Reduction amounted to 30% of the installation costs of the system, expire by the end of 2016
California Solar Initiative（CSI）	The nation's largest electricity users sharing subsidy bill, expires by the end of 2016
New Jersey SREC system	Price subsidies given to PV projects through public trading SREC

Source: OFweek Industry Research Center.

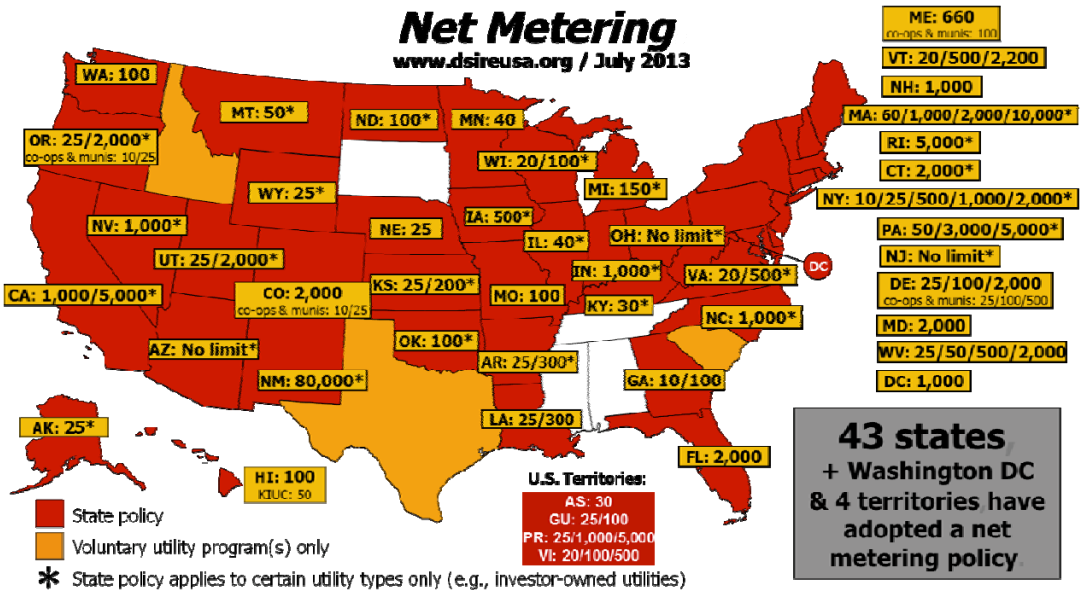

Fig. 11 The States Distribution Map of Net Metering Rules

Source: www.dsireusa.org

（**Fig.11** note: Numbers indicate individual system capacity limit in kilowatts. Some limits vary by customer type, technology and/or application. Other limits might also apply.

This map generally does not address statutory changes until administrative rules have been adopted to implement such changes.）

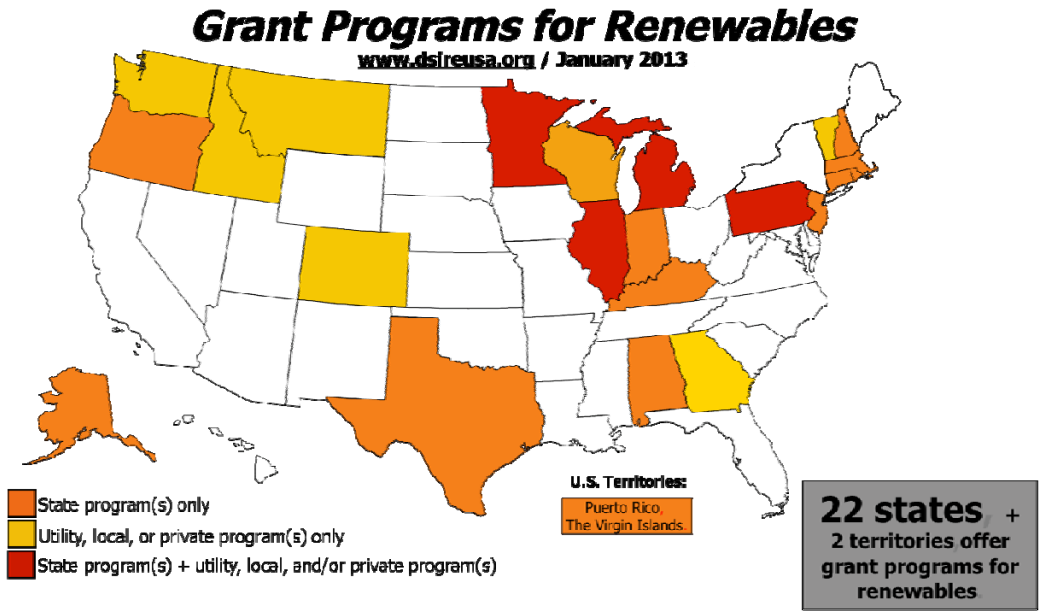

Fig. 12 The States Distribution Map of Grant Programs

Source: www.dsireusa.org

(**Fig.12** notes: This map only addresses grant programs for end-users. It does not address grants programs that support Research & Development, nor does it include grants for geothermal heat pumps or other efficiency technologies)

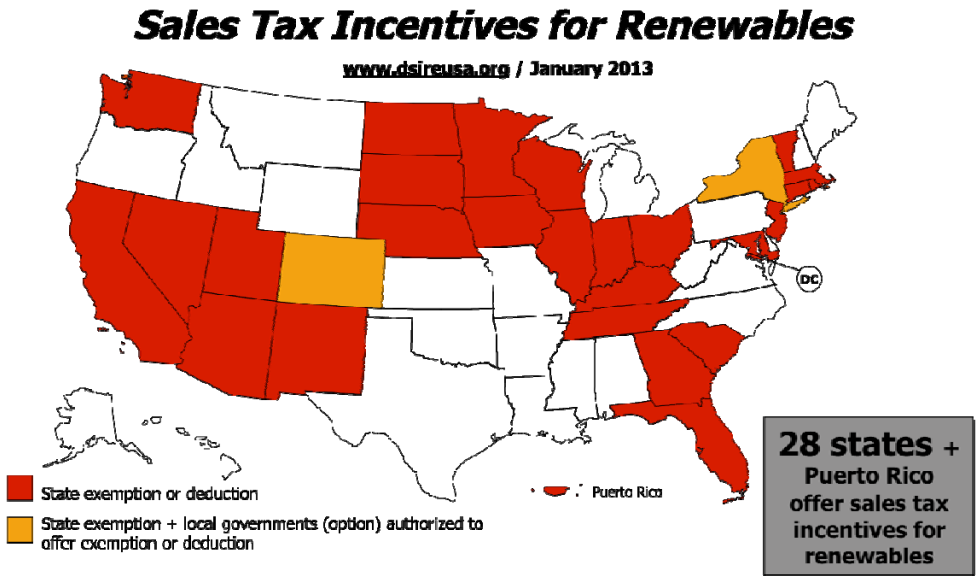

Fig. 13 The States Distribution Map of Sales Tax Incentives

Source: www.dsireusa.org

(**Fig.13** notes: This map does not include sales tax incentives that apply only to geothermal heat pumps

or other energy efficiency technologies.)

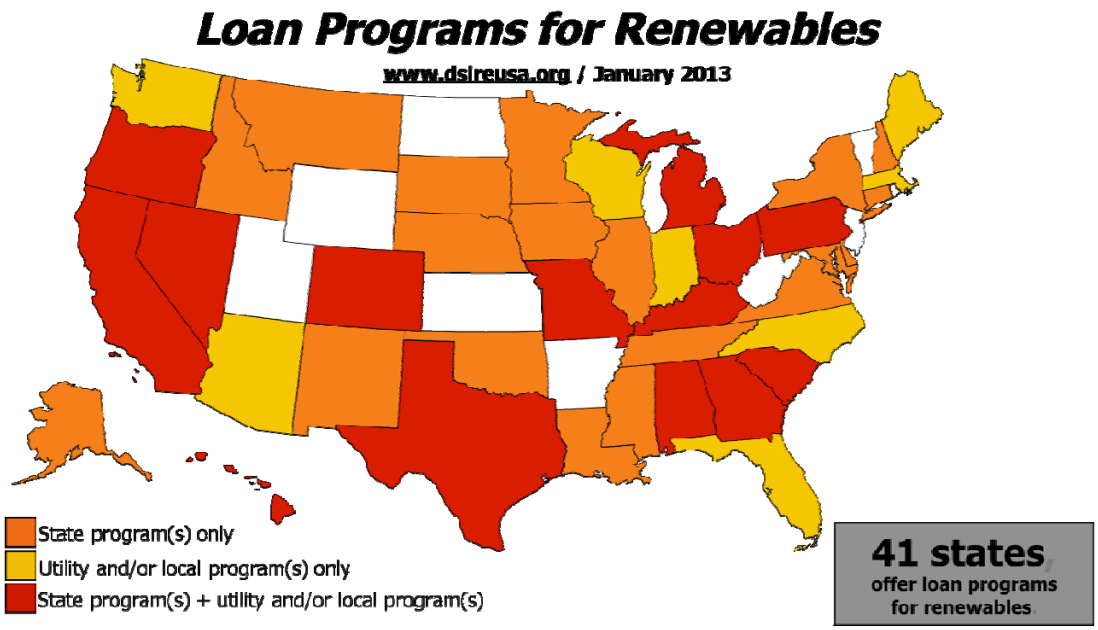

Fig. 14 The States Distribution Map of Loan Programs

Source: www.dsireusa.org

(**Fig.14** note: This map does not include loan programs for geothermal heat pumps or other energy efficiency technologies.)

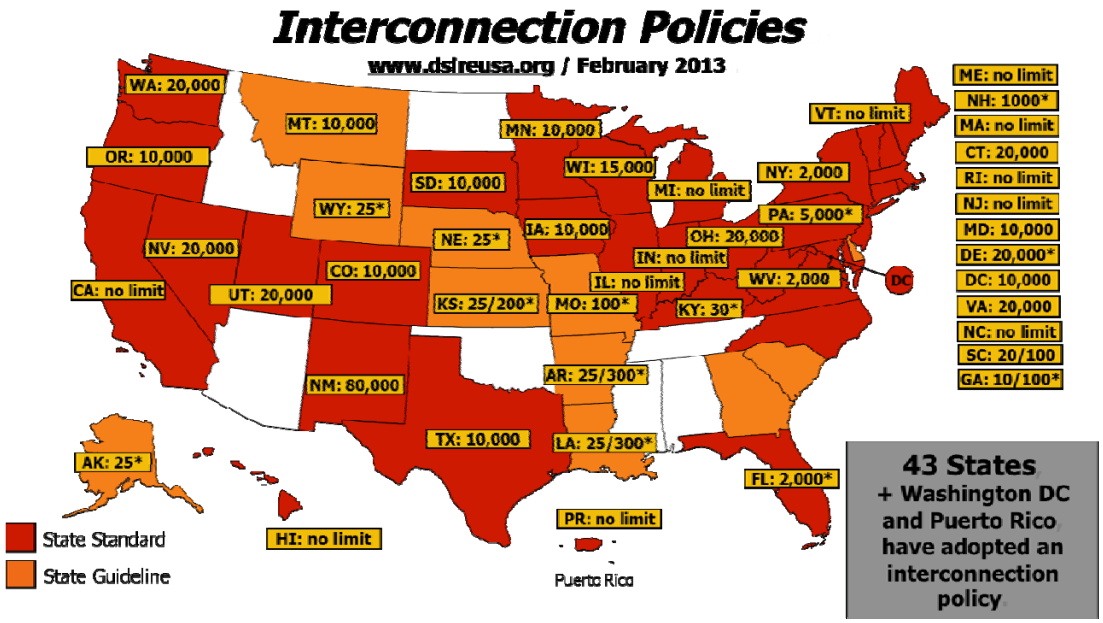

Fig. 15 The States Distribution Map of Interconnection Policies

Source: www.dsireusa.org

（**Fig.15** notes: Numbers indicate system capacity limit in kW. Some state limits vary by customer type (e.g., residential versus non-residential).“No limit” means that there is no stated maximum size for individual systems. Other limits may apply. Generally, state interconnection standards apply only to investor-owned utilities.）

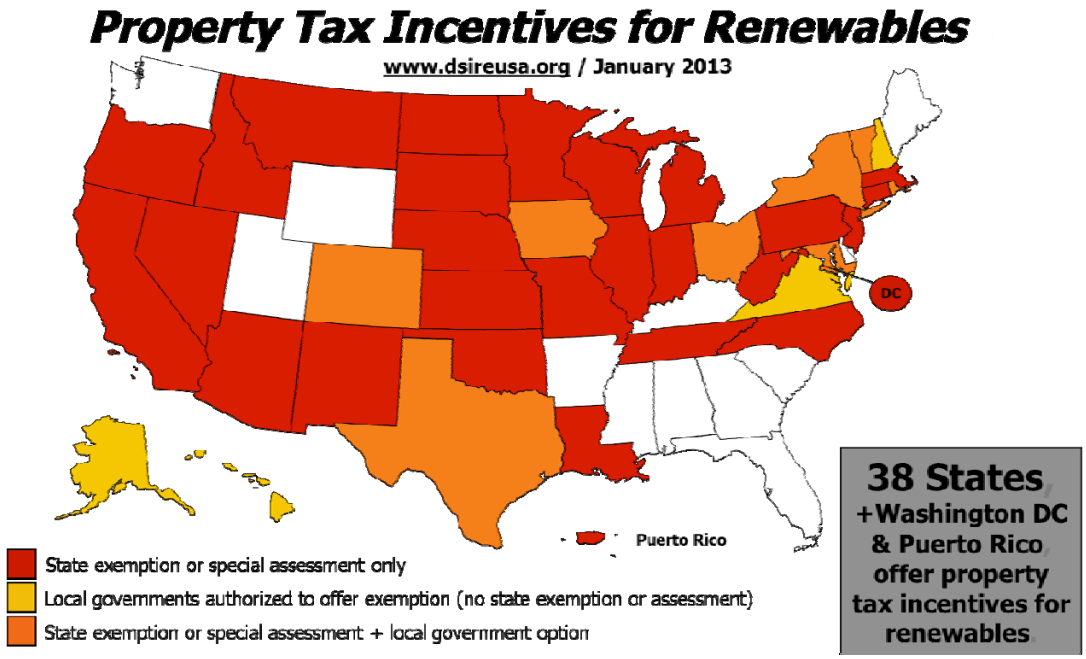

Fig. 16 The States Distribution Map of Property Tax Incentives

Source: www.dsireusa.org

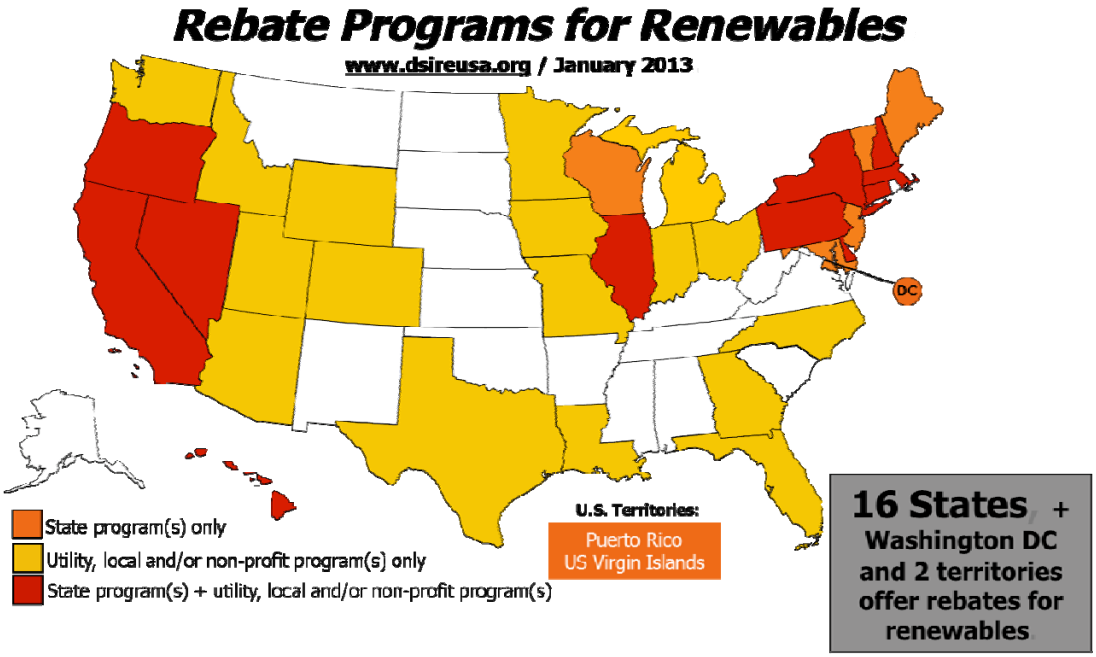

Fig. 17 The States Distribution Map of Rebate Programs

Source: www.dsireusa.org

（**Fig.17** notes: This map does not include rebates for geothermal heat pumps, daylighting or other energy efficiency technologies.）

Tab. 5 American FIT Policy

California feed-in tariff			
Power Company / Area	Installed Size	Electricity price （$/kWh）	Implementation Period
IOUs & POUs	<3MW	0.077-0.090	10，15 or 20 years
Sacramento Municiple Utilities	<5MW	0.068-0.285	Expired in 2016
LADWP	30-3000kW	0.13-0.17	Up to 20 years
Palo Alto	>100kW	0.12-0.14	10，15 or 20 years
Marin County	<1MW	0.12-0.13	10，15 or 20 years
Colorado State Xcel Energy		0.08-0.11	20 years
Florida State GRU		0.19-0.24	20 years
Georgia State GeorgiaPower		0.06	10，15 or 20 years
Hawaii State Three Power Companies		0.20	20 years
In addition，New York, Oregon, Tennessee, Texas, Vermont, Washington, Ontario, also have specific feed-in tariff			

Source: Professor Wang Sicheng

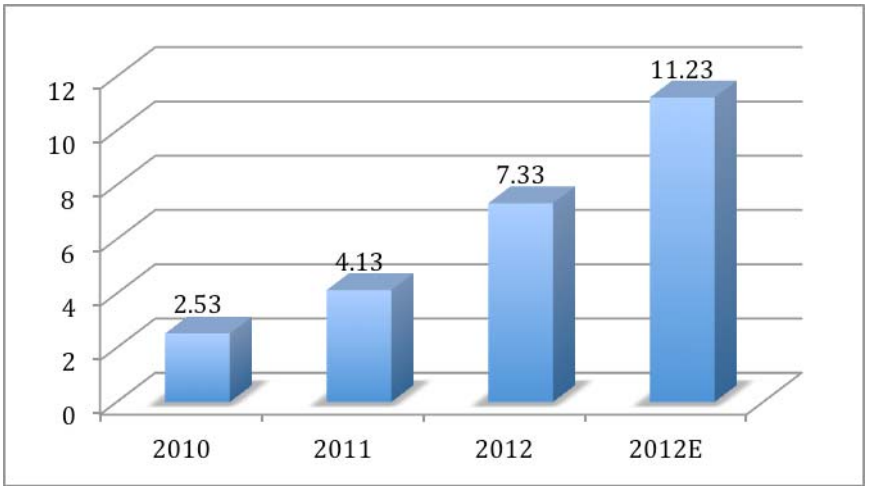

Fig. 18 U.S. Cumulative PV Installed Capacity Statistics for 2010-2013:GW

Source: Chilean research data center consolidation

American PV policies strongly encourage domestic installation in recent years, and also helped leading companies like SolarCity going public successfully. The latest efforts to introduce Real Estate Investment Trust (REITs) into PV, might lead a brand new wave of PV financing innovation.

2.2.4 The PV Policy of Other APEC Economies

In addition to China, Japan and USA, many other economies in APEC region also introduced their PV policy. Such as Ontario province, Canada executed *tariff law* in 2009. India proposed "Nehru National Solar Plan", to support the implementation of the national plan in 2009. In July 2010, India new energy and renewable energy department introduced policy guidelines for advanced solar projects. In the second quarter of 2011, Malaysia implemented of Feed-In Tariffs Act. Thailand announced the renewable electricity purchase subsidies Adder, subsidies for ten years in March 24, 2009, etc.

2.3 Summary

The rooftop PV system, as a relative high cost of power generation at current stage, rely heavily on the policy to promote the continuous improvement of rooftop PV technology, and reduce the construction costs. Through the guidance of related rooftop PV policy of APEC economies, to guide domestic and foreign investment capital to accelerate into the autonomous construction of PV power generation, promote the wider use of rooftop PV power system. At the same time, promote the PV policies of APEC economies to mutual learn and upgrade, such as agricultural insurance subsidies, investment guarantees and other successful policies is very necessary.

1) Policies have important oriented for the development of PV. For example, in Europe, Japan and USA, the price of residents' electricity is high, but the commercial and industrial electricity tariff is lower. However in China, this is just the opposite. Therefore, in Europe, Japan and USA, the projects in the residential sector are much profitable and more than other sector, and in Chinese there are more industry and Commerce rooftop projects currently.

2) The PV policies need to constantly adjust and optimize according to the stage of industrial development and the results of policies. It is also very critical to the government to fully meet commitments of encouragement solutions in long term.

3) Considering the rooftop PV system is located on the building, it is important to harmonize the PV standards of construction, design, the supervision of construction, operation and maintenance, with the related standards and policies in the real estate industry.

3 APEC PV Project Database

Currently financing model and investment are main bottlenecks to develop PV in many APEC member economies. To establish and improve the PV project database of APEC region, is not only helpful to PV industry information exchange and cooperation, but also valuable to attract long term qualified investment.

The report provides some PV projects information in the attachment from part of APEC member economies, including Australia, Canada, China, Japan, Malaysia, Singapore, USA, etc., which consist the first lot of demonstration projects of APEC PV project database.

The information provided by the following attached database does not mean the overall PV projects installation or capacity to a specific member economy, but only help to understand where stakeholders might get the information, and analysis to part of existing PV projects.

On the basis of this report output, the APEC PV project database and platform was proposed for consideration in future.

3.1 Introduction of APEC PV Project Database

3.1.1 Australia's PV Project Database

There are 1,189,902 PV systems with total capacity of 3,218,286kW in the Australia's PV project database (http://ret.cleanenergyregulator.gov.au/REC-Registry/Data-reports). Until March 2014, Queensland (QLD) has the largest capacity of 1043.2MW. New South Wales (NSW) and Victoria (VIC) also enjoy capacity over 500MW. North Territory (NW) has the smallest capacity of 15.1MW. The total capacity in South Australia (SA), Queensland (QLD), New South Wales (NSW) and Victoria (VIC) constitutes about 85% of the total capacity in Australia.

Tab. 6 Renewable energy projects annual table

Installation year	Hydro systems (Deemed)	Solar PV panel systems (Deemed)	Wind systems (Deemed)	Solar water heaters	Grand total
2001	3	118	18	10,075	10,214
2002	0	251	11	21,839	22,101
2003	0	664	13	28,653	29,330
2004	0	1,089	17	30,991	32,097
2005	0	1,406	11	33,964	35,381
2006	0	1,115	6	35,924	37,045
2007	0	3,480	12	50,977	54,469
2008	1	14,064	43	85,385	99,493
2009	5	62,916	58	194,695	257,674
2010	3	198,208	136	127,093	325,440
2011	1	360,745	44	105,050	465,840
2012	2	343,319	8	69,466	412,795
2013	0	192,656	3	53,297	245,956
2014	0	9,871	0	2,219	12,090
Grand total	15	1,189,902	380	849,628	2,039,925

Tab. 7 PV, wind and Hydro projects in Australia

	Installation quantity	Rated output (kW)
Solar photovoltaic (PV) panels	1,189,902	3,218,286
Wind	380	1,362
Hydro	15	22
Total SGU installations	1,190,297	3,161,202

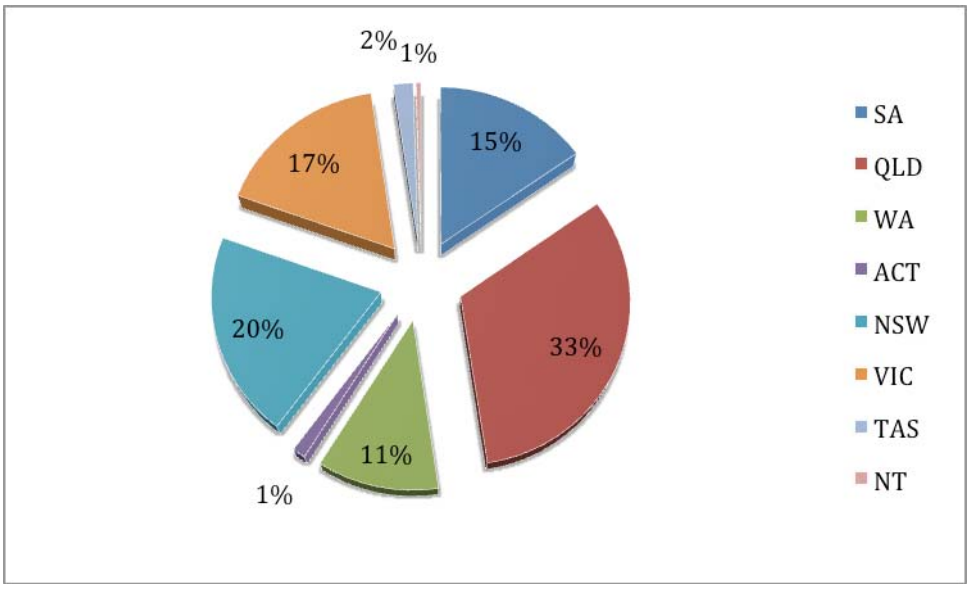

Fig. 19 Total Installed Capacity Distribution in different States of Australia

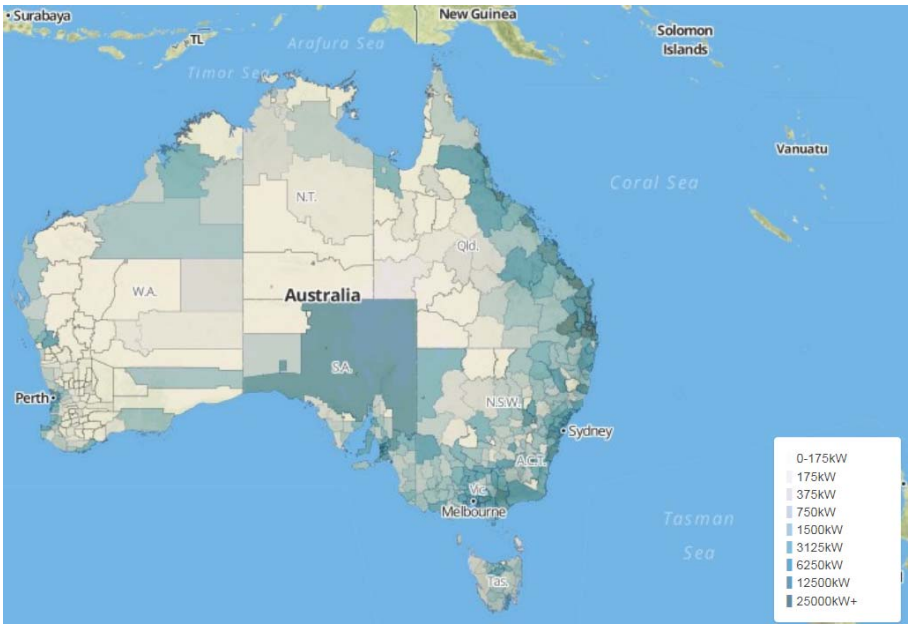

Fig. 20 Capacity density in Australia

The report includes 39 Australia PV systems with total capacity of 51MW. Mono crystalline silicon, polycrystalline silicon and concentrated modules of different manufacturers were used in those projects.

3.1.2 Canada's PV Project Database

The Canada's PV project database includes 817 projects with total capacity of 155.5MW. Among them 26 projects were built on the ground with capacity of about 6.4MW and 791 projects were built on the rooftop with capacity of about 149.1MW. The details are as below in **Fig.21**.

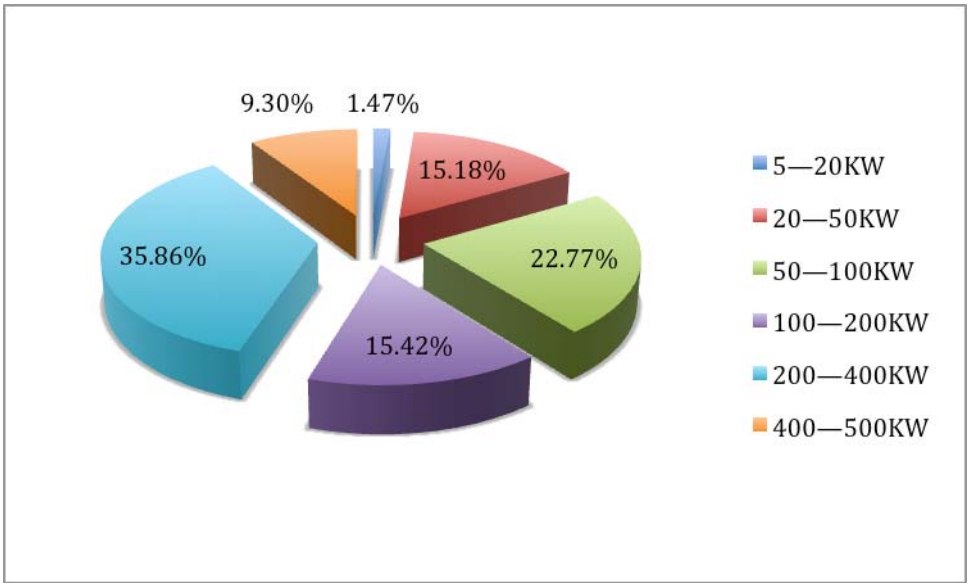

Fig. 21 The Distribution of PV Projects Installed Capacity

3.1.3 China's PV Project Database

China's PV project database included 629 projects with total installed capacity nearly 12GW. The distribution of PV project type and its main areas were shown in **Fig.22** to **Fig.25**.

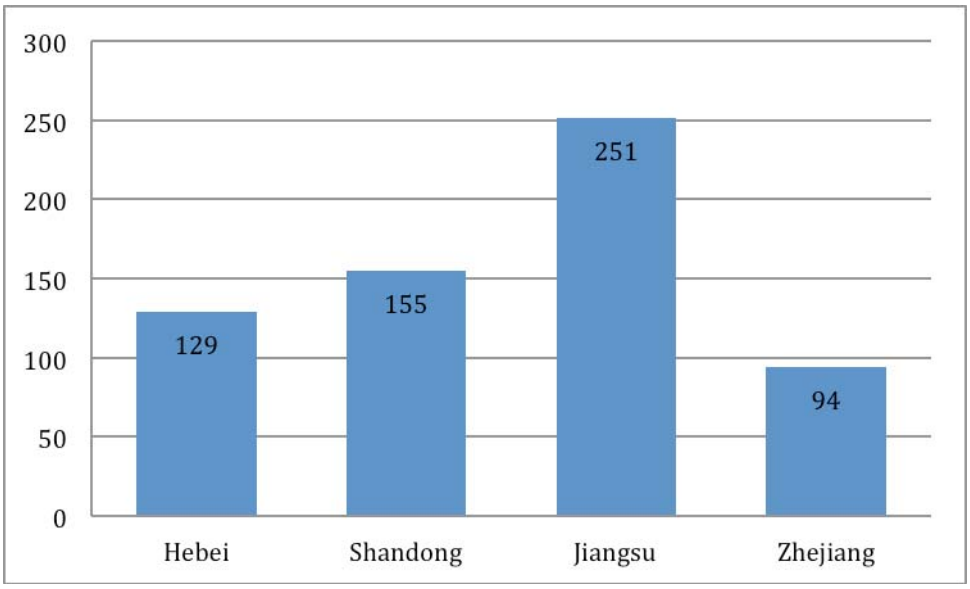

Fig. 22 The Quantity Distribution of PV Projects in 4 Provinces of China

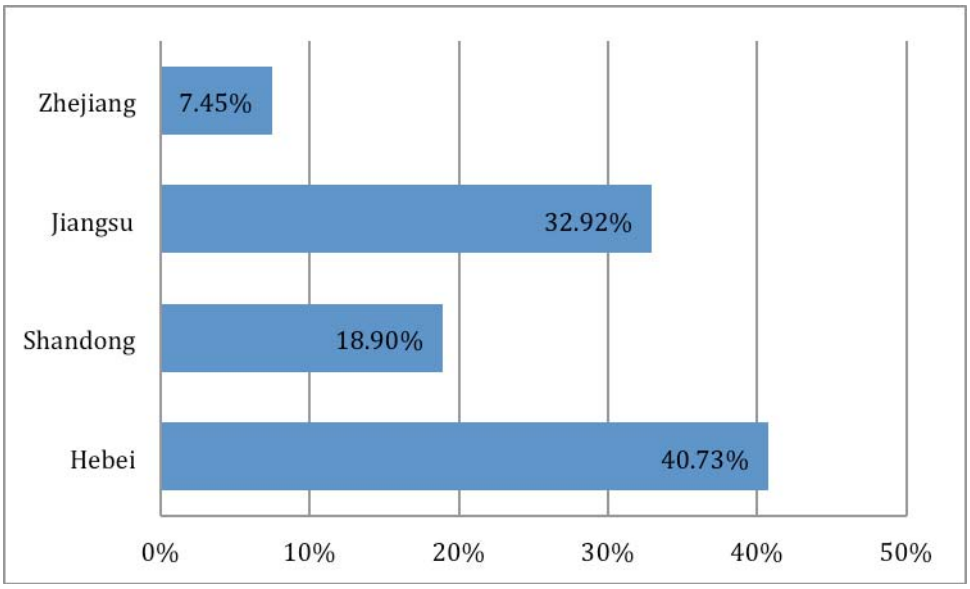

Fig. 23 The Capacity Distribution of PV Projects in 4 Provinces of China

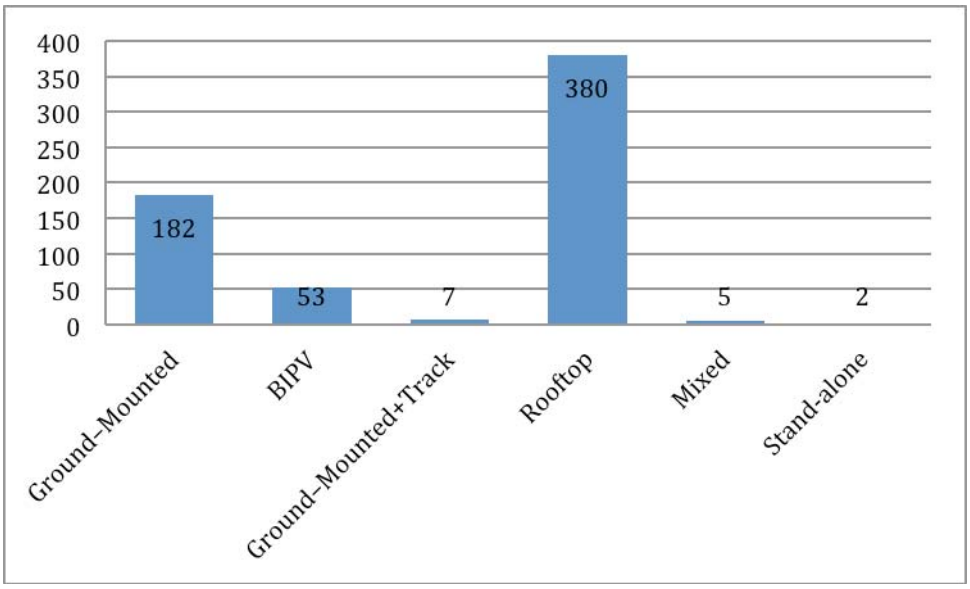

Fig. 24 The Quantity Distribution of Different Types PV Projects

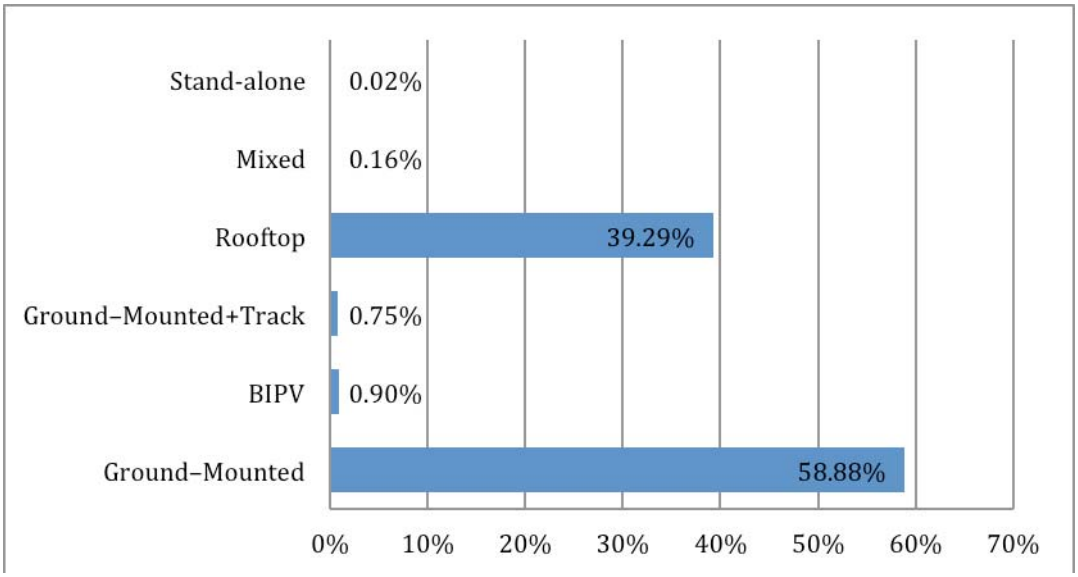

Fig. 25 The Capacity Distribution of Different Types

China's PV installation developed very fast during past several years. Due to the FIT and business model issues, the ground-mounted projects installation capacity is much higher than the rooftop projects by now.

3.1.4 Japan's PV Project Database

According to the introduction of Agency for Natural Resources and Energy (ANRE) on October 31, 2013（http://www.meti.go.jp/english/press/2014/0110_02.html）, the total combined capacity of renewable energy reached 5,852,000 kW after the FIT Scheme was introduced, mostly are PV projects.

Tab. 8 Renewable energy generation facilities before and after FIT Scheme in Japan

Renewable energy generating facilities (type of source)	Before introducing the FIT Scheme	After introducing the FIT Scheme	
	Combined total capacity of facilities before July 1, 2012	Combined total capacity of facilities in FY2012 (from July 1, 2012, to March 31, 2013)	Combined total capacity of facilities in FY2013 (from April 1 to October 31, 2013)
PV power (for households)	About 4,700,000 kW	969,000 kW	870,000 kW
PV power (other than households)	About 900,000 kW	704,000 kW	3,123,000 kW
Wind power	About 2,600,000 kW	63,000 kW	7,000 kW
Small and medium hydropower	About 9,600,000 kW	2,000 kW	3,000 kW
Biomass power	About 2,300,000 kW	30,000 kW	82,000 kW
Geothermal power	About 500,000 kW	1,000 kW	0 kW
Total	About 20,600,000 kW	1,769,000 kW	4,083,000 kW
		5,852,000 kW	

The 47 regions in Japan are all involved in PV systems. Among them 402,600 projects with individual capacity less than 10kW have been finished, with total capacity of 1,838,620 kW. There are 75,367 projects with individual capacity more than 10kW have been finished, with total capacity of 3,826,632kW.

Tab. 9 Quantity and capacity distribution of PV system in Japan

Area	PV system Quantity（<10kW）	PV system Quantity （>10kW）	Capacity（<10kW）	Capacity（>10kW）
Hokkaido	7,383 (6,302)	4,478 (1,047)	35,616 (32,868)	2,146,890 (97,901)
Aomori	2,459 (1,980)	618 (203)	10,866 (9,051)	379,389 (20,165)
Iwate	5,166 (4,375)	865 (329)	23,101 (20,147)	221,481 (23,387)
Miyagi	12,014 (9,659)	1,640 (856)	50,607 (42,768)	489,184 (43,130)
Akita	1,463 (1,232)	220 (67)	6,530 (5,622)	56,185 (9,490)
Yamagata	2,401 (1,924)	395 (204)	10,912 (8,813)	60,598 (14,029)
Fukushima	10,144 (8,211)	4,911 (1,132)	45,104 (38,230)	1,289,421 (63,620)
Ibaraki	17,235 (14,652)	10,932 (2,418)	75,219 (66,242)	1,412,920 (185,665)
Tochigi	13,380 (11,546)	5,924 (2,064)	59,274 (53,187)	732,176 (146,394)
Gunma	12,684 (11,196)	7,380 (2,508)	54,998 (50,503)	534,247 (146,125)
Saitama	27,577 (21,860)	5,571 (2,665)	109,795 (92,938)	269,384 (106,134)
Chiba	21,145 (17,329)	7,277 (2,385)	85,349 (73,534)	968,001 (137,699)
Tokyo	21,299 (17,588)	2,046 (1,145)	82,999 (73,386)	54,233 (21,298)
Kanagawa	23,156 (18,386)	2,390 (1,205)	87,808 (73,207)	136,560 (42,004)
Niigata	3,075 (2,427)	727 (305)	13,632 (10,936)	141,956 (21,988)
Toyama	2,459 (2,034)	847 (440)	10,939 (9,392)	62,001 (20,287)
Ishikawa	2,312 (1,984)	1,054 (483)	10,063 (9,001)	153,562 (37,563)
Fukui	1,883 (1,620)	571 (290)	8,663 (7,697)	37,387 (15,427)
Yamanashi	6,119 (5,284)	4,573 (1,217)	28,485 (25,432)	312,706 (60,294)
Nagano	13,841 (12,953)	5,963 (2,540)	63,309 (61,538)	446,204 (100,240)
Gifu	10,476 (9,406)	5,808 (2,763)	47,862 (44,629)	307,601 (106,889)
Shizuoka	19,562 (17,207)	7,310 (3,511)	85,844 (79,330)	658,672 (160,844)
Aichi	32,960 (28,749)	10,120 (5,413)	142,895 (131,279)	522,321 (190,380)
Mie	9,357 (7,825)	5,097 (1,922)	41,556 (36,550)	669,105 (110,198)
Shiga	8,410 (7,136)	2,815 (1,273)	36,058 (32,105)	210,211 (62,684)
Kyoto	8,371 (6,912)	1,993 (907)	33,382 (29,059)	120,790 (36,661)
Osaka	21,642 (17,582)	4,573 (2,487)	85,388 (73,394)	274,074 (108,898)

Area	PV system Quantity（<10kW）	PV system Quantity （>10kW）	Capacity（<10kW）	Capacity（>10kW）
Hyogo	19,382 (16,204)	6,981 (3,145)	79,564 (70,130)	832,881 (180,702)
Nara	7,004 (5,901)	1,771 (904)	29,544 (26,561)	130,149 (36,109)
Wakayama	5,014 (4,187)	2,126 (944)	22,343 (19,457)	183,237 (39,446)
Tottori	2,400 (2,191)	721 (304)	11,184 (10,475)	114,794 (15,533)
Shimane	2,341 (2,341)	840 (414)	11,407 (11,407)	79,169 (24,760)
Okayama	11,269 (10,090)	6,055 (2,482)	52,601 (48,970)	918,176 (114,623)
Hiroshima	11,997 (11,015)	5,119 (2,432)	53,002 (50,677)	423,172 (110,274)
Yamaguchi	6,891 (6,104)	2,578 (1,150)	30,875 (28,354)	343,478 (67,545)
Tokushima	2,619 (2,341)	2,617 (998)	12,700 (11,976)	195,833 (60,353)
Kagawa	4,723 (4,393)	2,754 (1,230)	21,566 (20,787)	234,679 (83,952)
Ehime	6,795 (6,025)	3,305 (1,461)	30,551 (27,828)	322,274 (62,625)
Kochi	3,376 (3,175)	1,612 (577)	16,052 (15,503)	100,038 (28,529)
Fukuoka	21,063 (18,144)	8,727 (3,860)	93,841 (85,285)	828,385 (238,809)
Saga	5,160 (4,881)	2,997 (1,313)	24,763 (24,446)	190,276 (74,110)
Nagasaki	6,231 (5,442)	4,560 (1,587)	29,863 (27,290)	777,325 (93,795)
Kumamoto	9,777 (8,735)	6,827 (2,528)	46,746 (43,614)	751,037 (113,583)
Oita	6,440 (5,612)	8,334 (1,901)	30,529 (28,030)	1,144,155 (115,983)
Miyazaki	7,049 (6,885)	7,155 (1,621)	35,224 (35,220)	706,795 (101,334)
Kagoshima	8,498 (7,862)	8,126 (1,783)	41,818 (40,506)	1,302,462 (125,097)
Okinawa	3,713 (3,713)	6,968 (2,954)	21,264 (21,264)	244,833 (50,075)
Total	469,715 (402,600)	196,271 (75,367)	2,041,691 (1,838,620)	22,490,402 (3,826,632)

Remarks: the data source is between 1 July 2012 and Oct 2013. The number in parentheses refers to the quantity already in use.

3.1.5 Malaysia's PV Project Database

The PV project database of Malaysia (http://www.seda.gov.my) included 222 PV projects. There are 168 projects with capacity less than 500kW, total capacity is 26.89MW. There are 54 projects with capacity between 500kW to 5MW, total capacity is 131.569MW.

There are 11 projects with capacity over 5MW, total capacity is 55MW.

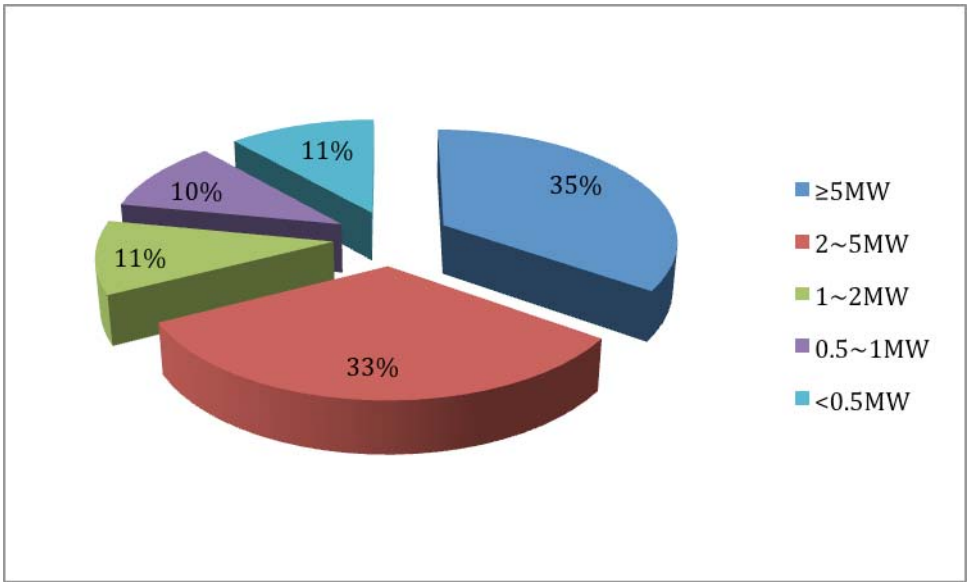

Fig. 26 The Quantity Distribution of PV Projects in Malaysia

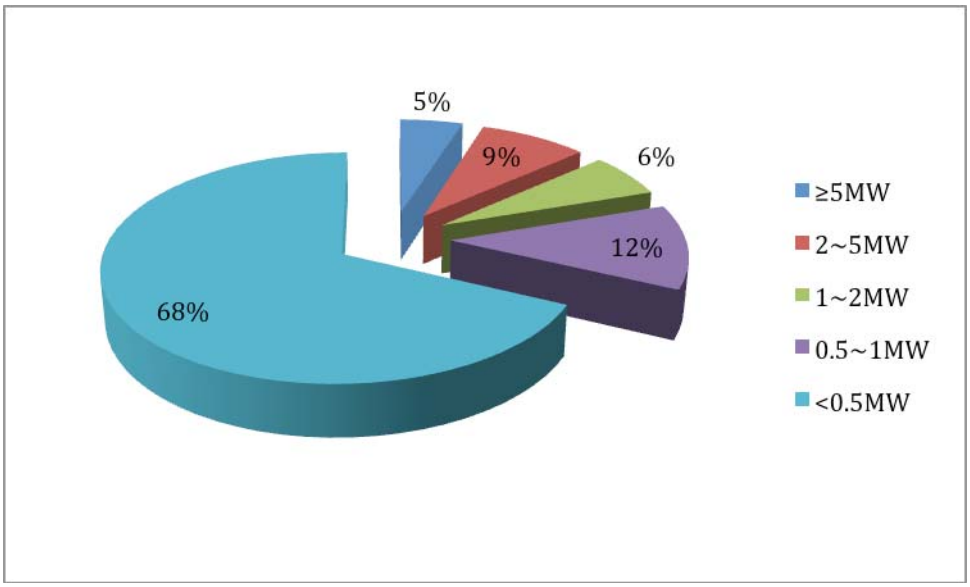

Fig. 27 The Capacity Distribution of PV Projects in Malaysia

3.1.6 Singapore's PV Project Database

There are 65 Singapore PV projects included in the attached database (http://www.sp.edu.sg/solar_rep/www.solar-repository.sg/index.php/photovoltaic-systems/systems-database.html) with total capacity of 2.572MW. Among them 3 projects with total capacity of 6.7kW were built as BIPV. 61 projects with total capacity of 2541.04kW were built on rooftop. One project with capacity of 25.21kW was built by Trellis.

In Singapore most of the projects are located in commercial area, education institutions, government building, industrial and residential areas. The total capacity of industrial rooftop projects (981.56kW) accounts for about 38% of the collected projects' capacity. Commercial area accounts for 29%, with capacity of 740.44kW.

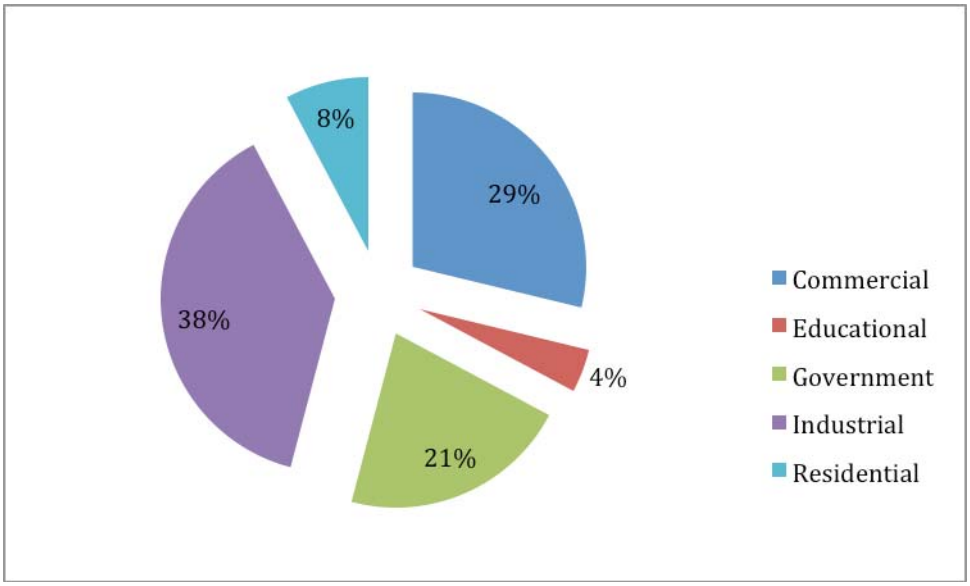

Fig. 28 Types of Installation in Singapore

3.1.7 USA PV Project Database

The USA PV Project Database developed by SEIA includes nearly 600 projects, and the total capacity exceeds 26GW (Including both completed and under construction). The detailed capacity information is presented in **Fig.29**.

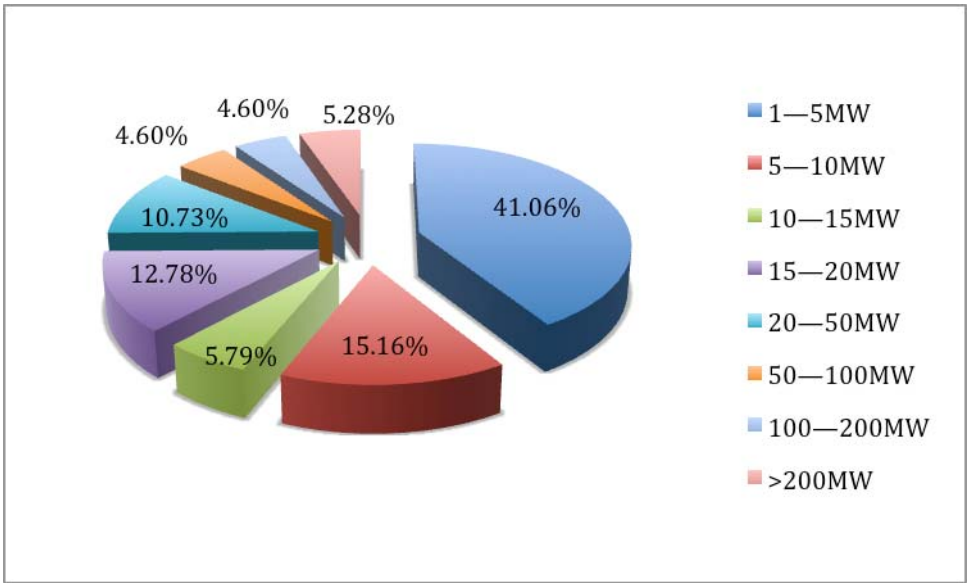

Fig. 29 The Distribution of PV Projects Installed Capacity

The database by SEIA (http://www.seia.org/research-resources/major-solar-projects-list) shows the projects are distributed in 31 states in the USA. The projects in California (CA), North Caroline (NC), Arizona (AZ), New Jersey (NJ), New Mexico (NM) and Massachusetts (MA) constitutes more than 70% of the total projects in the database. The details are presented in **Fig.30** below.

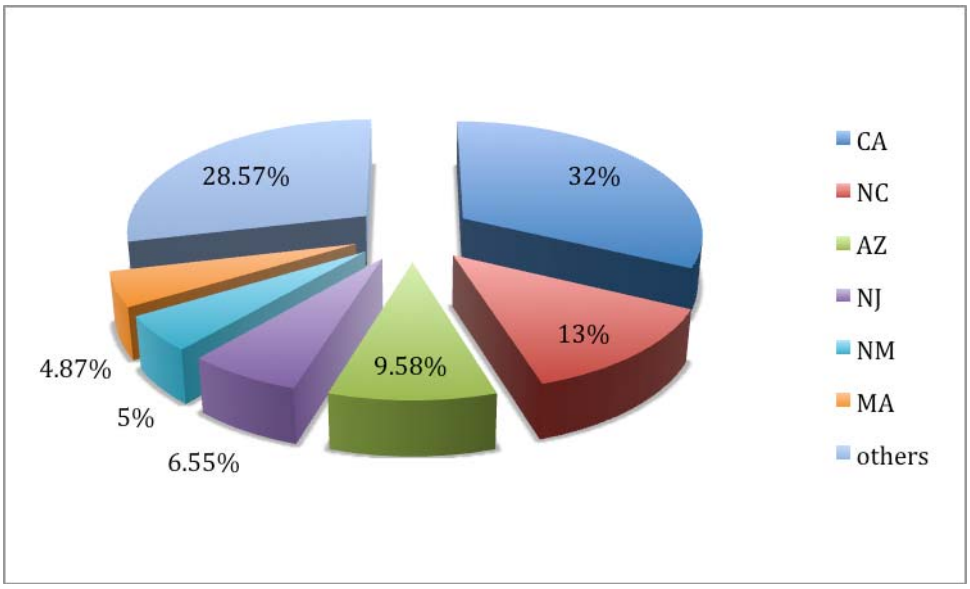

Fig. 30 The Quantity Distribution of PV Projects

Concerning capacity of PV systems, the consolidated capacity of PV systems in the five states of California (CA), Nevada (NV), Arizona (AZ), Florida (FL) and Texas (TX) makes for over 89% of the total capacity. The details are presented in **Fig.31** as below.

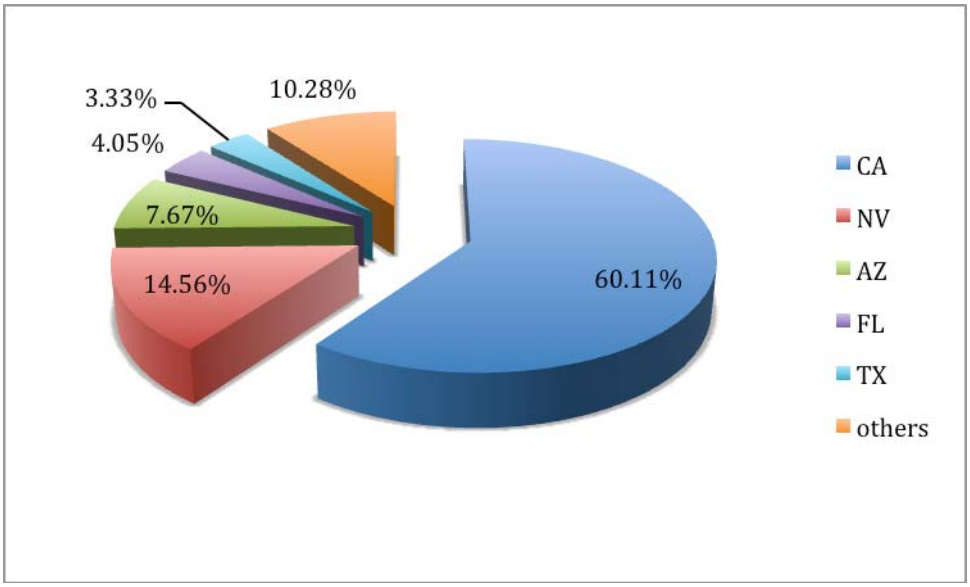

Fig. 31 The Total Insalled Capacity Distribution in different States of USA

Besides, the database shows that the majority of projects were connected to the grid after 2011. Most are owned by the private sector. Three PV systems with total capacity 267MW are owned by the government; and one PV system with capacity of 139MW is jointly held.

3.2 Proposal of APEC PV Project Database

The PV projects and assets developed very fast in lots of APEC member economies in recent years. However, it is quite challenging to find latest detailed PV projects information in most of economies. It is strongly suggested to develop a permanent APEC PV project database in future, as a harmonized platform for all related stakeholders.

The APEC PV Project Database which could serve all APEC member economies is expected in future, which will enables the stakeholders to release their projects information, and attract potential investors and partners among the APEC region. Meanwhile, the database will be able to help counterparties in bidding of the design, equipment procurement, construction and maintenance.

The APEC PV project database and platform could also be more convenient to provide job opportunities for female stakeholders, help them get more jobs opportunities and flexible time arrangement.

4 APEC PV Evaluation System

4.1 Introduction of truSolar

The research group and related stakeholders from some APEC economies has carried out a lot of work regarding PV system evaluation. The American truSolar™ (http://www.trusolarscore.com/) study is a valuable sample.

TruSolar is an industry-established, accessible, standard credit screen for commercial and industrial PV project selection, underwriting and approval. TruSolar credit screening provides a comprehensive risk assessment from project development to operation and maintenance. The concept behind truSolar was introduced in early 2011 by Distributed Sun as part of its core business. The Working Group evolved from discussions by the group's co-founders Distributed Sun and DuPont Photovoltaic Solutions at the Solar Power International conference in September 2012.

Fig. 32 The truSolar Network

Source: http://www.trusolarscore.com/

The truSolar™ credit screen tests and identifies lower risk solar asset investment opportunities. The screen scores project performance, site profile and counterparty risk criteria with sophisticated rating tools, helping to:

- Reduce project failure before, during and after construction;
- Increase the bankability of a company's solar pipeline in the C&I channel;
- Mitigate events of default and PPA revenue interruption from power off-takers with unrated, or less than investment grade, credit.

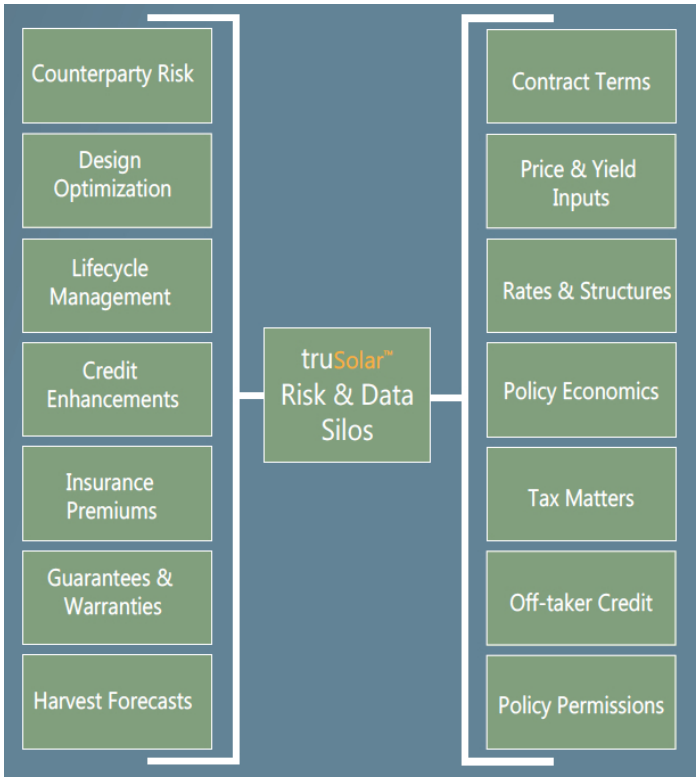

Fig. 33 The Structure of the truSolar System

Source: http://www.trusolarscore.com/

4.2 System Advisor Model

SAM (System Advisor Model) (https://sam.nrel.gov) was developed by the U.S. National Renewable Energy Laboratory (NREL) in 2005; initially it was only for the solar PV and thermal power project evaluation (Solar Advisor Model, SAM), when the public version of the model was published in 2007. After adding the technical and function of wind power and other renewable energy sources in 2010, it was renamed as System Advisor Model. The model can assess the technical and economic nature for individual renewable energy

projects, it can also provide a reference of the economic viability of different technologies in different areas to researchers.

According to SAM, an economic benefit of renewable energy development projects depends on four aspects: the resources, technology, capital and policy. SAM is to help project developers and researchers simulate economic output and earnings of the project with the conditions set in the above four areas (or uncertainty). SAM's main function is to simulate power output and the result of financial analysis, and therefore consists of two main models, namely performance model and financial model.

SAM also has a sensitivity analysis, optimization comparative analysis and comparative analysis of case and other functions, right now renewable energy project evaluation model is more mature.

The output includes basic information table, and various charts. Basic information table which includes net electricity production, kilowatt of electricity costs in nominal and real costs, the first year of gains, after-tax income, fixed cost recovery period. Other charts for users to analyze include the cash flow statement, monthly or hourly output level curve, the production cost curve, chart's output interface is show as the **Fig.34** below.

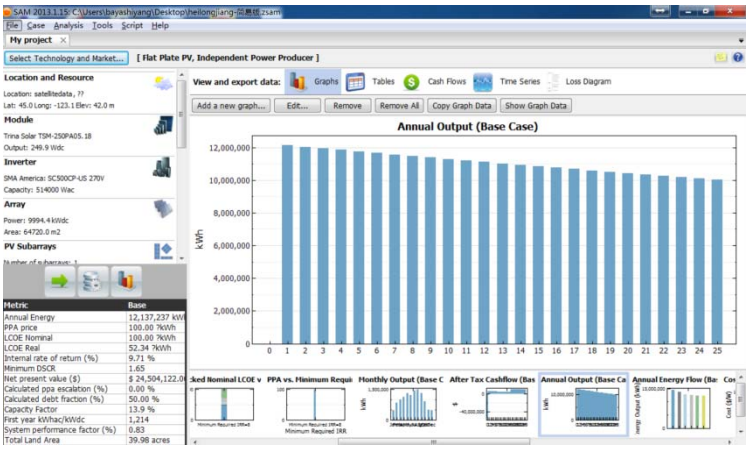

Fig. 34 The Output Interface of the Chart

Source: https://sam.nrel.gov

The output of SAM is managed with the SamUL format file. It's easy to update and re-analysis and the chart can be edited, exported, and quoted to the Office software.

4.3 RETScreen Model

Clean Energy Project Analysis Model (RETScreen Clean Energy Project Analysis software) is a clean energy decision-making model, which is widely used around the world. It's developed and supported financially by Natural Resources Canada. RETScreen (www.retscreen.net) collaborates with many government agencies and multilateral organizations to provide technical support and develop the work with a network of experts from industry, government and academia. The main partners include NASA, Renewable Energy and Energy Efficiency Partnership Project (REEEP), United Nations Environment Program (UNEP) and the Global Environment Facility (GEF). The first version of the model was developed in April 1998 to evaluate various energy efficiency and renewable energy technologies of energy production, energy efficiency, life cycle costs, emission reductions and financial risks.

The current RETScreen's function has changed from renewable energy, combined heat and power generation, and decentralized energy, expanding into clean power, heating and cooling technologies, and energy efficiency measures. It also expanded to the scope of climate data, including the central region grid of the entire surface of the Earth, isolated grid and off grid.

The core of the RETScreen tool includes standardized and integrated clean energy analysis model which can be applied with worldwide, and make an assessment of the energy production, cycle costs and the reduction of greenhouse gas emissions of different types of energy efficiency and renewable energy projects. Each RETScreen energy projects model can be developed in Excel Workbook file. Workbook file is composed of a series of Worksheets. These Worksheets have a common interface and a standard way matched with all RETScreen models. The model also includes product, cost and climate databases, and a detailed online user manual.

According to information provided by RETScreen official website, currently, in 222 countries and regions with more than 315,000 people are using the digital RETScreen; This model has been translated into 36 languages, covering two-thirds of the world's population.

RETScreen mainly consists of the following parts: beginning, energy project model, cost

analysis, carbon dioxide emission reduction analysis, financial analysis, and sensitivity and risk analysis tools. Model structure also determines the use of steps, although the model covers a variety of technical models, but the basic steps are the same analysis. Decision-makers can use five step standard analysis, including energy model, cost analysis, emission analysis, financial analysis, and sensitivity and risk analysis.

RETScreen Climate Database has now expanded to 6,500 ground stations worldwide. It has integrated and improved NASA Surface Meteorology on human living areas and Solar Energy data.

RETScreen model has simplified the preliminary assessment of the project and it requires a relatively small input data, calculates key technical and financial feasibility indicators automatically, and is one-tenth of the cost of other assessment methods application.

Standardized assessment procedures are relatively easy for the comparison of targets. Technical RETScreen project model contains a wide range of technology, divided into ten categories with detail, is the most comprehensive among the same types of products. Clean energy includes both traditional and non-traditional energy resources as well as common resources and technology that allow engineers, financial planners and architects to shape and analyze any clean energy projects.

4.4 Proposal for APEC PV Evaluation System

On the basis of the outputs from truSolar, SAM and RETScreen, the APEC PV project evaluation system is suggested as following for the benefits of whole APEC region.

4.4.1 Three Levels

The first level of APEC PV project evaluation system consists of five evaluation areas: stakeholder assessment, technology assessment, evaluation of the investment environment, profitability, society and other evaluation.

The second level of APEC PV project evaluation system consists of segments of 14 modules following the five evaluation areas. Management and construction team, power plant overview, power users, equipment, design and construction, operation and

maintenance , industrial policy , market demand, supporting and consumptive , net cash flow , internal rate of return , credit enhancement , environmental protection, social welfare .

The third level of APEC PV project evaluation system is mainly the quantitative or qualitative evaluation to support 14 modules of second level. It consists of standards, implementation details, measurements, calculation formula and other components, which support each evaluation module.

4.4.2 Evaluation Area and Sections

The detailed proposal of first level and second level of APEC PV evaluation system are as follow.

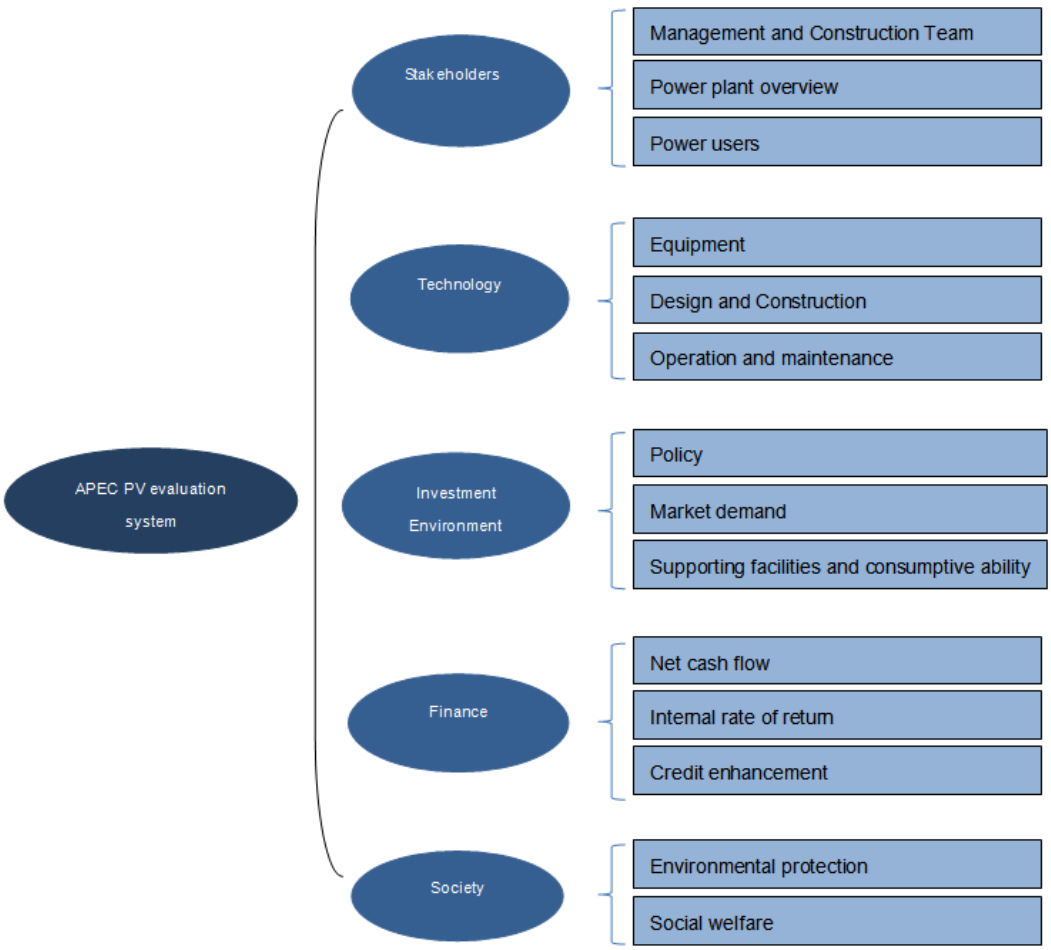

Fig. 35 The Structure of the APEC PV Evaluation System

4.4.2.1 Stakeholder Evaluation

PV system related stakeholders shall be evaluated, including the management and construction team, overview of PV system, as well as the main power users.

1) Management and construction team

To have a PV system be built in time, with sound quality, safety, and economic efficiency, is largely depends on the qualification and the professionalism of the management and construction team. This section will specify how to analysis professionalism, team values, and management capabilities, etc.

2) Overview of PV system

PV system profile includes: PV system name, reasonableness of address selection (Degree of construction difficulty, approach conditions, clear property rights, building structure (brick, concrete frame), roof condition (concrete, color steel tile), rooftop PV projects specially need to consider the roof's quality and life carefully, power system's generating capacity (power system's capacity, system efficiency, solar resource assessment (through the field metering and satellite metering to collect solar radiation data and related solar resource assessment results at the project site or a representative site), climatic conditions (whether frequent typhoons, snow pressure, hail, floods, earthquakes, mud-rock flow, lightning, fog and haze, etc.), affiliation, feasible research reports and permit of PV system project application, filing and approval.

3) Power Users

Evaluation of the main electricity consumers is primarily through evaluating its credit rating on power users itself and its financial position, to analyze the performance of their contracts; whether there are defaults due to electricity arrears, whether electricity tariff settlement is timely.

4.4.2.2 Technology Evaluation

Technical evaluation of PV systems mainly includes the following three sections:

1) Equipment (equipment efficiency, durability, safety (modules, inverters and electrical equipment));

2) Design and Construction (site utilization, installation angle, construction quality);

3) Operation and maintenance (including operation and maintenance requirements, personnel training, operation and maintenance costs, software and monitoring platform, etc.).

4.4.2.3 Investment Environment

PV system's investment environment evaluation includes the following three sections:

1) Policy

From the perspective of PV system's investment environment, the assessment of policy mainly includes policies of PV system industry, taxation, price subsidies.

2) Market demand

Assessment of market demand and electricity demand is usually to investigate trends, purchasing power, and the supply of electric power plant. In addition, it is also important to pay attention to the complementary relationship between PV power generation and power alternative in the evaluation.

3) Supporting facilities and consumptive ability

In supporting capacity, the main evaluation is the grid access conditions of PV systems. Whether there is specific grid connection requirement, supporting grid planning (local grid planning) and construction; grid conditions (access voltage grade, number and capacity of transformers); weighted average electricity tariff; etc.

In the consumptive capacity evaluation, these points as following are mainly reviewed: Whether the PV system is in line with nearby access to electricity; carrying out power consumptive analysis with local consumptive principles; whether there is long-distance transport, abandonment and restriction, the existence of transmission losses and other potential risk.

4.4.2.4 Financial Evaluation

The three sections of financial evaluation of PV systems are NPV, IRR, and credit enhancements.

1) Net Present Value

Net Present Value (NPV) is the sum of the present values (PVs) of the individual cash flows of the same entity. It can be described as the “difference amount” between the sums of discounted: cash inflows and cash outflows. It compares the present value of money today to the present value of money in the future, taking inflation and returns into account.

If the NPV is positive, which means that the return on investment of the PV system is greater than the benchmark rate of return or the set discount rate; conversely, if the NPV is negative, which means that the return on investment of the PV system is less than the benchmark yield or the set discount rate. When calculate actually, usually use the integrated and weighted average capital cost of PV system or bank lending rate, plus 1% to 2% of risk factor as a benchmark rate of return.

Cash inflows include electricity tariff revenue, recovery of fixed asset, subsidies and recycling fluid capital, etc.

Cash outflows include fixed-asset investment, liquidity, operating costs (depreciation and amortization, interest, rent, insurance costs, guarantee fee (if any)), taxes (sales tax and income tax) and so on.

2) Internal Rate of Return

Internal Rate of Return, also known as IRR is the actual yield of investment projects of PV system, is the discount rate that makes the investment project NPV equal to zero, which reflects the actual investment yield of PV system in its life cycle, calculated at the present value.

IRR of an investment project is the yields of project itself can be actually achieved. This reflects the difference between the internal rate of return and the standard rate of return (discount rate set by) the standard rate of return is the minimum standard when making decisions on the basis of investment projects, a minimum rate of return shall be achieved in the investment projects, usually use the cost of capital rates, debt interest, the average social or industry yield.

3) Credit Enhancements

Credit enhancements could be mortgage, pledge, hypothecate third party guarantee, insurance, and so on.

Credit enhancement measures can effectively improve the stability and security of PV system revenue and increase the willingness of investors and creditors to invest and finance. For investors, credit enhancement could further ensure the investment income; for creditors, it could further strengthen the willingness to lend.

4.4.2.5 Society and other Evaluation

Society and other evaluation mainly consider two sections:

1) Environmental protection: ecological balance, urban renewal;

2) Social Welfare: increase of employment, distribution of income.

The evaluation of PV system is a complex technical and economic feasibility process. In APEC region, due to the large differences of various administrative structure, policies, electricity markets, solar resources, solar system construction and operating costs, with the industry's continuous development, it might take long term to explore and develop a set of evaluation methods that can be applied to different APEC economies.

American PV industry has made active exploration in this regard, and provided a relatively more clear and developed set of evaluation system to the investors that have the intention to finance in the US financial market. This might also help to improve the PV system's safety, quality, reliability and efficiency in whole APEC region in near future.

5 Technology Research and Case Study

5.1 General Introduction

Technical factors affecting the PV system capacity can be attributed to three aspects: 1) the Solar radiation which is a photovoltaic power generation system's "fuel "; 2) the installed capacity of the power station; 3) the efficiency of the PV system.

5.1.1 Solar Radiation

The annual amount of solar radiation of specific PV system location is the main indicators to characterize the merits of the local solar resources; the annual amount of solar irradiation directly determines the size of the generating capacity of PV systems. The study of the characteristics of solar energy resources can help investors find a suitable investment, estimate the investment income, and provides a basis for the intended acquisition of PV systems rating.

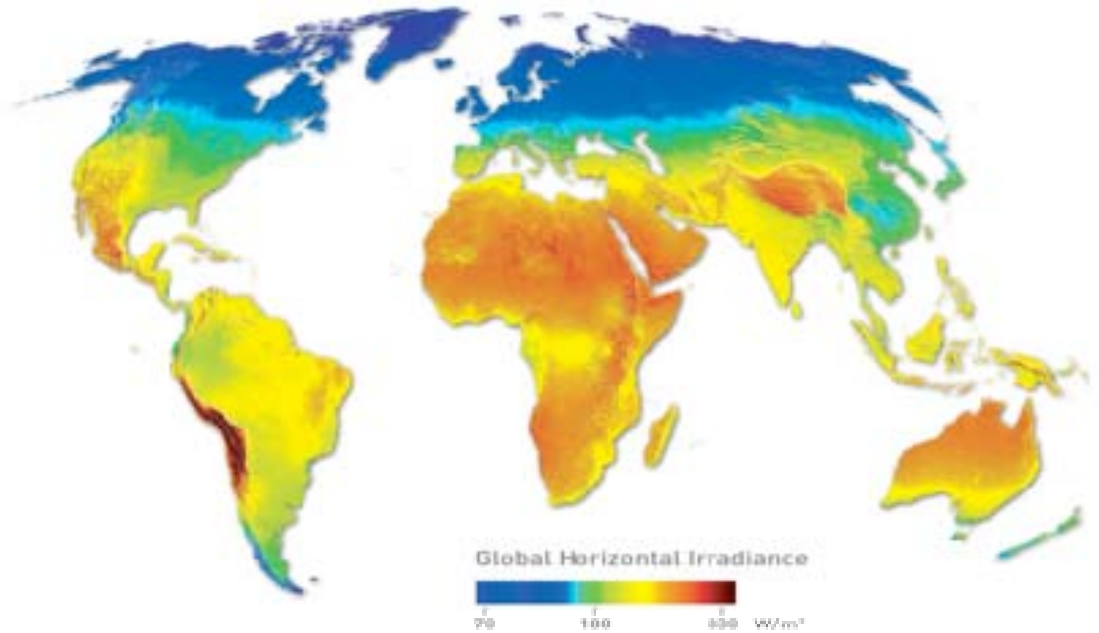

Fig. 36 Global Distributions of Solar radiation resources

Source: 3 TIER (http://www.3tier.com/)

5.1.1.1 Australia's Solar Radiation Resources

Vast areas of central Australia are sparsely populated desert land, which is suitable for large-scale solar energy development and utilization. Recently, Australia also made a plan of large-scale domestic development and utilization of solar energy investment to increase the utilization of renewable energy. The distribution and data of its solar radiation resources are shown respectively in **Fig.37** and **Tab.10**.

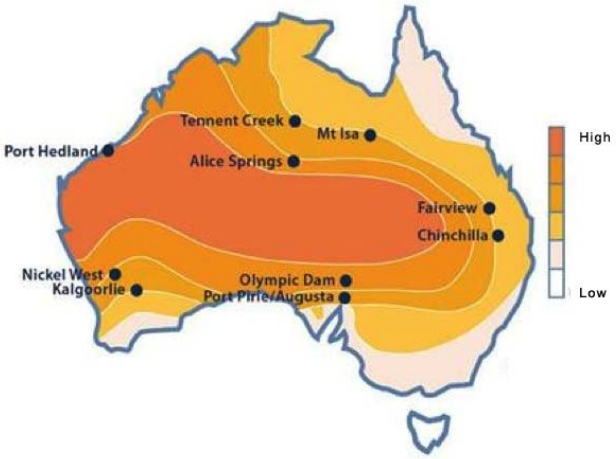

Fig. 37 Solar Resource Map of Australia

Source：Australia and New Zealand Solar Energy Society

Detailed data of solar radiation resource is as below:

Tab. 10 Data Sheet of Solar Radiation Resources across Australia

Level	Annual total amount of solar radiation （MJ/ m^2）	Annual total amount of solar radiation （kWh/ m^2）	Average daily solar radiation （kWh/m^2）
I	7621 - 8672	2117 - 2409	5.8 – 6.8
II	6570 - 7621	1825 – 2117	5 – 5.8
III	5389 - 6570	1497 – 1825	4.1 – 5
IV	< 6570	< 1497	< 4.1

5.1.1.2 China's Solar Radiation Resources

Generally speaking, western China's solar resource is the best area to develop PV system. However, eastern China's economy and energy consumption is much better and higher than western China. Several years ago, some PV projects in western area had the problem of grid connection. This situation is quickly improved as the grid capacity improved rapidly recently.

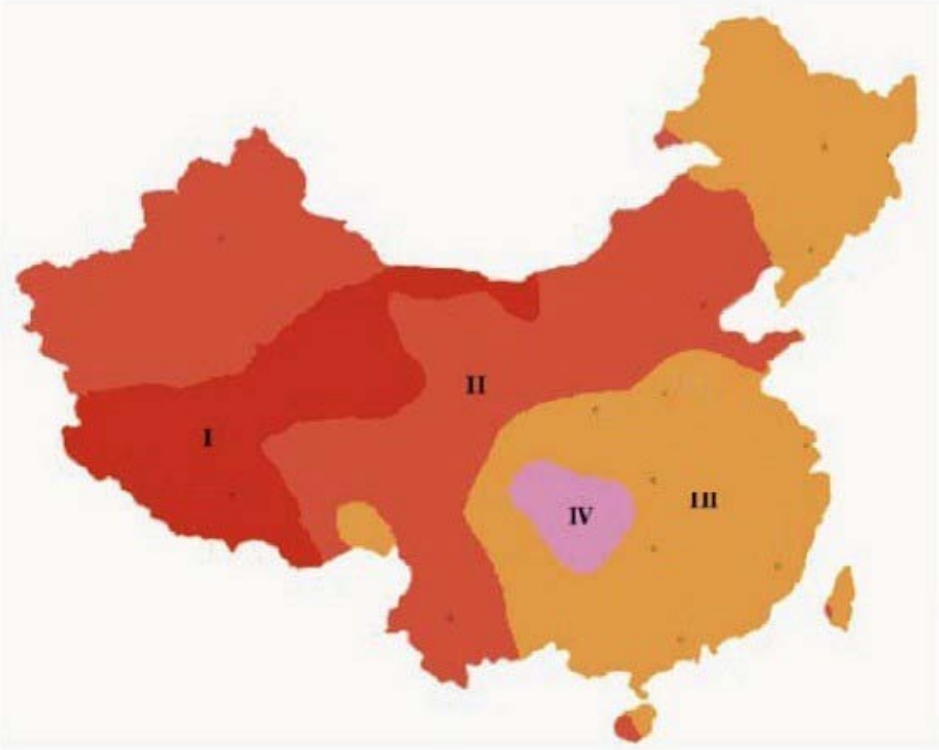

Fig. 38 Distributions of Solar Radiation Resources across China

According to current China's FIT policy, the whole country is divided into four catalogue of solar resource area. Area I is the best resource area and area IV is the poorest area. The detailed information of four catalogue are listed as following:

Tab. 11 Data Sheet of Solar Radiation Resources Distribution across China

Level	Annual total amount of Solar radiation（MJ/m^2）	Annual total amount of Solar radiation（kWh/m^2）	Average daily solar radiation（kWh/m^2）	Area of distribution
I	⩾ 6300	⩾ 1750	⩾ 4.8	Most of the Tibet, southern Xinjiang, Qinghai, the west of Gansu and Inner Mongolia, totally accounting for 17.4% of land area
II	5040–6300	1400–1750	3.8-4.8	northern Xinjiang, northeast China and Inner Mongolia, north China and northern Jiangsu, the Loess Plateau, Qinghai and eastern Gansu, Areas from western Sichuan to the Hengduan mountains, and Fujian, coastal areas of Guangdong and Hainan, totally representing 42.7% of the total land area
III	3780 –5040	1050 – 1400	2.9 – 3.8	Hilly region of southeastern China, Hanjiang River Basin and Sichuan, Guizhou and western Guangxi region, totally accounting for 36.3% of land area
IV	< 3780	< 1050	< 2.9	Sichuan and Guizhou region, totally accounting for 3.6% of land area

Compared to the fast growth of PV installation, China's solar resource evaluation network and database need more investment and attention in future, to provide precise and detailed data to support PV power station yield prediction and analysis.

5.1.1.3 Japan's Solar Radiation Resources

Solar radiation resources are relatively good throughout Japan, which are distributed in **Fig.39**.

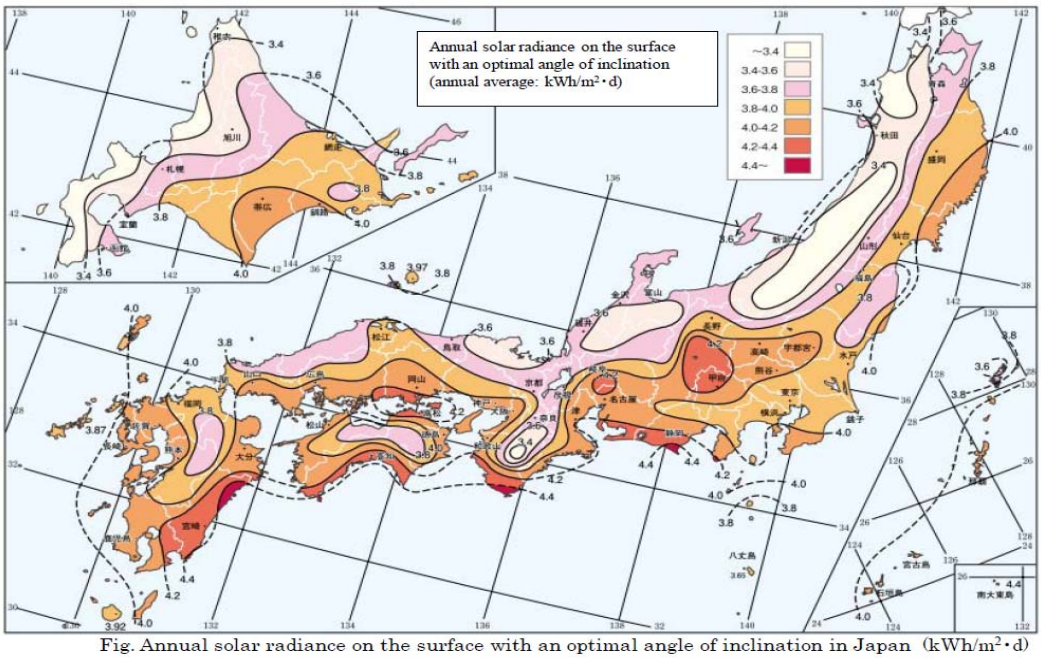

Fig. Annual solar radiance on the surface with an optimal angle of inclination in Japan (kWh/m²・d)
Source: NEDO, Guidelines for PV Power Generation Field Test Project (Design, Construction and System), 2010

Fig. 39 Distribution of Solar Radiation Resources Across Japan

Source: The initiative of New Energy and Industrial Technology Development Organization (NEDO)

5.1.1.4 USA Solar Radiation Resources

The United States is one of the regions of the world's most abundant solar energy resource. It's all solar irradiation resource is shown in **Fig.40**. Based on the 239 observation stations of U.S. for 30 years, from 1961 to 1990, the statistics results are shown in **Tab.12**.

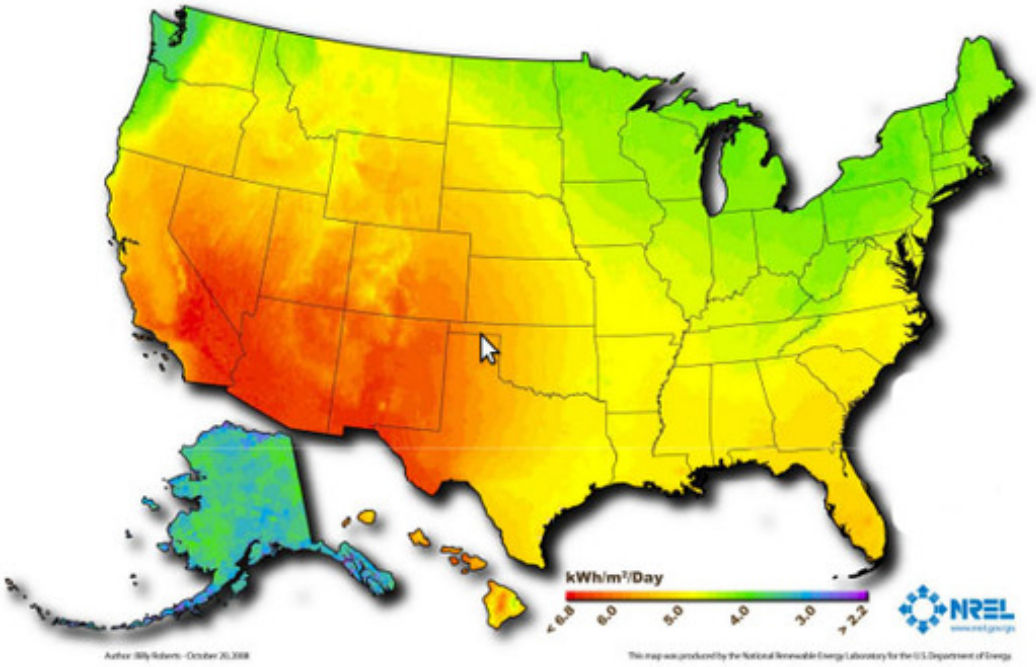

Fig. 40 Distribution of Solar Radiation Resources Across the United States

Source: National Renewable Energy Laboratory (NREL)

Tab. 12 Data Sheet of Solar Radiation Resources across the United States

Level	Annual total amount of Solar radiation（MJ/ m^2）	Annual total amount of Solar radiation（kWh/ m^2）	Average daily solar radiation （kWh/m^2）	Area of distribution
I	9198 - 10512	2555 – 2920	7 – 8	All of Arizona and New Mexico, California, Nevada and Utah, Colorado and southern Texas, accounting for 9.36% of state's total area
II	7884 - 9198	2190 - 2555	6 – 7	Utah, Wyoming, Kansas, Oklahoma, Florida, Georgia and South Carolina, accounting for 35.67% of the total area, including offshore islands

Level	Annual total amount of Solar radiation（MJ/ m^2）	Annual total amount of Solar radiation（kWh/ m^2）	Average daily solar radiation （kWh/m^2）	Area of distribution
III	6570 - 7884	1825 - 2190	5 – 6	Most parts of northern and eastern America, accounted for 41.81% of the total area
IV	5256 - 6570	1460 – 1825	4 – 5	Most part of California area, accounted for 9.94% of the total area
V	3942 - 5256	1095 – 1460	3 – 4	A small area of the northernmost part of Arras, accounting for 3.22% of the total area

5.1.2 PV Technology Development Review

The development of PV technology among APEC region is important to the global PV manufacturing, application and investment, especially in the sectors of cell, module, system.

5.1.2.1 Solar Cell and PV Module Technology

1) Solar Cell Technology

At present, a variety of high efficiency solar cell has developed, such as PERC (Passivated Emitter and Rear Cell), PERL (Passivated Emitter and Rear Locally-diffused), HIT (Heterojunction Intrinsic Thin-film), double side solar cell and IBC （Interdigitated Back Contact Solar Cell, like MWT, Metal wrap through and EWT, Emitter Wrap Through）. The highest efficiency solar cell is HIT, which attains 27%. Many solar cell technologies which are under mass production, are compatible with the traditional process and have good efficiency breakthrough, such as IBC from Sunpower, MWT from Canadian Solar, Yinlis Panda Module made from double side solar cell, HIT from Sanyo, PERC from Trina, etc.

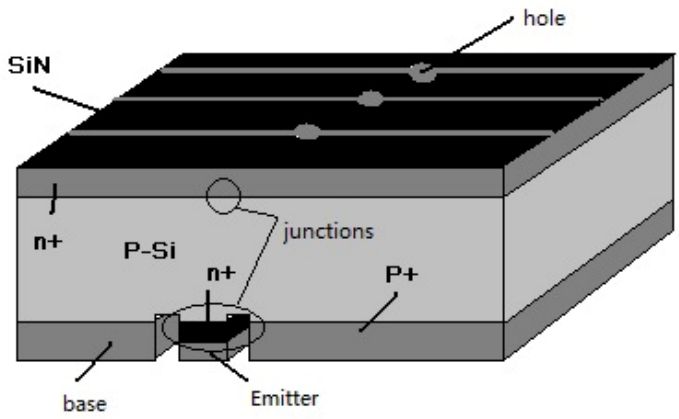

Fig. 41 MWT Solar Cell

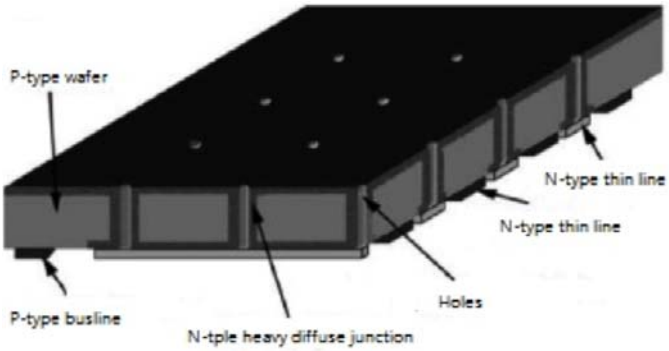

Fig. 42 EWT Solar Cell

The EWT (Emitter Wrap-Through) is an improved version of MWT (Metal Wrap-Through), absorbing the advantages between IBC and MWT. MWT and EWT belong to IBC solar cell. Their characteristic is reducing the front electrode shadow and improving the utilization of solar light and the cell efficiency. At the same time, the anode and cathode are all concentrated at rear side, which reduces the packaging difficulty and simplifies the manufacturing process so that the cell is more beautiful.

In addition to the new variety of high efficiency solar cell through process optimization, there are many manufactories improve the raw material performance. The Golden Concord Holdings Limited ("GCL") launched its second generation Quasi Monocrystal silicon wafer named “Xin Monocrystal G2” to numerous customers and partners, besides, announced its entry into commercial production. This wafer can improve the efficiency of 1.1% in average, which can be used to make out more than 280/335W (60/72PCS) modules.

The thin and more busline process has become the development trend of high efficiency solar cell. LINUO Group said that their three busline solar cell’s FF(Fill Factor) would be 1% higher than conventional solar cell. More busline will reduce the module resistance lose. The Talesun aslo launched the four busline high efficiency solar cell and module with the average cell efficiency of 17.7%.

2) PV Module Technology

The materials of conventional PV module are mainly glass, EVA (ethylene-vinyl acetate), Solar Cell, backboard and Aluminum frame. The glass and solar cell are the key factors to improve the efficiency of modules. The EVA, backboard and aluminum frame are the key

factors to improve the weather fastness. The application environments of economies are not identical. According to their geographical environment and application field, many new technologies are developing at the same time.

In 2014, the KYOCERA proposed that the commercial monocrystal module's efficiency would reach 22% in the next few years, improved by 3%, compare with module efficiency of 19% at present. Now, its poly-crystal module's efficiency has reached 18.6% with large-scale production, breaking the industry record of 17.8%. The KYOCERA said through improving the silicon wafer quality and reducing the carrier recombination, the module efficiency is improved.

JAsolar annouced it's new products, Percium monocrystal module and Riecium ploy-crystal module. The 60 pieces solar cell of Percium monocrystal module's power is achieving 285W, which is 20W higher than industry average power. The Percium monocrystal module's efficiency is 20.3% with Percium monocrystal solar cell, which use the advance technology of rear passivated and locally-diffused. This high efficiency module will improve 8% power than conventional module in the same area. The 60 pieces solar cell of Rercium ploycrystal module's power is 270W, which is 15W higher than industry average power and 5W higher than average industry monocrystal module power. The Rercium ploycrystal module's average efficiency is 18.3%, 0.8% higher than average industry level, which use Riecium ploycrystal solar cell with black silicon technology making it consist the cell's color and product appearance more beautiful.

Solibro is Hanergy's subsidiary. The CIGS (Cooper Indium Gallium Selenide) thin film solar cell, produced by its laboratory, has made great progress. It's confirmed that the conversion efficiency was19.6%.

USA CIGS film developer Stion recently said, the use of CIGS cell samples, which were produced by scalable commercial production line, have obtained 23.2% of conversion efficiency. The company did not disclose whether the product parameters and the results have been independently verified.

First Solar recently tested in America DOE's National Renewable Energy Laboratory (NREL), its new module efficiency record, CdTe thin film solar module efficiency is 17%. Proved by Newport Corp's technology and Application Center (TAC) photovoltaic

laboratory certification and NREL, The world record of First Solar's cadmium telluride (CdTe) solar cell conversion efficiency is 20.4%.

The innovation mechanism of Merlin technology is expected to be substantially reduced silver expensive usage, the company said it could reduce as high as 80% of silver paste dosage, the company also said it could improve the module efficiency, and reduce 10% of cost raw materials.

Panasonic Corp recently launched the HIT-N245 and HIT-N240 PV modules series. The HIT-N245 module has a conversion rate of 19.4%, and at the same time with a variety of upgraded function, and it's to improve the overall performance, especially in the roof of the house market performance. With the assembly conversion rate of 19.4% and cell conversion rate of 22%, HIT-N245 has become one of the highest performance component in the market. Panasonic Corp said Low temperature coefficient of relating components was -0.29%/ ° C, which is far beyond the traditional cell operation effect in normal operating environment. Weatherproof of module focuses on PID test recently, requiring a test of ninety-six hours at 85% relative humidity, with temperature of 85 ± 5 ° C and negative voltage 1000 volts. This PID test results for the module attenuation is less than 1%

JinkoSolar announced that a new series of smart module would be released in 2014 Japan PV Expo. In poor weather conditions such as shadows and cloud occlusions, the generating capacity of smart module could be increased by about 20% than ordinary solar module capacity.

Considering the tough environment of some APEC member economies and latest PID study, some manufacturers develop Double-glazed PV module, like Almaden use double 2mm glass, the weight is very close to usual module.

5.1.2.2 PV system Applications

1) Modular of PV system applications

By the refinement of PV systems and modular design, we could solve the matching problem of PV systems, achieve the better combination of PV systems. Qualified design

helps to achieve design optimization, consider the application of differentiation, compare program design (including the cost, power generation, yield , comparison of individual demand), modular design to achieve easy installation, easy disassembly, easy management, standard product mix (color steel tile roof, the civil roof, the commercial roof). Modular PV system applications can not only optimize plant efficiency, but also facilitate the promotion of a wide range of PV systems and applications.

2) Standardization of PV system applications

Standardization of PV system applications mainly include standard modular products of key PV system equipment, the standardization in construction process, the standardization of documentation system, and the standardization of project management, etc.

Modular products matched with critical equipment:

- According to Differences of villas and buildings, Systems modular design of distributed household could design for different forms of building respectively, with easy installation, which is safe and reliable;
- Standardization of PV system construction management;
- Process Standardization: the site, the project feasibility study, reporting, approval, design, construction, operation and maintenance;
- Standardized documentation system: text, tables, materials, and depth description of each stage during the construction need to be standardized;
- Project Management Standardization: For the management and coordination involved in the projects, need to be standardized.

3) Serialization of PV system applications

On the basis of modularity and standardization of the PV system applications, through further modular design to further realize serialization of PV system applications, serialization of scale, and the serialization of geographical environment.

Serialization of PV system applications' areas helps PV system meet the module

requirements in different areas of industry, agriculture, commerce, civil and construction, etc.; Serialization of PV system applications' scale meet different installed size.

4) IT platform of PV system applications

The development of PV technology has close connection with modern IT technology, including the project development platform, construction management and supervision platform, risk based maintenance and complete evaluation, etc.

5.1.2.3 Development together with the SG and EMS

Harmonization of smart grid (SG) and energy management system (EMS) with PV system are important to PV application in large scale. It helps to create large potential market to PV and reduce the possible negative influences like fluctuation, intermittency.

5.2 Case Studies

5.2.1 International Solar Decathlon

International Solar Decathlon Competition (Solar Decathlon, SD) was initiated and sponsored by the U.S. Department of Energy. It is a solar building technology race among global university of participating units. With the world's top research and development, technology and creative design teams, closely integrating the solar energy, energy efficiency and building design in new ways, to design, construct and operate the fully functional, comfortable, livable, sustainable solar homes. During the race, all the residential energy is entirely supplied by the PV equipment. Competition will be a comprehensive assessment of energy efficiency, building's environmental control, and physical and self-sufficiency capabilities. Through ten individual appraisals to determine the final ranking, that are architectural design, marketing , engineering, promotional displays, solar applications , comfort , hot water , appliances , home entertainment , energy balance, thus it's called " Decathlon " competition.

From August 2 to 13, 2013, China International Solar Decathlon Competition was held in Datong, Shanxi Province. 20 teams came from the Australia, China , Iran, Israel, Malaysia, Singapore, Sweden, United Kingdom, United States. There are altogether 35 universities with new green solar energy application technology attended this competition.

Tab. 13 Typical Team Details (by race rankings)

Title of the Work	University Members	Main Solutions	Picture of the Work
Illawarra Flame	University of Wollongong	Using the single-phase, two components, that are thin film and silicon, the total installed capacity is 9.4kW; respectively connected to two 5kW three-phase inverter, grid –connected at the same time	
E-CONCAVE	South China University of Technology	The house comes with a set of cost control system and circulating water treatment system. Photovoltaic installed capacity of 13.56kW, the dip angle is 3 °, four road access 3 inverters. Photovoltaic module adopts a flat pattern, the bottom bracket is fixed and connecting with the surrounding wall together.	
Halo	Charles Moss science and Technology University,	All of the flexible thin film components, total installed capacity is 11.38kW, with the SMA15kW wall hanging	

Title of the Work	University Members	Main Solutions	Picture of the Work
	Sweden	type inverter, the film component is connected with the wood structure.	
I4E House	Israel, College of Tel Aviv University, Oded SHENKAR School of engineering and design, management and technology research, Bloomfield School of design and education	Select SolarOr Ltd. As thin film photovoltaic decoration components, Pythagoras Solar thin film components, ET-Solar components, installation angle of 15 °; also the First Solar component, at an angle of 90 degrees. The total installed capacity of 12.89kW, 5kW inverter 3 road access of 3 SolarEdge.	
O-HOUSE	Tsinghua University, Florida International University	Housing photovoltaic is divided into three parts: the corridor is small membrane component; the kitchen roof alone using 265 components, connected with a micro inverter, the dip angle is 3 °; the main structure, the laying of photovoltaic	

Title of the Work	University Members	Main Solutions	Picture of the Work
		components, installation angle is 23.58 °. The total installed capacity is11.13kW.	
Solar House	National University of Singapore	The southern component is installed, the installation angle is 10 °, the northern component is the horizontal azimuth angle tracking system. The whole system adopts DC and AC power supply way respectively, AC output, average to three phases, three-phase equilibrium; DC delivered to DC MPPT, for the refrigerator, computer, lighting and other DC equipment.	
Solartium	Polytechnic Institute of New York University, Ghent University, and	The installed capacity of PV is 11.78kW, using the three-phase grid connected inverter with SMA15kW. The reason of	

Title of the Work	University Members	Main Solutions	Picture of the Work
	Worcester Polytechnic Institute (Belgium-United States)	separating power and power supply is the use of 60Hz&110V powered devices of the household electrical appliances. So the first thing is to convert the 50Hz&220V power grid to 60Hz&110V, and then sent the power to the house.	
NEXUS House	Harbin Institute of Technology, New Jersey Institute of Technology	The installed capacity is up to 18.6kW, distributed in the housing body and a corridor roof. The whole building is designed according to the components of the best angle, the entire gradient between rooftop and corridor is 32°. Three roads access SMA inverter.	

Each of the 20 teams has their own characteristics in the applications for photovoltaic systems. For module, there are applications of crystalline silicon PV modules, thin-film PV modules, flexible thin-film PV modules. For system structure, there are flat fixed installation, angle fixed installation, automatic tracking tracking system installation. For inverter, there are centralized inverter, micro inverter and DC optimizer with simple inverter applications. For energy distribution, there are conventional applications of distribution system of 220V four wire three phase, 110V60Hz two-phase four wire of

American distribution system, 220V single phase two wire Australia distribution system, and low voltage DC power distribution system.

The competition provides an international platform and opportunities for participants and stakeholders to learn from each other and get the latest information of PV development.

5.2.2 SolarCity Rooftop Project

SolarCity（http://www.solarcity.com/commercial/portfolio/housing/arbor-gardens.aspx）is founded in 2006, provides clean energy. The company has disrupted the century-old energy industry by providing renewable electricity directly to homeowners, businesses and government organizations for less than they spend on utility bills. SolarCity gives customers control of their energy costs to protect them from rising rates. The company offers solar power, energy efficiency and electric vehicle services, and makes clean energy easy by taking care of everything from design and permitting to monitoring and maintenance. SolarCity currently serves 14 states and signs a new customer every three minutes. SolarCity has thousands of customers in Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Texas, Washington and Washington D.C. Now SolarCity has assembled one of the most experienced clean energy project design and installation teams in the world.

1) Bayer Healthcare Program

This program is located in Berkeley, CA, it’s total installed capacity is 295 kilowatt, Is the city of Berkeley’s largest solar electricity system.

Fig. 43 Effect Drawing of Bayer Healthcare Program

For Bayer, the 295-kilowatt project offers a tangible example of the company's commitment to healthy communities, as well as a concrete step to further its greenhouse gas emissions reduction goals. Over the next twenty years, the system will help Bayer avoid emitting more than 10 million pounds of carbon dioxide into the atmosphere, equivalent to taking nearly 900 cars off the road.

2) Oakland Zoo Educational Center Problem

This program is located in Oakland, CA, was installed in June 2007, the system size is 30 kilowatt, it's roof type is Standing Seam Metal and Educational Pole Mount, the Internal Rate of Return (IRR) is 13%

SolarCity first installed a 1 kW system for educational purposes and later installed a 29 kW system on an adjacent Oakland Zoo Educational Center building to offset the zoo's electricity usage. The educational center is also home to a SolarCity kiosk that features real-time solar production statistics and educates visitors on how solar power works.

Fig. 44 Oakland Zoo Educational Center Problem

5.2.3 Solar Town in Japan

On the initiative of New Energy and Industrial Technology Development Organization (NEDO), from 2002 to 2007, the project of Demonstrative research on clustered PV systems is carried out in OTA, Japan. The total installed capacity of the project is 2.2MW. The project successfully developed of a multi- grid connected and anti-islanding "AICOT" technology, and achieved a maximum of 533 units grid-connected at the same time on the earth. The objective of this program is to demonstrate that a clustered PV system of several hundred residences, where each residence installs a PV system, can be controlled by the technology developed in this program without any technical problems.

Fig. 45 Overview of Solar Town

Source: The initiative of New Energy and Industrial Technology Development Organization (NEDO)

5.2.4 Commercial and Industrial Rooftop PV system

Changzhou Almaden project is located in the Industrial Park of Changzhou, China, covering an area of 300,000 square meters, with a large number of industrial roofs, commercial roofs and carports, etc., relying on these existing buildings. The project adopts double-glazing module. The total installed capacity of this project is 20MW, the basic project revenue is shown in **Tab.14**.

Tab. 14 Changzhou Almaden Project's Estimated Revenue Table

Basic Project Information							
Name of Project	Owner of Project	Capacity（kW）	Site of Project	Total Investment (Million RMB)	Annual Generating Hours	On-Grid Energy（Million Kw/h）	On-Grid Price
Changzhou Almaden 20MW PV system	Changzhou Almaden Co., Ltd.	20000	Changzhou, Jiangsu Province, China	158.60	1068	2136.00	1.308
Results Calculated							

On the basis of the Almaden project, it will be built into a group of compared projects to verify the transmittance of double-glazing module, anti-fire characteristics, PID-resistant properties, weather resistance (salt spray, acid, and dust), high mechanical load performance advantages.

Fig. 46 Glass Conservatory with Double-Glazing Module

Fig. 47 Double-Glazing Module Used in Residential Buildings

Fig. 48 Photovoltaic Carports with Double-Glazing Module

Fig. 49 Double-Glazing Modules of Photovoltaic Charging Piles

5.2.5 Agricultural greenhouses

Qingdao New Energy Solutions Inc. (NESI) in Shandong Province, China, has developed, and promoted a number of integrated PV system application solutions, using building roofs, south facade, agriculture greenhouses and integrated PV buildings. By November 2013, NESI the total installed capacity of accumulated PV system reached 350MW; the cumulative annual generating capacity was 380 million kWh.

According to the special needs of distributed PV systems, solar PV greenhouses and other agricultural science and technology projects, NESI actively develops customized professional products and provides integrated PV solutions for the innovative business models, such as, PV tech greenhouses and BIPV curtain walls, and other ordinary PV module. 50MW PV project, which is seated in Helan County, Yinchuan, China, is an example of earnings estimates. The calculation results are shown in **Tab.15**, and the PV agricultural greenhouse is shown in **Fig.50**.

Tab. 15 Estimated Revenue Table of Agricultural Greenhouses 50MW PV project in Helan County, Yinchuan

Basic Project Information							
Name of Project	Owner of Project	Capacity （kW）	Site of Project	Total Investment (Million Yuan)	Annual Generating Hours	On-Grid Energy （Million Kw/h）	On-Grid Price
Agricultural Greenhouses 50MW PV project in Helan County, Yinchuan	Qingdao New Energy Solutions Inc.	50000	Helan County, Yinchuan	500	1435	7175.00	0.900

Fig. 50 Agricultural Greenhouses with Double-Glazing Module

6 Conclusion

6.1 The PV investment profitability is increasing

With the fast development of PV module and system technology, and the rapid drop of construction cost, the PV investment profitability is quite attractive compared against other traditional energy solutions.

For example in China, 100 GW PV power station investment is about 160 billion USD, generate about 100 billion kWh electricity, with 16 billion USD revenue every year. In 2013 there are about 1230 GW electricity installation in China. The five main state owned companies have about 584 GW installation, with total profit about 12 billion profit. Considering the PV maintenance costs are relatively low and there is no fuel cost during the whole life cycle, the similar PV investment could generate much higher profit than traditional energy, and even better than other traditional industries like real estate in some APEC member economies.

6.2 Rooftop is main development field

Lots of economies face challenges from grid, land resources while developing Very Large PV power plant (VLPV). However, the rooftop projects are much more convenient to get connected with consumption center, and less transmission lost. Besides, rooftop PV project has much higher profitability in lots of economies, like residential projects in USA and Japan, and Industry & Commercial projects in China.

6.3 Policy plays important role

Traditional energies are widely subsidized by government in many APEC member economies. Considering PV is at the beginning stage in large scale application, the PV asset value is very limited compared against traditional sectors, and the financing costs are much higher than traditional energy in most APEC member economies. To make proper PV policy scheme and adjust according to domestic and international PV industry and market development is critical.

6.4 PV project evaluation scheme

The PV project evaluation scheme will connect PV industry together with financing market in large amount in near future. The government and policy plays important role in the beginning stage, while the capital and financing market might be most efficient power to push PV application into large scale. The APEC PV project evaluation scheme could be developed upon the basis of its member economies valuable efforts, like truSolar by USA, and RETScreen by Canada.

6.5 Project database and platform

The international PV project database and platform could help related stakeholders to get latest information from each other efficiently, to provide valuable projects' information to potential investors, and help existing PV asset owner improve their maintenance, bankability and liquidity, and build up an convenient platform for all related product and service providers.

6.6 Technology exchange and innovation

There are still some critical challenges to rooftop PV projects in some APEC member economies, like fire-prevention, design optimization, risk-based maintenance, etc. Technology and knowledge exchange and cooperation, innovation will not only benefit one economy, but also will benefit whole PV industry and APEC region.

6.7 Human resource training

Large scale of PV application needs large number of professional human resources, including manufacturing, design, construction, maintenance, testing and inspection, financing and insurance, etc. The APEC PV best practices, database, reports could be valuable training materials for all member economies.

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Attachment: PV project database

Australia's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
1	Parliament House Solar Power Pilot Project	43	ACT
2	Royalla solar farm	20000	ACT
3	Johnson & Johnson Medical	200	NSW
4	Dubbo	50	NSW
5	GPG Solar	45	NSW
6	Building 46, Newington Armoury	64	NSW
7	Queanbeyan	50	NSW
8	Singleton	400	NSW
9	Sydney Superdome	70	NSW
10	White Cliffs Solar Power Station	45	NSW
11	Araluen Arts Centre	162	NT
12	Bulman	56	NT
13	Hermannsburg	192	NT
14	Kings Canyon Solar Power Station	241	NT
15	Lajamanu	288	NT
16	Yuendumu	192	NT
17	Crowne Plaza Alice Springs	305	NT
18	Uterne Solar Power Station, Alice Springs	1000	NT
19	Alice Springs Airport	235	NT
20	Desert Knowledge Australia Solar Centre, Alice Springs	201	NT
21	Cloncurry Solar Farm	2128	QLD
22	University of Queensland St Lucia campus	1220	QLD
23	Fraser Coast Solar Farm	401	QLD
24	Queensland University of Technology (QUT)	202	QLD
25	Jaques Coffee Plantation	81	QLD

Australia's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
26	Moorooka Shopping Centre	60	QLD
27	Windorah Solar Farm	150	QLD
28	Valdora Solar Farm	10000	QLD
29	Adelaide Showgrounds	1000	SA
30	Wilpena Pound	100	SA
31	Queen Victoria Market	200	VIC
32	Ballarat Solar Park. Ballarat Aerodrome. Mitchell Park, Ballarat.	300	VIC
33	Bendigo Solar Park.	300	VIC
34	Bridgewater Solar Plant, Bridgewater, Victoria	500	VIC
35	NextDC M1 Data Centre, Port Melbourne, Victoria	400	VIC
36	SeaViews Manor	90	VIC
37	Fenning Timber	99	VIC
38	Carnarvon	51	WA
39	Greenough River Solar Farm	10000	WA

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
1	1010 Lorne Street	250	Sudbury
2	Ferme Joly Drouin et Filles Solar	250	Plantagenet
3	1620 Steeles Avenue	250	Brampton
4	100 Washburn Drive	250	Kitchener
5	Floradale 2	40	Elmira
6	Solar Beams 1	100	Sparta
7	1111944 Ontario Limited	250	Aylmer
8	Bryan Prince Bookseller	16	Hamilton
9	545 Speedvale Avenue	250	Guelph
10	Windsor Renewable Energy L1	200	Tecumseh
11	Westbrook Solar	100	Binbrook
12	The Marcus Centre	100	Utopia
13	900 Vances Side Road	250	Ottawa
14	Avonmore 5	250	Avonmore
15	Avonmore 7	250	Avonmore
16	Bridlewood Mall Rooftop 2	249	Scarborough
17	Pembroke Mall Rooftop 1	249	Pembroke
18	Merivale Mall Rooftop 1	249	Ottawa ON
19	MBrisson Garage	30	Casselman
20	MMFS002PV	75	Tillsonburg
21	Huron East	240	Clinton
22	GSU Photovoltaic Generation Feasibility Study	30	Sudbury
23	433 Steeles Avenue	125	Milton
24	Moulinette Road	30	Ottawa
25	Casselman Tire 82KW	82	Casselman
26	Moote Rd.	190	St. Anns
27	Bayfield Mall Rooftop 2	249	Barrie

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
28	2020 Old Keene Road GPE 09017504	125	Peterborough
29	Woodbine Centre Rooftop	499	Etobicoke
30	Woodbine Centre Rooftop 2	500	Etobicoke
31	3427 Sandwich Street	30	Windsor
32	3441 Sandwich Street	30	Windsor
33	Muskoka Beach Rd Solar	60	Bracebridge
34	2075	50	Peterborough
35	CBSF- 170 Sharer	120	Vaughan
36	4350 Industrial Drive	250	Windsor
37	200 Clark Street	500	Harrow
38	2234721 Ontario Corporation Solar One	250	Toronto
39	4897 Fly Rd.	250	Beamsville
40	Skids Away	135	Toronto
41	SA1	500	Welland
42	SA2	500	Welland
43	Norsecan Solar	250	Kingston
44	SA3	500	Dresden
45	30 Kern Rd	100	Toronto
46	Poulettes Skye Pullets	100	Dunvegan
47	417 Bus Line	135	Casselman
48	BURLMINI 001PV	250	Burlington
49	BramKal Rooftop	250	Burlington
50	677 Mac Donald	249	Sault Ste. Marie
51	757182 Ontario Ltd.	250	Ayton
52	757182 Ontario Ltd.	250	Ayton
53	757182 Ontario Ltd.	250	Ayton
54	757182 Ontario Ltd.	250	Ayton
55	757182 Ontario Ltd.	250	Ayton

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
56	390 Healey Road	250	Bolton
57	31 Mcaffee 2	30	Harrow
58	Great Canadian 75kW	75	Kitchener
59	Floradale 1	90	Elmira
60	49 Simpson Road	305	Bolton
61	Brant Street Solar Energy Progject	150	Woodstock
62	620 Supertest Rd	500	Toronto
63	133 Taunton Road West	250	Oshawa
64	All Weather Farmers Inc. Barn	100	Simcoe
65	Nature Feed Centre	40	Burgessville
66	Nature Farms Inc.	250	Burgessville
67	Nature Pork Systems	250	Woodstock
68	GEDSB AG Hodge	80	Brantford
69	GEDSB Courtland	50	Courtland
70	GEDSB Houghton	70	Langton
71	GEDSB Langton	60	Langton
72	GEDSB Paris Central	45	Paris
73	GEDSB St. George-German	75	St. George
74	GEDSB Port Dover Composite	215	Port Dover
75	GEDSB West Lynn	100	Simcoe
76	GEDSB McKinnon Park	180	Caledonia
77	GEDSB River Heights	95	Caledonia
78	St. Monica C.S.	30	Markham
79	240 Racco Parkway (Solar)	500	Thornhill
80	ANDEMAR CATTLE CO	250	St.Marys
81	Williamson Solar	500	Val Rita-Harty
82	Owens Solar	500	Val Rita-Harty
83	Cecil's rooftop FIT	250	Waterdown
84	Anita's Solar project	250	Waterdown
85	Anmar Rooftop PV System	221	Lively

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
86	Annan & Bird - 1060 Tristar	250	Mississauga
87	Elcho Rd.	150	Wellandport, ON
88	Longhurst	100	St. Thomas
89	Atlantic Packaging - 45 Chisholm Dr	500	Ingersoll
90	Atlantic Packaging - 333 Progress Ave	500	Scarborough
91	Atlantic Packaging - 111 Progress Ave	500	Scarborough
92	Atlantic Packaging - 350 Midwest Ave	500	Scarborough
93	Atlantic Packaging - 255 Brimley Rd	500	Scarborough
94	Atlantic Packaging - 45 Milliken Blvd	500	Scarborough
95	Atlantic Packaging - 55 Milliken Blvd	500	Scarborough
96	Atlantic Packaging - 80 Progress Ave	500	Scarborough
97	Atlantic Packaging - 195 Walker Dr	500	Brampton
98	AB101-501	250	Toronto
99	Bayridge Centre	200	Kingston
100	Bayridge Centre West	80	Kingston
101	Bayly Brock 250KV Solar PV System	250	Pickering
102	BCR Solar Farm	100	Tweed
103	Long Sault-Weston	499	Long Sault
104	Endura Energy 6606 Rainham Road	250	Dunnville
105	LONG SAULT- GILDAN	499	Long Sault
106	Flamborough Solar	250	Hamilton
107	BLT Farms FIT Project	130	Moorefield
108	Bluewater Power Solar FIT #1	30	Sarnia
109	Bluewater Solar 250 Queen	250	Sarnia
110	Pines Stor & Lok	200	Trenton
111	East Side Storage	100	Quinte West
112	B Buma Eadie	45	Russell

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
113	Endura Energy 620 South Cayuga	100	Haldimand County
114	Solar Barn 1	100	Hagersville
115	460 Industrial	500	Woodstock
116	510 Main	500	Delhi
117	252 Power	500	Norfolk (Delhi)
118	80 Norwich	500	Woodstock
119	215 Gilbert	250	West Lorne
120	1000 Wye Valley Road	500	Midland
121	BCC 73.3 kW Roof Mounted PV	73	Buckhorn
122	Blower Engineering - 40 Industrial Pkwy N	59	Aurora
123	Bioniche Life Sciences Inc.	100	Belleville
124	Solar Dance	19	Toronto
125	Canadian Opera Company	36	Toronto
126	Canadian Solar Developers Ltd. L.P.#8	100	Barrie
127	Canadian Solar Developers Ltd. L.P.#9	100	R.R.#1 Midhurst
128	Canadian Solar Developers Ltd. L.P.#10	100	R.R.#1 Midhurst
129	Canadian Solar Developers Ltd. L.P. #11	100	R.R. #1, Barrie
130	Canadian Solar Developers Ltd. L.P. #14	250	R.R. #1, Barrie
131	Canadian Solar Developers Ltd. L.P.#1	100	Strathroy-Caradoc
132	Canadian Solar Developers Ltd. L.P.#5	100	Strathroy-Caradoc
133	Canadian Solar Developers Ltd.	100	Strathroy-Cara

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
	L.P.#6		doc
134	Canadian Solar Developers Ltd. L.P.#7	100	Strathroy-Cara doc
135	1015 Lakeshore	250	Toronto
136	158 Primeway Dr.	250	Welland
137	1608 The Queensway	250	Toronto
138	4630 Sheppard Ave. E.	250	Scarborough
139	801 The Queensway	27	Toronto
140	1100 Kerr St Oakville	250	Oakville
141	1156 Dundas St E.	250	Mississauga
142	983 Upper James Street	35	Hamilton
143	5970 Mavis Road	250	Mississauga
144	10031 McLaughlan Rd. Brampton	250	Brampton
145	4100 Garden St Whitby	250	Whitby
146	3050 Mavis Road	250	Mississauga
147	7650 Markham Rd.	250	Markham
148	#174 330 Coventry Rd, Ottawa	250	Ottawa
149	#733 1515 Bank St., Ottawa	25	Ottawa
150	#258 1820 Merivale Rd, Nepean	250	Nepean
151	#272 85 Robertson Rd., Nepean	235	Nepean
152	#442 2501 Greenbank Rd, Nepean	250	Nepean
153	#457 8181 Campeau Dr, Kanata	250	Kanata
154	#195 59 Bath Rd, Kingston	150	Kingston
155	#336 1333 Wilson Rd N. Oshawa	250	Oshawa
156	#30 1901 Eglinton Ave E, Toronto	250	Toronto
157	#220 11 Clappison Ave, Waterdown	250	Waterdown
158	#5 341 Hastings St. N, Bancroft	150	Bancroft
159	#8 20215 Chatham St N, Blenheim	100	Blenheim
160	#18 485 McNeely Ave, Carleton Place	250	Carleton Place
161	#24 109 6th Ave, Cochrane	100	Cochrane

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
162	#406 1330 Front St, Hearst	130	Hearst
163	#664 30 Lyndon Rd, Brantford	250	Brantford
164	#36 75 Dundas St, Cambridge	150	Cambridge
165	#31 950 Tower St, Fergus	100	Fergus
166	#199 8505 Tecumseh Rd, Windsor	250	Windsor East
167	#236 4150 Walker Rd, Windsor	250	Windsor
168	#743 5300 Tecumseh Rd. E, Windsor	25	Windsor
169	#142 605 John St N, Aylmer	100	Aylmer
170	#55 262 Erie St S, Leamington	200	Leamington
171	#172 300 Maidstone Ave W, Essex	175	Essex
172	#103 1093 Ontario St, Stratford	250	Stratford
173	#179 1000 kings Hwy, Fort Frances	200	Fort Frances
174	#278 1066 Barrydowne Rd, Sudbury	250	Sudbury
175	#445 2259 Regent St, Sudbury	250	Sudbury
176	#260 10 Woodlawn Rd, Guelph	200	Guelph
177	#29 1002 Broad St. E, Dunnville	150	Dunnville
178	#159 1525 Cameron St., Hawkesbury	250	Hawkesbury
179	#48 98 Mutual St, Ingersoll	75	Ingersoll
180	#204 1229 Highway 17, Kenora	225	Kenora
181	#704 642 Fairway Rd. S, Kitchener	25	Kitchener
182	#58 1125 Wellington Rd S, London	250	London
183	#61 Highway 93 South Hugel Ave, Midland	200	Midland
184	#140 1210 Steeles Ave, Milton	250	Milton
185	#305 2850 Queen St. E, Brampton	250	Brampton
186	#411 10 Great Lakes Dr, Brampton	250	Brampton
187	#69 17750 YONGE STREET, NEWMARKET	250	NEWMARKET
188	#73 99 FIRST STREET,ORANGEVILLE	250	,ORANGEVILLE

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
189	#86 1050 O'Brien Rd, Renfrew	150	Renfrew
190	#95 200 McNabb St, Sault Ste Marie	250	Sault Ste Marie
191	#92 1063 Talbot Street, St. Thomas	250	St. Thomas
192	#34 1221 Arthur St W, Thunder Bay	250	Thunder Bay
193	#7 101 Bell Blvd. Belleville	250	Belleville
194	#124 465 NORWICH AVENUE, WOODSTOCK	250	WOODSTOCK
195	#75 441 Gibb St, Oshawa	250	Oshawa
196	#22 801 Centre St, Espanola	150	Espanola
197	#251 400 Weber Street North, Waterloo	250	Waterloo
198	#674 656 Erb Street West, Waterloo	225	Waterloo
199	#425 1875 Hyde Park Rd, London	250	London
200	#494 378 Horton St, London	50	London
201	#273 2681 Danforth Ave, Toronto	250	Toronto
202	#703 106 Centennial Pkwy N, Hamilton	25	Hamilton
203	211 St. Clair Ave. W	31	Toronto
204	400 Dundas Street E. Oakville	250	Oakville
205	#427 111 Rylander Blvd, Scarborough	150	Scarborough
206	#192 1019 Sheppard Ave. E. Willowdale	250	Willowdale
207	#90 431 Louth Street, St.Catharines	250	St.Catharines
208	#145 300 Glendale Ave, St. Catharines	200	St. Catharines
209	#281 380 Sandwich St. S, Amherstburg	100	Amherstburg
210	#753 1305 Dundas St. E, London	25	London
211	#130 1975 Dundas St. E, London	250	London
212	#83 939 Fort William Road, Thunder	250	Thunder Bay

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
	Bay		
213	#738 730 Memorial Ave, Thunder Bay	30	Thunder Bay
214	Cannery Park 101-A	250	St. Davids
215	Cannery Park 101-B	250	St. Davids
216	Cannery Park 101-C	100	Niagara-on-the -Lake
217	Cannery Park 101-D	100	Niagara-on-the -Lake
218	Hendrick Solar	62	Inkerman
219	Seagrave Solar Two	250	Scugog
220	Grey Road 12 Solar	50	Euphrasia, Municipality of Grey Highlands
221	Cave Spring Cellars Tufford	36	Beamsville
222	CC FIT-1	250	Vaughan
223	Centennial Plastic	100	Mississauga
224	Chad Fischer Solar	160	Brussels
225	CKH Solar 1	250	Chatham
226	Chimed Farms Solar	250	Walkerton
227	Ciromadonia Power	100	RR#1 Fisherville
228	Ferme Claude Castonguay	250	Moose Creek
229	247 Kingsley Road	250	Picton
230	15860 Loyalist Parkway	250	RR # 2 Bloomfield
231	545 CR - 22 P.E.C.	250	Picton
232	162 Fish Lake Road, P.E.C	50	RR # 2 Demorestville
233	499 South Big Island Road - P.E.C.	100	RR # 1

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
			Demorestville
234	13753 Loyalist Parkway	100	RR # 1 Picton
235	1838 CR-5 P.E.C.	100	Picton
236	Ecole Secondaire Catholique Sainte-Marie 100kW	100	New Liskeard
237	The Town of Ajax Operations Centre	100	Ajax
238	Complexe JR Brisson	200	Casselman
239	Flamboro Springs	250	Waterdown
240	Charlie Cetinski 250 kW AC	250	East Flamborough
241	May Farm Solar	75	Atwood
242	71 Melford Rooftop PV	200	Toronto
243	670 Riddell Road, Orangeville	30	Orangeville
244	Dave Franken Solar	100	Blyth
245		250	601 Toronto
246		225	603 Toronto
247	604A	200	Toronto
248	604B	250	Toronto
249		250	606 Toronto
250	607A	250	Toronto
251		250	608 Toronto
252		250	609 Toronto
253		250	610 Markham
254	DeLellis Farms roof	250	kingsville
255	Dimplex Distribution Centre Rooftop PV Project	250	Cambridge
256	Don Kennedy Solar	100	Allanford
257	homesun	250	grimsby
258	DougyJoe's Solar Farm	250	Selkirk
259	Sharon Apartments	25	niagara falls

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
260	Dubwear's Tranmere Dr FIT	150	Mississauga
261	Prince of Wales Self Storage Corporation	250	Ottawa
262	South Keys Self Storage Corporation	250	Ottawa
263	Coventry Self Storage Corporation	250	Ottawa
264	Duke of Devenshire Retirement Residence	100	Ottawa
265	Carling/Queensway Self Storage Corporation	100	Ottawa
266	Centrum Self Storage Corporation	500	Kanata
267	Innes Self Storage Corporation	250	Ottawa
268	Vimont Court Limited	500	Orleans
269	DuPont Scarborough Warehouse	250	Scarborough
270	Pioneer Hi-Bred Chatham	100	Chatham
271	Part lot # 1516 Concession 6 Williamsburg	250	Williamsburg
272	Ecotricity Solar Southgate	100	Guelph
273	EDKIE Solar	250	Ennismore
274	EffiSolar Stone Mills Solar Farm A (500KW)	500	STONE MILLS TOWNSHIP
275	Singer Solar	500	Woodbridge
276	Endura Energy 2730 Brighton	100	Oakville
277	Endura Energy 5 Sims Crescent	100	Richmond Hill
278	10001R - Canada Aviation Museum	250	Ottawa
279	Fondations Brisson	53	Casselman
280	BEG Farm-Solar	100	Goderich
281	Eden Farms Solar	100	Meaford
282	Vollmer Centre Solar PV Project	250	LaSalle
283	Ferme Geranik Solar	50	Saint-Albert
284	Tracy1	250	Brampton

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
285	FFS-K 001PV	250	Kitchener
286	SunMac1	50	Scugog
287	(C73) Real Canadian Superstore Highland Road West	250	Kitchener
288	(C75) Real Canadian Superstore Steeles Avenue West	375	Brampton
289	(C76) Real Canadian Superstore Lasalle Boulevard	250	Sudbury
290	(C77) Real Canadian Superstore South Service Road	250	Grimsby
291	(C78) Real Canadian Superstore Guelph Street	375	Georgetown
292	(C79) Real Canadian Superstore Oxford Street	250	London
293	(C80) Real Canadian Superstore Eagleson Road	250	Ottawa
294	(C81) Real Canadian Superstore Queensway East	375	Simcoe
295	(C82) Real Canadian Superstore Victoria Street	250	Strathroy
296	(C83) Real Canadian Superstore Murphy Road	250	Sarnia
297	(C84) Zehrs Coldwater Road	135	Orillia
298	(F37) No Frills John Street North	135	Aylmer
299	(C72) Real Canadian Superstore Main Street East	250	Milton
300	(O1) Bayly Street Warehouse	500	Ajax
301	AB102-1878	110	MISSISSAUGA
302	950 South Service Road	250	Hamilton

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
303	100 Galcat Drive	250	Vaughan
304	3115 14th Avenue	250	Markham
305	30 Riviera Drive	100	Markham
306	34 Riviera Drive, Markham	50	Markham
307	3175 14th Avenue	100	Markham
308	25 Royal Crest Court	200	Markham
309	35 Minthorn Boulevard	500	Markham
310	560 Denison Street	250	Markham
311	Shunpiker Farms	75	Muirkirk
312	Gleaners PV Project	15	Belleville
313	GM Livestock Solar	100	Teeswater
314	Mikhail 1 250	250	Amherstberg
315	Mikhail 2 250	250	Amherstberg
316	Mikhail 3 250	250	Amherstberg
317	Mikhail Sobeys 250	250	Amherstberg
318	Patchell FIT1	250	Coldwater
319	Haemmerli Solar	30	Mitchell
320	289 BRIDGELAND	100	toronto
321	Hakkesteegt's Poultry Farm Ltd.	200	Brighton
322	Veurink's Solar Farm	250	Hagersville
323	Fedsol	250	Grimsby
324	Heated Self-Storage	250	Orillia
325	88 Todd Solar Project	250	Georgetown
326	35 Sinclair Solar Project	250	Georgetown, ON
327	2380 Royal Windsor Solar Project	250	Mississauga
328	60 Armstrong Solar Project	200	Georgetown
329	Hendrick Holdings Inc.	150	Elmira
330	Hidden Bench Winery	24	Beamsville
331	HTS Solar	250	Richmond Hill

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
332	IKEA Solar PV Vaughan	250	Vaughan
333	IKEA Solar PV Etobicoke	250	Etobicoke
334	IKEA Solar PV North York	250	North York
335	ISS Solar	225	Innisfil
336	Intech number 3 - N7M 5J1	400	Thamesville
337	Intech number 4 - N0L 2C0	500	Rodney
338	Intech number 2 - N0P 1V0	500	Kent Bridge
339	Rose Valley Solar Project	250	Desbarats
340	La Mantia's Country Market	30	Lindsay
341	The Barn	240	Lakeshore
342	Johann Reichart	250	Braeside
343	Johann Reichart	100	McNab/Braeside
344	Vermeer Solar	100	Forest
345	JTB Solar	30	Ameliasburg
346	Csoff 75kW	75	Otterville
347	hillpower	100	fisherville
348	Merrickville CR15	100	Merrickville
349	Dalton FIT Project	110	Huron East
350	Keen Fit Project #1	80	Dunnville
351	Kempfarms #1	250	Carp
352	Wardlaw Poultry Farm Project	200	Cookstown
353	231 Bethel Road GPE09020804	100	Omemee
354	Keystone Holdings-WINGOLD	175	Toronto
355	Kirchmeier Farms PV	250	St. Isidore
356	LCS Solar Energy Project	100	Lakefield
357	Hammarskjold High School 100kW	100	Thunder bay
358	Dykstra Farm	100	Canfield
359	Solar Power Project	76	Walkerton
360	Laverne Bauman Solar	100	Belleville

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
361	6515 Concession 11	40	Maidstone
362	LPC Manufacturing	250	Guelph
363	Vehcom Manufacturing	250	Guelph
364	Quadrad Manufacturing	250	Guelph
365	Traxle Manufacturing	250	Guelph
366	Autocom Manufacturing	250	Guelph
367	Transgear Manufacturing	250	Guelph
368	Camcor Manufacturing	250	Guelph
369	Camtac Manufacturing	250	Guelph
370	Comtech Manufacturing	250	Guelph
371	LPP Manufacturing	250	Guelph
372	Corvex Manufacturing	250	Guelph
373	Eston Mfg	250	Guelph
374	Roctel Manufacturing	250	Guelph
375	Linex Manufacturing	250	Guelph
376	Linamar Gear	250	Guelph
377	The Frank Hasenfratz Centre of Excellence	250	Guelph
378	Luyks Home Farm	250	Port Stanley
379	Dutton Pork	100	Dutton
380	VKW	70	Casselman
381	Mapleton 1	95	Moorefield
382	119 memorial	75	Orillia
383	Poultry Power	150	Carp
384	420 Thompson	96	cambridge
385	Boys & Girls Club of London	160	London
386	Burke Power	100	Fisherville
387	MPDC Arena	100	Strathroy
388	West Street Storage	100	Orillia
389	Mill Creek 30kW Barrie	30	Barrie

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
390	261 Parkhurst Square	250	Brampton
391	291 Elgin St N Cambridge	250	Cambridge
392	MEC Burlington Solar	48	Burlington
393	5041 King Street	70	Beamsville
394	3300 Merrittville Highway	125	Thorold
395	3250 Schmon Parkway	60	Thorold
396	3550 Schmon Parkway	75	Thorold
397	3350 Merrittville Highway	60	Thorold
398	3340 Schmon Parkway	150	Thorold
399	23 Hannover Drive	120	St. Catharines
400	261 Martindale Road	225	St. Catharines
401	Franklin Solar	75	Dunvegan
402	Komoka Wellness & Recreation Centre	250	Komoka
403	Neeb Haven Farms	60	New Hamburg
404	NUUC-Upgrade	5	Toronto
405	NR1	50	Tavistock
406	Sunflower	18	Paris
407	NAFTC Energy	500	Lakeshore
408	North American Steel Equipment Company Ltd.	100	Whitby
409	StoRRack Limited	250	Colborne
410	West Village Suites	100	Hamilton
411	Main West Plaza	175	Hamilton
412	Oshawa Village Suites	200	Oshawa
413	1141 King Rd	250	Burlington
414	69 John Street	40	Hamilton
415	220 Nebo Rd	70	Hamilton
416	240 Nebo Rd	70	Hamilton
417	2247 Rymal Rd	50	Hamilton

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
418	6537 Kister Road	60	Niagara Falls
419	5070 Benson Dr	250	Burlington
420	Nor-Weld	50	Orillia
421	ORSINC 450 Rooftop	500	INGERSOLL
422	160 INGERSOLL STREET SOUTH	500	INGERSOLL
423	Planet Storage c/o Viceroy Self Storage Inc.	34	Toronto
424	ONE Inc. 150kW Beta Array	150	toronto
425	Don Reid	50	Ottawa
426	Heyink Farms	150	Ridgetown
427	Burnham Machine Shop	100	Cobourg
428	Burnham Equine Arena	120	Cobourg
429	CL&GR solar project Phase 1	30	Komoka
430	Van Der Veen Solar	50	Grand Valley
431	Philmar Solar	99	Alfred
432	Lindsay A Solar Farm	250	Kawartha Lakes
433	Pine Point Farms Solar	100	Port Perry
434	Seagrave Solar One	250	Seagrave
435	Lindsay B Solar Farm	250	Kawartha Lakes
436	Pioneer Engineering	250	Toronto
437	Pipers	75	Hornby
438	Claire's Delivery and Storage	500	Port Colbourne
439	Canadian Ferro Refractories	250	Stoney Creek
440	Port Dover 100kW	100	Port Dover
441	2280 - 2300 Stevenage Drive	50	Ottawa
442	41 Grenfell	40	Ottawa
443	19 Grenfell	50	Ottawa
444	2525 St. Laurent	10	Ottawa

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
445	2413 Stevenage	100	Ottawa
446	2415 Stevenage	75	Ottawa
447	3210 Swansea	90	Ottawa
448	43 Grenfell	60	Ottawa
449	5 Lesmill	20	Toronto
450	5299 Maingate	20	Mississauga
451	2781 Lancaster Road	25	Ottawa
452	150 Montreal Road	50	Ottawa
453	20 Gurdwara	75	Ottawa
454	22 Gurdwara	75	Ottawa
455	15 Grenfell	50	Ottawa
456	17 Grenfell	50	Ottawa
457	5300 Canotek Road	50	Ottawa
458	5310 Canotek	50	Ottawa
459	107 Colonnade	50	Ottawa
460	111 Colonnade	25	Ottawa
461	146 Colonnade	100	Ottawa
462	148 Colonnade	100	Ottawa
463	PowerStream 2010-118	350	Markham
464	PowerStream 2010-103	250	Markham
465	PowerStream 2010-116	200	Markham
466	PowerStream 2010-120	150	Markham
467	PowerStream 2010-127	20	Markham
468	PowerStream 2010-123	70	Markham
469	PowerStream 2010-122	450	Markham
470	PowerStream 2010-049	68	Barrie
471	PowerStream 2010-059	40	Barrie
472	PowerStream 2010-051	54	Barrie
473	Preformed Line Products	250	Cambridge
474	Prism Farms Solar 1	250	Leamington

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
475	FIT 3 - Knoxville 1	250	Port Hope
476	FIT 2 - Marsh	250	Port Hope
477	FIT 7 - Knoxville 2	250	Port Hope
478	Water Treatment Plant	117	Sault Ste. Marie
479	Fort Frances High School 100kW	100	Fort Frances
480	Randy Dykstra 225 kW Roof Mounted PV	225	Belmont
481	50 Legault Solar Project	30	North Bay
482	ROW - Bus Storage	132	Cambridge
483	ROW - Landfill South Workshop	35	Kitchener
484	ROW - 339 Bishop St N	55	Cambridge
485	ROW - Cambridge Waste Transfer Station	45	Cambridge
486	ROW - Heidelberg Yard	43	Heidelberg
487	ROW - Sunnyside Support Housing	26	Kitchener
488	Gananoque-FH2	68	Gananoque
489	Inglewood Light and Power	200	Inglewood
490	Robert and Samantha Crowley	80	Peterborough
491	Homestead Farms	32	Roblin
492	428 Jutras Drive South	500	Windsor
493	85 Parkshore Drive	500	Brampton
494	Rockview Seniors Co-operative Homes Incorporated	150	Sudbury
495	C5 Farm Solar One	250	Delta
496	C5 Farm Solar Two	250	Delta
497	19 Waterman	500	Toronto
498	71 Kincort	500	Toronto
499	20 Bertrand	275	Toronto
500	170 Midwest	500	Scarborough

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
501	Rowan McLean	135	Fergus
502	Sault College RMI Demonstration Project	35	Sault Ste. Marie
503	RWCW Solar	30	Oakville
504	RPS Properties	200	Kitchener
505	Saentis Farms Inc.	50	Shallow Lake
506	Bothwell Project	250	Cambridge
507	Appleby Project	250	Burlington
508	Sanyo Canada Rooftop System	68	Woodbridge
509	Scarsdale	75	Toronto
510	Scarsdale	75	Toronto
511	McGaw Solar Project	250	Goderich
512	Scott Solar	250	Meaford
513	533 Romeo	500	Stratford
514	Storage World Bysham Park	245	Woodstock
515	S Buma Kittle Road	101	Chesterville
516	625 Harvie Settlement Rd	250	Orillia
517	M07-46 Bosworth	500	Brantford
518	M07-371 Gough	250	Markham
519	M07-40 Commander	150	Toronto
520	S03-6976 Columbus	200	Mississauga
521	M07-5040 Timberlea	250	Mississauga
522	M03-6045 Edwards	250	Mississauga
523	S11-165 Summerlea	500	Brampton
524	D03-3300 Steeles	150	Markham
525	R05-317 Rutherford	450	Brampton
526	M03-500 Harry Walker	400	E. Gwillimbury
527	H07-6300 Kennedy	500	Mississauga
528	H07-9195 Torbram	500	Brampton
529	H06-15360 BAYVIEW	400	AURORA

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
530	H06-10 BARRIE	250	BARRIE
531	H06-120 CLARINGTON	450	BOWMANVILLE
532	H06-2120 PARKDALE	250	BROCKVILLE
533	H06-1450 OTTAWA	250	KITCHENER
534	H06-16775 HWY #12	250	MIDLAND
535	H06-901 JULIANA	250	WOODSTOCK
536	H06-3225 MONARCH	500	ORILLIA
537	H06-2121 10TH LINE	400	ORLEANS
538	S11-1325 Clark	500	Brampton
539	H06-600 KING	250	WATERLOO
540	H06-122 MARTINDALE	350	ANCASTER
541	H06-4200 Garden	400	Brooklin
542	H06-9 OTT	400	HUNTSVILLE
543	G01-1520 Steeles	100	Concord
544	S06-353 Saunders	150	Barrie
545	G01-1625-1645 Flint	100	Toronto
546	N02-68 Leek	250	Richmond Hill
547	T04-110 Bell Farm	150	Barrie
548	A01-945 Meyerside	50	Mississauga
549	A01-970 Verbena	100	Mississauga
550	G04-880 Laurentian	50	Burlington
551	104-1481 Michael	250	Ottawa
552	V02-1501 Sieveright	100	Ottawa
553	P07-19-21 Melanie	150	Brampton
554	M07-1111 Corporate	500	Burlington
555	E01-280 Holiday Inn	200	Cambridge
556	G04-409 Weber	250	Kitchener
557	P07-4101 Weston	150	North York
558	P07-4141 Weston	100	North York

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
559	M03-175 Green Lane	50	East Gwillimbury
560	M03-18195 Yonge	150	East Gwillimbury
561	M03-18183 Yonge	50	East Gwillimbury
562	C12-17890 Yonge	150	Newmarket
563	C12-17940 Yonge	500	Newmarket
564	C12-150 Connie	250	Concord
565	E02-217 Tillson	150	Tillsonburg
566	E02-261 Tillson	150	Tillsonburg
567	C12-89 Connie	150	Concord
568	C12-40 N. Rivermede	150	Concord
569	C12-9665 Bayview	150	Richmond Hill
570	A01-431 Alden	50	Markham
571	A01-461 Alden	100	Markham
572	T05-540 West Arthur	150	Thunder Bay
573	D-03 5362 Hwy #7	50	Markham
574	C12-6800 Maritz	500	Mississauga
575	G07-151 Amber	100	Markham
576	G07-366-400 Denison	150	Markham
577	L01-8800 Huntington	250	Vaughan
578	H06-470 HOLLAND	250	BRADFORD
579	A01-6200 Tomken	200	Mississauga
580	L01-3085 Hwy 7	100	Markham
581	L01-1225 Fairview	100	Burlington
582	L01-2900 Walker's	100	Burlington
583	G04-835 Harrington	50	Burlington
584	L01-3163 Winston Churchill	100	Mississauga
585	H06-1201 CASTLEMORE	350	MARKHAM

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
586	B02-1300 Fewster	50	Mississauga
587	B02-5938-5942 Ambler	150	Mississauga
588	F04-572 Millway	50	Vaughan
589	A01-200 Centennial	250	Stoney Creek
590	A01-170 Steelwell	150	Brampton
591	A01-1 Rutherford	150	Guelph
592	A01-75 West Wilmot	150	Richmond Hill
593	A01-1001 Thornton	250	Oshawa
594	A01-6185 Kestrel	100	Mississauga
595	A01-128 Hedgedale	50	Brampton
596	G01-7810 Keele	500	Concord
597	G01-250 Trowers	200	Woodbridge
598	G01-300 Trowers	200	Woodbridge
599	C10-127 Aviva Park	150	Woodbridge
600	C10-180 New Huntington	400	Woodbridge
601	M07 - 6660 Campobello	100	Mississauga
602	M12-160 Four Valley	150	Vaughan
603	M12-220 Caldari	100	Vaughan
604	G07-1630 Matheson	250	Mississauga
605	G07-1825 Dundas	250	Mississauga
606	C12-355 Confederation	100	Concord
607	H03-5636 Glen Erin	100	Mississauga
608	S03-51 Stoneridge	350	Vaughan
609	S03-6820 Davand	200	Mississauga
610	S03-6845 Davand	100	Mississauga
611	A01-7490 Pacific Circle	50	Mississauga
612	A01-6500 Tomken	250	Mississauga
613	M07-6695 Pacific Circle	150	Mississauga
614	A01-7381 Pacific Circle	150	Mississauga
615	A01-7400 Pacific Circle	100	Mississauga

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
616	S03-77 Courtland	250	Vaughan
617	S03-89 Courtland	150	Vaughan
618	S03-6850 Davand	50	Mississauga
619	S03-7007 Davand	50	Mississauga
620	A01-7460 Pacific Circle	50	Mississauga
621	H06-17850 YONGE	450	NEWMARKET
622	S03-53 Courtland	150	Vaughan
623	S03-101 Courtland	100	Vaughan
624	M12-8701 Jane	200	Vaughan
625	M12- 8885 Jane	100	Vaughan
626	D-03 3120 Steeles E	50	Markham
627	A01-91 Esna	150	Markham
628	A01-20 Valleywood	100	Markham
629	A01-70 Valleywood	50	Markham
630	A01-340 Ferrier	50	Markham
631	A01-3400 Pharmacy	200	Toronto
632	A01-6325 Kestrel	50	Mississauga
633	H06-1013 MAPLE	250	MILTON
634	T04-665 Adelaide	150	London
635	C10-7933 Huntington	200	Woodbridge
636	S03-6953 Davand	150	Mississauga
637	A01-5286 Timberlea	100	Mississauga
638	H06-100 GATEWAY	250	KITCHENER
639	S03-731 Millway Avenue	250	Vaughan
640	S03-701 Millway Avenue	100	Vaughan
641	F04-554 Millway	50	Vaughan
642	F04-115 Applewood	100	Vaughan
643	F04-156 Chrislea	50	Vaughan
644	H03-365 Deerhurst	100	Brampton
645	G04-125 McGovern	50	Cambridge

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
646	H06-49 FOURTH	250	ORANGEVILLE
647	C12-219 Connie	250	Concord
648	H06-570 MCNEELY	250	CARLETON PLACE
649	H06-50 RED MAPLE	450	RICHMOND HILL
650	H06-50 KIRKHAM	400	MARKHAM
651	H06-1706 ELGIN MILLS	450	RICHMOND HILL
652	H06-140 NORTHVIEW	350	WOODBRIDGE
653	T04-4780 Sheppard	350	Toronto
654	R03-25 Clairville	250	Toronto
655	A01-6170 Tomken	100	Mississauga
656	A01-6035 Kestrel	100	Mississauga
657	P07-200 Ferrier	50	Markham
658	P07-210 Ferrier	50	Markham
659	P07-230 Ferrier	50	Markham
660	H04-500 Palladium	500	Kanata
661	A01-2395 Cawthra	100	Mississauga
662	G06-720-730-740 Belfast	100	Ottawa
663	M12-335 Connie	200	Vaughan
664	E02-301 Tillson	250	Tillsonburg
665	C12-131-161 Connie	200	Concord
666	A01-2399 Cawthra	100	Mississauga
667	V01-6500 Silver Dart	500	Mississauga
668	T04-328 Commissioners	50	London
669	S10-400 Maplegrove	150	Kanata
670	B03-760-768 Belfast	100	Ottawa

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
671	G07-151 Carlingview	400	Toronto
672	H08-780 Tapscott	500	Toronto
673	T04-867 Nippissing	50	Milton
674	T04-1700 Alliance	50	Pickering
675	G04-3430 South Service	50	Burlington
676	A01-3909 Nashua	150	Mississauga
677	A01-3939 Nashua	200	Mississauga
678	G04-301 Queen	200	Bolton
679	T05-915 Memorial	150	Thunder Bay
680	G07-1375 Aimco	200	Mississauga
681	101-60 Spy CRT	50	Markham
682	P05-7420 Pacific	50	Mississauga
683	P05-6500 Gottardo	150	Mississauga
684	P05-6520 Gottardo	50	Mississauga
685	P05-896 Meyerside	150	Mississauga
686	P05-6045 Kestrel	100	Mississauga
687	P05-35 Dynamic	350	Toronto
688	P05-1 summerlea	500	Brampton
689	P05-109 Summerlea	500	Brampton
690	P05-15 Blair	50	Brampton
691	P05-55 Walker	250	Brampton
692	P05-35 Automatic	500	Brampton
693	T07-81 Curlew	50	Toronto
694	P05-5905 Kennedy	100	Mississauga
695	M11-405 GORDON BAKER	150	North York
696	P08-1702 Tricont	250	Whitby
697	P08-5030 Maingate	50	Mississauga
698	A07-5485 Tomken	150	Mississauga
699	M09-1260 Kamato	110	Mississauga
700	P08-6 Manchester	500	Caledon

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
701	A07-40 Nolan	150	Markham
702	P05-6789 Millcreek	70	Mississauga
703	P05-6540 Gottardo	100	Mississauga
704	A07-615 Beaverhall	100	Thunder Bay
705	103-211 Silver Star	70	Toronto
706	A07-11 Automatic	150	Brampton
707	R05-3141 Mainway	50	Burlington
708	P08-1935 Drew	150	Mississauga
709	P08-90 Whybank	500	Brampton
710	P05-1195 Clark	300	Brampton
711	P05-12 Indell	40	Brampton
712	A07-78 Walkers	450	Brampton
713	P05-2 Colony	450	Brampton
714	P08-275 Orenda	500	Brampton
715	Linergy Manufacturing	250	Guelph
716	Skyjack Inc Plant 1	250	Guelph
717	Solar-Caledonia	99	Alfred
718	Dalkeith Condo	150	Brantford
719	Lewis Farm A	100	Lucan (Lucan Biddulph)
720	Lewis Farm 3	100	Denfield (middlesex Centre)
721	Van Osch Farms	250	North Middlesex
722	Van Osch Farms B	250	North Middlesex
723	Van Osch Farms A	175	North Middlesex
724	Lewis Farm 2	100	Denfield

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
			(Middlesex Centre)
725	Jeysman Building	65	St. Catharines
726	Toronto Electric	70	Toronto
727	Northern Sky Solar Farm	250	Palmerston
728	Southern Sky Solar Farm	250	Palmerston
729	Southwestern 100	100	Windsor
730	Solar Beams 2	250	Sparta
731	St. Joseph's Hospital 100kW	100	Chatham
732	Simcoe Farm	250	Port Perry
733	7171 Jane Streeet	250	Vaughan
734	120 Rodinea Road	250	Vaughan
735	550 Industrial Drive	250	Milton
736	Bakker Ray Wilson Road	75	Metcalfe
737	CanFirst - Markham (90 Nolan Court)	174	Markham
738	CanFirst - Toronto (1400 Castlefield Ave)	73	Toronto
739	CanFirst - Mississauga (6885 & 6895 Menway Court)	250	Mississauga
740	CanFirst - Toronto (45 Progress Ave)	500	Toronto
741	IGRI - Ottawa (200 Iber)	250	Ottawa
742	LaSalle - Kanata (415 Legget)	250	Kanata
743	LaSalle - Lindsay (363 Kent St. W)	250	Lindsay
744	LaSalle - Lindsay (401 Kent St. W)	250	Lindsay
745	GE Real Estate - Vaughan, ON (30 Whitmore Rd)	65	Vaughan
746	GE Real Estate - Vaughan, ON (400 Rowntree Dairy)	250	Vaughan
747	LaSalle - Toronto (150 Middlefield)	250	Toronto
748	CanFirst - Richmond Hill (45 B West	245	Richmond Hill

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
	Wilmot Street)		
749	CanFirst - Richmond Hill (45 A West Wilmot Street)	213	Richmond Hill
750	GE Real Estate - Vaughan (64 Trowers)	55	Vaughan
751	GE Real Estate - Vaughan, ON (361 Rowntree Dairy)	95	Vaughan
752	LaSalle - Woodbridge (1 Royal Gate)	250	Woodbridge
753	GE Real Estate - Mississauga, ON (2599 Speakman)	205	Mississauga
754	IGRI - Toronto (100 Disco)	500	Toronto
755	IGRI - Bolton, ON (86 Pillsworth)	500	Bolton
756	IGRI - Burlington (4240 Harvester Rd)	500	Burlington
757	370kW 2 Solar PV Systems - Rooftops	370	Toronto
758	Sunrise Rooftop Solar	250	Alliston
759	Arena Solar Project	100	Durham
760	745 Richmond Street	125	Chatham
761	7659 Bramalea Road	250	Brampton
762	Quinte Sports Centre Solar Farm	499	Belleville
763	Brockville Memorial Centre Rooftop Solar Project	221	Brockville
764	Public Works Solar Array	20	Cambridge
765	St Isidore Arena	100	St Isidore
766	The Nation Municipality Fournier Fire Station	40	Fournier
767	Stone Mills Roads Facility	126	Centreville
768	Earth Rangers Parking Lot Solar	58	Woodbridge
769	Vera M Davis Photovoltaic Project	30	Bolton
770	ROW - 9 Westgate Crt	128	Cambridge

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
771	ROW - WRPS Division One	50	Kitchener
772	ROW - 168 Grand Ave	91	Cambridge
773	ROW - 95 Concession Street	40	Cambridge
774	ROW - 74 Church St	16	Kitchener
775	ROW - Greenbrook Water Treatment Plant	27	Kitchener
776	ROW - 215 Lorraine	38	Kitchener
777	ROW - Waterloo Administration Office	33	Kitchener
778	ROW - Doon Heritage Crossroads Museum	74	Kitchener
779	ROW - Philipsburg Yard	22	Philipsburg
780	ROW - Mannheim Water Treatment Plant	100	Kitchener
781	Region of Waterloo - 150kW PV	170	Cambridge
782	ROW - Regional Operations Centre 2	71	Cambridge
783	32 GoodMark Place	135	Toronto
784	Van Arem Farm	100	Adjala
785	Cavanagh Solar 3	250	Ashton
786	Cavanagh Solar 1	250	Ashton
787	Cavanagh Solar 2	250	Ashton
788	Betolianni Solar	125	Bailieboro
789	Pope John Paul II 50kW	50	Thunder Bay
790	Spence Crt (Amelia St) 75kW	75	Thunder Bay
791	McIvor Crt (Lincoln St) 50kW	50	Thunder Bay
792	Andras Crt (Cumberland St) 75kW	75	Thunder Bay
793	Regency Towers (Regent St) 30kW	30	Thunder Bay
794	640 Conrad Place	250	Waterloo
795	Ontario's West Coast Energy Centre	100	Walton
796	90 Parma Crt.	46	Toronto
797	1525 Dundas St. W.	27	Toronto

Canada's PV Project Database			
Number	**Projects Name**	**Capacity（kWp）**	**Location**
798	2 Faywood Blvd.	24	Toronto
799	190 Woolner Ave.	18	Toronto
800	100 Cavell Ave.	82	Toronto
801	1862 Sheppard Ave W	32	Toronto
802	1884 Sheppard Ave W	32	Toronto
803	1890 Sheppard Ave W	32	Toronto
804	1898 Sheppard Ave W	32	Toronto
805	500 Commissioners Solar PV System	250	Toronto
806	Better Living Centre Solar PV, Exhibition Place	250	Toronto
807	Trinity College Larkin Building Rooftop PV System	58	Toronto
808	555 Parkside Drive	125	Waterloo
809	South Coast Solar	100	Nanticoke
810	Rainham Road Solar	250	Nanticoke
811	31 THORNHEIGHTS ROAD	40	THORNHILL
812	Wal-mart Store #1111	250	Kitchener
813	Walnut Grove System 200KW	200	Hagersville
814	Waterview Ontario 1 Ltd.	375	Mississauga
815	26 Robb Blvd	75	Orangeville
816	Endura Energy 7017 Rainham Road	250	Dunnville
817	WMS Solar	199	London

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
1	Dingzhou Solar PV Phase 2	1	Dingzhou	Hebei
2	Langfang Eco Forest Farm Solar PV Station	1	Langfang	Hebei
3	Laiyuan Jinjiajing Town Solar PV Project	1	Baoding	Hebei
4	Laiyuan Jinjiajing Town 1MW Solar PV Project	1	Baoding	Hebei
5	Shangyi Solar PV Project	1	Zhangjiakou	Hebei
6	Langfang Eco Forest Farm Solar PV Station Phase2	1	Langfang	Hebei
7	Hebei Iron&Steel Group 3MW Solar PV Project Phase2	1		Hebei
8	Baoding BIPV Project	1	Baoding	Hebei
9	Dingzhou Solar PV Phase 1	1	Dingzhou	Hebei
10	Shahe BIPV 1.5MW Project	1	Shahe	Hebei
11	Hebei Huazheng Industry Solar PV Project	1	Hengshui	Hebei
12	Baoding Industrial Zone BIPV Project	2	Baoding	Hebei
13	Hebei Iron&Steel Group 3MW Solar PV Project Phase1	2		Hebei
14	Tanshan Caofeidian Solar PV Project	2	Tangshan	Hebei
15	Xingtai Jinglong Solar PV Project	2	Xingtai	Hebei
16	Hengshui Technology Engineering School BIPV Project	2	Hengshui	Hebei
17	Hebei University of Science and Technology BIPV Project	2	Shijiazhuang	Hebei
18	Beijing Pingshankangzhuang 120MW Solar PV Project Phase1	2	Shijiazhuang	Hebei
19	Yingli Industrial Zone 10MW Solar PV Project Phase3	2	Baoding	Hebei
20	Zhuzhou New Materials Zone Solar PV Project	3	Baoding	Hebei
21	Hengshui Haijiang Group 3MW Solar PV Project	3		Hebei
22	Qinhuangdao Golden Energy Solar PV Project	3	Qinhuangda	Hebei

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
			o	
23	Tangshan Caofeidian Eco-city BIPV Project	4	Tangshan	Hebei
24	Dingzhou Solar PV Phase 3	4	Dingzhou	Hebei
25	Dingzhou Solar PV Phase 2_adjunction	4	Dingzhou	Hebei
26	Hengshui Yingli PV Industrial Zone Solar PV Project	4	Hengshui	Hebei
27	Guodian Weichang Solar PV Project	5	Chengde	Hebei
28	Jinzhou Solar PV Project	5		Hebei
29	Chengde Weichang Wind and Solar Hybrid Power Project	5	Chengde	Hebei
30	Jinglong Roof Top Solar PV Project	6	Xingtai	Hebei
31	Yingli Industrial Zone 10MW Solar PV Project Phase4	7	Baoding	Hebei
32	Baoding Industrial Zone Solar PV Project Phase3	10	Baoding	Hebei
33	Dingli Renewable Energy Solar PV Project	10	Shijiazhuang	Hebei
34	Hebei Dongming Solar PV Project	10	Langfang	Hebei
35	Hebei CSG Holding Solar PV Prokofiev	10	Langfang	Hebei
36	Jinjiajing 10MWp Solar PV Project	10		Hebei
37	Zhangjiakou Guyuan Solar PV Project	10	Zhangjiakou	Hebei
38	Hebei Qianan Solar PV Project	10		Hebei
39	Jinjiajing （10+1）MWp Solar PV Project	10		Hebei
40	Zhangjiakou Xiahuayuan 30MW Solar PV Project Phase1（10MW）	10	Zhangjiakou	Hebei
41	Chabei 10MW Solar PV Project	10	Zhangjiakou	Hebei
42	Kangbao 10MW Solar PV Project	10	Zhangjiakou	Hebei
43	Kangbao Solar PV Project	10		Hebei
44	Fengning Wandeyong 10 MW Solar PV Project	10	Chengde	Hebei
45	Shangyi 10MW Solar PV Project Phase2	10	Zhangjiakou	Hebei
46	Fengning Waigoumen Wind and Solar Hybird Power Project	10	Chengde	Hebei
47	Shangyi 10MW Solar PV Project	10	Zhangjiakou	Hebei

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
48	Juli Indrustrial Zone Solar PV Project	10	Baoding	Hebei
49	Yingli Indrustrial Zone Solar PV Project	10	Baoding	Hebei
50	Lightway Solar Industrial Zone Solar PV Project	10	Baoding	Hebei
51	Kangbao Bailong Hill 11MW Solar PV Project	11	Zhangjiakou	Hebei
52	Baoding Quyang Solar PV Project Phase 1	20	Baoding	Hebei
53	Yongqing Agricultural Zone Solar PV Project Phase1	20	Langfang	Hebei
54	Yongqing Agricultural Zone Solar PV Project Phase2	20	Langfang	Hebei
55	中 Baoding Yixian Solar PV Project Phase1	20	Baoding	Hebei
56	Fuping Pingyang Solar PV Project	20		Hebei
57	Chicheng 20MW Agricultural Solar PV Project	20	Zhangjiakou	Hebei
58	Huailai 20MW Agricultural Solar PV Project	20	Zhangjiakou	Hebei
59	Shangyi Bulongwan 20MW Solar PV Project Phase1	20	Zhangjiakou	Hebei
60	Shangyi Liushizhuang 20MW Solar PV Project	20	Zhangjiakou	Hebei
61	Shangyi Daqingshan 20MW Solar PV Project	20	Zhangjiakou	Hebei
62	Shangyi Chensuoliang 20MW Solar PV Project Phase1	20	Zhangjiakou	Hebei
63	Shangyi 20MW Solar PV Project	20	Zhangjiakou	Hebei
64	Shangyi Wind and Solar Hybird Power Project	20		Hebei
65	Great Wall Motor Company 50MW Solar PV Project Phase2	20	Baoding	Hebei
66	Baoding Yixian Solar PV Project Phase2	20	Baoding	Hebei
67	Quyang Solar PV Project	20	Baoding	Hebei
68	Xuanhua 20MW Solar PV Project	20		Hebei
69	Xingtai Huangsi Solar PV Project Phase1	20		Hebei
70	Zhangjiakou Xiahuayuan 30MW Solar PV Project Phase2	20	Zhangjiakou	Hebei
71	Zhangbei Caojiaying 20MW Solar PV Project Phase1	20		Hebei
72	Gaobei Development Zone Solar PV Project Phase1	23	Baoding	Hebei
73	Great Wall Motor Company 50MW Solar PV Project	30	Baoding	Hebei

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
	Phase1			
74	Kangbao 30MW Solar PV Project	30	Zhangjiakou	Hebei
75	Weichang Yudaokou 30MW Solar PV Project	30	Chengde	Hebei
76	Kangbao Solar PV Project	30		Hebei
77	Shangyi 40MW Solar PV Project Phase3	40	Zhangjiakou	Hebei
78	Cangzhou Bohai New Zone 50MW Solar PV Project	50	Cangzhou	Hebei
79	50MW Solar PV Project	50		Hebei
80	Zhangjiakou Guyuan Solar PV Project	50	Zhangjiakou	Hebei
81	Shangyi 50MW Solar PV Project Phase4	50	Zhangjiakou	Hebei
82	Shangan 50MW Solar PV Project	50		Hebei
83	Chaobai River Industrial Zone Solar PV Project Phase1	60	Langfang	Hebei
84	Chaobai River Industrial Zone Solar PV Project Phase2	60	Langfang	Hebei
85	Chaobai River Industrial Zone Solar PV Project Phase3	60	Langfang	Hebei
86	Chaobai River Industrial Zone Solar PV Project Phase4	60	Langfang	Hebei
87	Chaobai River Industrial Zone Solar PV Project Phase5	60	Langfang	Hebei
88	Chaobai River Industrial Zone Solar PV Project Phase6	60	Langfang	Hebei
89	Chaobai River Industrial Zone Solar PV Project Phase7	60	Langfang	Hebei
90	Chaobai River Industrial Zone Solar PV Project Phase8	60	Langfang	Hebei
91	Chaobai River Industrial Zone Solar PV Project Phase9	60	Langfang	Hebei
92	Chaobai River Industrial Zone Solar PV Project	60	Langfang	Hebei

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
	Phase10			
93	Baoding Solar PV Project Phase3	90		Hebei
94	Yangyuan Solar PV Project	100	Zhangjiakou	Hebei
95	Xingtai Julu Solar PV Project Phase1	100	Xingtai	Hebei
96	Xingtai Julu Solar PV Project Phase2	100	Xingtai	Hebei
97	Xingtai Julu Solar PV Project Phase3	100	Xingtai	Hebei
98	Pingshan Kangzhuang 120MW Solar PV Project Phase2	118	Shijiazhuang	Hebei
99	Gaobei Development Zone Solar PV Project Phase2	127	Baoding	Hebei
100	Baoding Quyang Solar PV Project Phase 2	130	Baoding	Hebei
101	Lincheng 200MW Solar PV Project	200		Hebei
102	Linuo Sun Science Park Solar PV Project	2	Jinan	Shandong
103	Dezhou Yucheng Solar PV Project	1	Dezhou	Shandong
104	Qingdao Laixitai Solar PV Project	3	Qingdao	Shandong
105	Qingdao Jimo Solar PV Project Phase1	5	Qingdao	Shandong
106	Qingdao Jimo Solar PV Project Phase2	15	Qingdao	Shandong
107	Sunvim Group 3MW Solar PV Project Phase2	2	Weifang	Shandong
108	Sunvim Group 3MW Solar PV Project Phase1	1	Weifang	Shandong
109	Songshan Hunanfang Factory Solar PV Project	4		Shandong
110	Liaocheng Guanxian Industrial Zone Solar PV Project	20	Liaocheng	Shandong
111	Sailun Industrial Zone Solar PV Project	4	Qingdao	Shandong
112	Zhongkeshengchuang Solar PV Project	5	Qingdao	Shandong
113	Weigaochu BIPV Project	10	Weihai	Shandong
114	Jining No.1 Middle School BIPV Project	2	Jining	Shandong
115	Qingdao Blue Silicon Valley 26MW Solar PV Project	5	Qingdao	Shandong
116	Qingdao MESNAC Industrial Zone 3MW BIPV Project	3	Qingdao	Shandong
117	COFCO Shangdong BIPV Project	2	Qingdao	Shandong
118	Weihai Bus Station 3MW BIPV Project	3	Weihai	Shandong
119	Yucheng Hanergy Building BIPV Project	3	Yucheng	Shandong

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
120	Pingdu Economic Development Zone Solar PV Project	15	Qingdao	Shandong
121	Sailun Industrial Zone Solar PV Project Phase2	5	Qingdao	Shandong
122	Liuyun Group Solar PV Project	3	Zibo	Shandong
123	Jinan High-tech Industrial Development Zone Solar PV Project	15	Jinan	Shandong
124	Agricultural Greenhouse Solar PV Project	20	Qingdao	Shandong
125	Qingdao Motor Solar PV Project	20	Qingdao	Shandong
126	Qingdao Xiaotian Solar PV Project	8	Qingdao	Shandong
127	Nanquan 1MW Solar PV Project	1	Qingdao	Shandong
128	Qingdao Free Trade Zone Solar PV Project	15	Qingdao	Shandong
129	Haier Industrial Park Solar PV Project	20	Qingdao	Shandong
130	Dongying Industrial Zone Solar PV Project	15		Shandong
131	Dongyingtaihe Solar PV Project	15		Shandong
132	Weifang Comprehensive Bonded Zone Solar PV Project	15		Shandong
133	Zhaoyuan Linglong Group Solar PV Project	10	Yantai	Shandong
134	Haiyang Economic Development Zone Solar PV Project	5	Yantai	Shandong
135	Zhaoyuan zhongjia Solar PV Project	5	Yantai	Shandong
136	Weishan Economic Development Zone Solar PV Project	5		Shandong
137	Zaozhuang Solar PV Project	5		Shandong
138	Innoev Solar PV Project	5		Shandong
139	Linuo 1MW Solar PV Project	1	Jinan	Shandong
140	Zoucheng Solar PV Project	20	Zoucheng	Shandong
141	Feicheng High-tech Industrial Development Zone Solar PV Project	15	Taian	Shandong
142	Linyi Economic Development Zone Solar PV Project	10	Linyi	Shandong
143	Weifang Haomai Group Solar PV Project	8	Weifang	Shandong

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
144	Shandong Career Development College Solar PV Project	3	Jining	Shandong
145	Weishan 1MW Solar PV Project	1	Jining	Shandong
146	Licheng Science Park 10MW Solar PV Project	10	Jinan	Shandong
147	Zoucheng Eco-Park 9MW Solar PV Project	9	Jining	Shandong
148	Dezhou 10MW Solar PV Project Phase1	10	Dezhou	Shandong
149	Dongying 10MW Solar PV Project	10	Dongying	Shandong
150	Taian High-tech Industrial Development Zone Solar PV Project Phase1	35	Taian	Shandong
151	Zibo High-tech Industrial Development Zone Solar PV Project Phase1	20	Zibo	Shandong
152	Taian High-tech Industrial Development Zone Solar PV Project Phase2	15	Taian	Shandong
153	Zibo High-tech Industrial Development Zone Solar PV Project Phase2	30	Zibo	Shandong
154	Qingdao Minlonggang 1MW Solar PV Project	1	Qingdao	Shandong
155	Dezhou Qingyun Solar PV Project Phase1	10	Dezhou	Shandong
156	Wuli Zhongtaikang Solar PV Project	1	Binzhou	Shandong
157	Linuo Science Park Solar PV Project	2	Jinan	Shandong
158	Jimo 5MW Thin film Solar PV Project	5	Qingdao	Shandong
159	Fulonghu Solar PV Project	8	Heze	Shandong
160	Weishan 30MW Solar PV Project	30	Jining	Shandong
161	Fulonghu Solar PV Project Phase2	10	Heze	Shandong
162	Liaocheng Shenxian Middle School PV Project	2	Liaocheng	Shandong
163	Greenhouse Solar PV Project	1	Qingdao	Shandong
164	Weihai China Glass Solar 10MW Solar PV Project	10	Weihai	Shandong
165	Binzhou Wuli 10MW Solar PV Project	10	Binzhou	Shandong
166	Dongying Hekou 10MW Solar PV Project	10	Dongying	Shandong
167	Dezhou Qingyun 1MW Solar PV Project	1	Dezhou	Shandong

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
168	Wendeng Nanhai 3MW Solar PV Project	3	Weihai	Shandong
169	Linyi 90MW Solar PV Project Phase1	90	Linyi	Shandong
170	Yutai 30MW Solar PV Project Phase1（5MW）	5	Heze	Shandong
171	Samil Power 10MW Solar PV Project	10		Shandong
172	Linyi 20MW Agricultural House Solar PV Project	20	Linyi	Shandong
173	Himin Dayan Industrial Park Solar PV Project	2	Dezhou	Shandong
174	Pingdu Economic Development Zone 15MW Solar PV Project	15	Qingdao	Shandong
175	Zoucheng 20MW Agricultural House Solar PV Project	20	Zoucheng	Shandong
176	Feicheng 26MW Solar PV Project	26	Taian	Shandong
177	Xiajin 10MW Solar PV Project	10	Xiajin	Shandong
178	Linyi 20MW Agricultural House Solar PV Project	20	Linyi	Shandong
179	Xintai 30MW Solar PV Project Phase1	30		Shandong
180	Binzhou Yangxin Solar PV Project	5	Binzhou	Shandong
181	Dezhou Qingyun Solar PV Project Phase2	40	Dezhou	Shandong
182	Zhongkeshengchuang Roof Top Solar PV Project	5	Qingdao	Shandong
183	Jining Jiaxiang Solar PV Project	10	Jining	Shandong
184	Feicheng Solar PV Project	10	Taian	Shandong
185	Dezhou Leling Solar PV Project	90	Dezhou	Shandong
186	Dezhou Leling Solar PV Project Phase1（10MW）	10	Dezhou	Shandong
187	Yucheng 500MW Solar PV Project	500	Dezhou	Shandong
188	Himin Company Workshop Solar PV Project	7	Dezhou	Shandong
189	Linyi 100MW Solar PV Project Phase2	100	Linyi	Shandong
190	Yutai 30MW Solar PV Project Phase2（25MW）	25	Heze	Shandong
191	Shanxian Development Zone 1MW Solar PV Project Phase2	1	Heze	Shandong
192	Weihai 6MW Solar PV Project	6	Weihai	Shandong
193	Shanxian Development Zone 1MW Solar PV Project Phase1	1	Heze	Shandong

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
194	Dezhou Yatai Group Solar PV Project	2	Dezhou	Shandong
195	Dongying Lijin 100MW Solar PV Project	100	Dongying	Shandong
196	Fulonghu Solar PV Project Phase3	10	Heze	Shandong
197	Dezhou 10MW Solar PV Project Phase2	10	Dezhou	Shandong
198	2012 Shandong Solar PV Project	40		Shandong
199	Changzhou Technology and Education City Solar PV Project	1	Changzhou	Jiangsu
200	Linyang Industrial Zone 2.2MW Solar PV Project	2	Nantong	Jiangsu
201	EOPLLY New Energy Factory Roof Top Solar PV Project	2	Nantong	Jiangsu
202	Nantong Qiangsheng 1.05MW Solar PV Project	1	Nantong	Jiangsu
203	Yancheng No.1 Middle School 1.5MW Solar PV Project	1	Yancheng	Jiangsu
204	Yangzhou International Exhibition Center 1.1MW Solar PV Project	1	Yangzhou	Jiangsu
205	Yangzhou Stadium1.03MW Solar PV Project	1	Yangzhou	Jiangsu
206	Changshu Institute of Technology Solar PV Project	1	Suzhou	Jiangsu
207	Trina Solar Solar PV Project	2	Changzhou	Jiangsu
208	Jiangsu College of Information Technology Solar PV Project	2	Wuxi	Jiangsu
209	Jiangyi Aikang Factory Roof Top Solar PV Project	1	Wuxi	Jiangsu
210	Suzhou Industrial Zone Solar PV Project	1	Suzhou	Jiangsu
211	Yancheng Dafeng Solar PV Project	2	Yancheng	Jiangsu
212	Yancheng Dongtai Solar PV Project	2	Yancheng	Jiangsu
213	GD Solar（Jiangsu）Solar PV Project	7	Wuxi	Jiangsu
214	Changzhou New Technology Zone Solar PV Project	10	Changzhou	Jiangsu
215	Liyang Economic Development Zone Solar PV Project Phase1	3	Changzhou	Jiangsu
216	Liyang Economic Development Zone Solar PV Project	18	Changzhou	Jiangsu

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
	Phase2			
217	Suqian Economic Development Zone Solar PV Project	15	Suqian	Jiangsu
218	Taizhou Hailing Industrial Zone Solar PV Project	10	Taizhou	Jiangsu
219	Haian Solar PV Project	1	Nantong	Jiangsu
220	Chuangshu Guanghua Solar PV Project	4	Suzhou	Jiangsu
221	Jintan Hualuogeng Science Park BIPV Project	2	Changzhou	Jiangsu
222	Suzhou Science City2.6688MW BIPV Project	3	Suzhou	Jiangsu
223	Yangzhong Xinba 2MW BIPV Project	2	Zhenjiang	Jiangsu
224	Zhenjiang New Zone Solar PV Project	5	Zhenjiang	Jiangsu
225	Suzhou University Solar PV Project	2	Zhenjiang	Jiangsu
226	Changzhou Government Building BIPV Project	2	Changzhou	Jiangsu
227	EGing Photovoltaic Technology 5.6MW Solar PV Project	6	Changzhou	Jiangsu
228	Canadian Solar Suzhou New Technology Zone Solar PV Project Phase1	30	Suzhou	Jiangsu
229	Dongwang Gongmao Solar PV Project	2	Huaian	Jiangsu
230	Nanjing Jima Solar PV Project	2	Nanjing	Jiangsu
231	Nantong Rongwei Solar PV Project	2	Nantong	Jiangsu
232	Honghua Ocean Solar PV Project	6	Qidong	Jiangsu
233	ENN Donghai Solar PV Project	4	Lianyugang	Jiangsu
234	Yancheng Economic Development Zone Solar PV Project	20	Yancheng	Jiangsu
235	Dongtaibicheng Solar PV Project	2	Yancheng	Jiangsu
236	Suzhou Mudu Solar PV Project Phase1	10	Suzhou	Jiangsu
237	Hareon Solar Factory Roof Solar PV Project	4	Wuxi	Jiangsu
238	Huaian Gongchuang Industrial Zone Solar PV Project	9	Huaian	Jiangsu
239	Nanjing agricultural logistics center Solar PV Project	6	Nanjing	Jiangsu
240	GHY Paper Group Solar PV Project	5	Suzhou	Jiangsu
241	Yangzijiang Shipbuilding Solar PV Project	5	Wuxi	Jiangsu

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
242	China Energy Conservation and Environmental Protection Group（Zhenjiang）Solar PV Project	3	Zhenjiang	Jiangsu
243	Delta Factory Roof Top Solar PV Project	2	Suzhou	Jiangsu
244	Xuzhou Economic Development Zone Solar PV Project	14	Xuzhou	Jiangsu
245	Rugao Software Park Solar PV Project	10	Nantong	Jiangsu
246	Nantong Wanzha Solar PV Project	5	Nantong	Jiangsu
247	Danyang Daya Science Factory Roof Solar PV Project	15	Zhenjiang	Jiangsu
248	Trina Solar （Changzhou）Factory Roof Top Solar PV Project	2	Changzhou	Jiangsu
249	EGing Photovoltaic Technology13.6MW Solar PV Project	14	Changzhou	Jiangsu
250	SAIC Motor Corporation Nanjing Factory Solar PV Project	30	Nanjing	Jiangsu
251	Changzhou Wujin Solar PV Project	30	Changzhou	Jiangsu
252	Changzhou Dafeng Industrial Zone Solar PV Project	20	Changzhou	Jiangsu
253	Changzhou Wujin New Technology Zone Solar PV Project	30	Changzhou	Jiangsu
254	Laian Zone Solar PV Project	20	Suqian	Jiangsu
255	Nantong Diren Solar PV Project	4	Nantong	Jiangsu
256	LGDNJ Solar PV Project	10	Nanjing	Jiangsu
257	Kunshan Economic Development Zone Solar PV Project	20	Suzhou	Jiangsu
258	Jiangyin Hareon Solar Solar PV Project	10	Wuxi	Jiangsu
259	Zhangjiagang New Energy Zone Solar PV Project	20	Suzhou	Jiangsu
260	XCMG Solar PV Project	10	Xuzhou	Jiangsu
261	Gaochun Economic Development Zone Solar PV Project	6	Nanjing	Jiangsu
262	TICA Solar PV Project	5	Nanjing	Jiangsu

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
263	Tianyang Motor Solar PV Project	5	Zhenjiang	Jiangsu
264	Hairun Taixingfangtai Solar PV Project	12	Taizhou	Jiangsu
265	Zhenjiang New Zone Solar PV Project	15	Zhenjiang	Jiangsu
266	Rudong Economic Development Zone Solar PV Project	20		Jiangsu
267	Trina Solar Solar PV Project	10	Changzhou	Jiangsu
268	Changzhou New Technology Zone BIPV Project	2	Changzhou	Jiangsu
269	ENN Yangzhou Factory Solar PV Project	2	Yangzhou	Jiangsu
270	Taizhou Solar PV Project	1	Taizhou	Jiangsu
271	Hanwha SolarOne Qidong Factory Roof Top Solar PV Project	2	Nantong	Jiangsu
272	Shuyang Kunshu Industrial Zone 8.9MW Solar PV Project	9	Wuxi	Jiangsu
273	Yancheng Dongtai Wind & Solar Hybird 20MW Solar PV Project	20	Yancheng	Jiangsu
274	Nanjing South Railway Station BIPV Project	7	Nanjing	Jiangsu
275	Suntech Eco-Building BIPV Project	1	Wuxi	Jiangsu
276	Guoxin and Suntech Solar PV Project	1	Huaian	Jiangsu
277	Jiangyanshenji 2MW Solar PV Project	1	Taizhou	Jiangsu
278	Suqian Muyangkunmu Industrial Zone 8.9MW Solar PV Project	9		Jiangsu
279	Xuzhou Jiawang Qingshanquan Solar PV Project	20	Xuzhou	Jiangsu
280	Yancheng Dafeng Solar PV Project Phase1	6	Yancheng	Jiangsu
281	Yanghe Wine Park 1.4MW Solar PV Project	1	Suqian	Jiangsu
282	Guoxin Siyang Solar PV Project Phase1	4	Suqian	Jiangsu
283	Dafeng 50MW Thin-film Solar PV Project Phase1(20MW)	20	Yancheng	Jiangsu
284	Dongtai 10MW Solar PV Project Phase1	10	Yancheng	Jiangsu
285	Sheyang Lingang Industrial Zone Solar PV Project	20	Yancheng	Jiangsu

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
	Phase1(20MW)			
286	Canadian Solar Changshu Factory Roof Top Solar PV Project	3	Suzhou	Jiangsu
287	Lianyungang Xinpu Solar PV Project	3	Lianyugang	Jiangsu
288	Suqian Sihong New Technology Industrial Zone 2.9MW Roof Top Solar PV Project	3	Suqian	Jiangsu
289	Huaian 1.93MW Roof Top Solar PV Project	2	Huaian	Jiangsu
290	Zhenjiang 3.5MW Thin-Film Solar PV Project	4	Zhenjiang	Jiangsu
291	Yanghe Wine Park Solar PV Project Phase2	6	Suqian	Jiangsu
292	Changzhou Wujin New Technology Zone 3.5MW Roof Top Solar PV Project	4	Changzhou	Jiangsu
293	Zhenjiang Technology New City 9.8MW Roof Top Solar PV Project	10	Zhenjiang	Jiangsu
294	Yancheng Sheyang Solar PV Project Phase1	30	Yancheng	Jiangsu
295	Guoxin Siyang Solar PV Project Phase2	10	Suqian	Jiangsu
296	Siyang Jianghuai 1.5MW Roof Top Solar PV Project	2	Suqian	Jiangsu
297	Changzhou Jintan 5.2MW Solar PV Project	5	Changzhou	Jiangsu
298	Suqian Xiehe New Energy Roof Top Solar PV Project	9	Suqian	Jiangsu
299	China Power Investment Corporation Jianhu 20MW Solar PV Project Phase1	20	Yancheng	Jiangsu
300	China Power Investment Corporation Huaian Zebaima Lake Solar PV Project	20	Huaian	Jiangsu
301	Suzhou and Changshu Roof Top Solar PV Project	10	Suzhou	Jiangsu
302	Dongtai 20MW Solar PV Project Phase2	20	Yancheng	Jiangsu
303	Dongtai 30MW Solar PV Project Phase2	30	Yancheng	Jiangsu
304	Dongtai 30MW Solar PV Project Phase1	30	Yancheng	Jiangsu
305	Jiangyin 2MW Roof Top Solar PV Project	2	Wuxi	Jiangsu
306	Xuzhou Fengxian New Agriculture 3.8MW Roof Top Solar PV Project	4	Xuzhou	Jiangsu

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
307	Xuzhou Fengxian New Agriculture 20MW Roof Top Solar PV Project	20	Xuzhou	Jiangsu
308	Wuxi New Technology Zone Distrubited Solar PV Demo Zone Phase1	20	Wuxi	Jiangsu
309	Nantong New Technology Zone Distrubited Solar PV Demo Zone Phase1	35	Nantong	Jiangsu
310	Wuxi New Technology Zone Distrubited Solar PV Demo Zone Phase2	30	Wuxi	Jiangsu
311	Nantong New Technology Zone Distrubited Solar PV Demo Zone Phase2	115	Nantong	Jiangsu
312	Akcome Roof Top Solar PV Project	2	Suzhou	Jiangsu
313	Changzhou Economic Development Zone 3.1MW Solar PV Project	3	Changzhou	Jiangsu
314	China Electric Equipment Group Factory Solar PV Project	1	Nanjing	Jiangsu
315	Nanjing South Railway Station Solar PV Project Phase2	4	Nanjing	Jiangsu
316	Xuzhou Pizhou 30MW Solar PV Project	30	Xuzhou	Jiangsu
317	2012 Subei Solar PV Project(20-40MW)	20		Jiangsu
318	Jiangsu Zhongchao Solar Technology 2.09MW Roof Top Solar PV Project	2	Wuxi	Jiangsu
319	Liulaozhuang Solar PV Project Phase1 (9.8MW)	10	Huaian	Jiangsu
320	China Power Investment Corporation Huaian Zebaima Lake Solar PV Project Phase2	30	Huaian	Jiangsu
321	Dongtai Solar PV Project Phase1	50	Yancheng	Jiangsu
322	Zhongtian 10MW Solar PV Project	10	Nantong	Jiangsu
323	Haian 30MW Solar PV Project	30	Nantong	Jiangsu
324	Lianyungang Solar PV Project Phase1(20MW)	20	Lianyugang	Jiangsu
325	Pizhou 20MW Solar PV Project	20	Xuzhou	Jiangsu

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
326	Wuxi Qianzhou Solar PV Project	1	Wuxi	Jiangsu
327	Qianzhou Yinran Solar PV Project	1	Wuxi	Jiangsu
328	Wuxi Cluster Solar PV Project	6	Wuxi	Jiangsu
329	Changshu 9.8MW Solar PV Project	10	Suzhou	Jiangsu
330	Huayang Jiangyan 9.8MWp Solar PV Project	10	Taizhou	Jiangsu
331	Yancheng Sheyang Solar PV Project Phase2	30	Yancheng	Jiangsu
332	Guoxin Siyang Solar PV Project Phase3	4	Suqian	Jiangsu
333	China Power Investment Corporation Jianhu 20MW Solar PV Project Phase2	20	Yancheng	Jiangsu
334	Peixian Xihe 6MW Solar PV Project	6	Xuzhou	Jiangsu
335	Xinghua Lizhong 6MW Solar PV Project	6	Taizhou	Jiangsu
336	Taizhou Jiangyanyuxie 6MW Solar PV Project	6	Taizhou	Jiangsu
337	Dongtai 9.8MW Solar PV Project Phase3	10		Jiangsu
338	Sihong 50MW Solar PV Project	50	Suqian	Jiangsu
339	Liulaozhuang Solar PV Project Phase2	10		Jiangsu
340	Liulaozhuang Solar PV Project Phase3	10		Jiangsu
341	Xingyang Xinghua 30MW Solar PV Project Phase1	30		Jiangsu
342	Suqian Sucheng Nancai Solar PV Project	100	Suqian	Jiangsu
343	Canadian Solar Sihong Solar PV Project	20		Jiangsu
344	Huaian 20MW Solar PV Project Phase2	20	Huaian	Jiangsu
345	GD Solar 10MW Solar PV Project	10		Jiangsu
346	Rudong 9.8MW Solar PV Project	10		Jiangsu
347	Yangkougang Solar PV Project	1	Nantong	Jiangsu
348	Xuqian 2.8MW Solar PV Project	3	Suqian	Jiangsu
349	Trina Solar Yancheng Solar PV Project	100	Yancheng	Jiangsu
350	Yancheng Solar PV Project	20	Yancheng	Jiangsu
351	Gaoyou 30MW Solar PV Project	30		Jiangsu
352	Zhenjiang New Zone 30MW Thin-flim Solar PV Project Phase3(18MW)	18	Zhenjiang	Jiangsu

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
353	Zhenjiang New Zone 30MW Thin-flim Solar PV Project Phase2(10MW)	10	Zhenjiang	Jiangsu
354	Zhenjiang New Zone 30MW Thin-flim Solar PV Project Phase1(2MW)	2	Zhenjiang	Jiangsu
355	China Power Investment Corporation Huaian Zebaima Lake Solar PV Project Phase3	30	Huaian	Jiangsu
356	Dafeng 50MW Thin-film Solar PV Project Phase2(30MW)	30	Yancheng	Jiangsu
357	Jiangsu Xinghua150MW Solar PV Project Phase2	35	Taizhou	Jiangsu
358	Jiangsu Xinghua150MW Solar PV Project Phase3	35	Taizhou	Jiangsu
359	Jiangsu Xinghua150MW Solar PV Project Phase1	80	Taizhou	Jiangsu
360	ET Solar Dafeng Solar PV Project	100	Yancheng	Jiangsu
361	Canadian Solar Sihong 6MW Solar PV Project	6		Jiangsu
362	Dongtai Solar PV Project Phase4(9MW)	9		Jiangsu
363	NB Solar Factory Solar PV Project	1	Ningbo	Zhejiang
364	Jiaxing Jinko Solar PV Project	2	Jiaxing	Zhejiang
365	ReneSola Roof Top Solar PV Project Phase1	2	Jiaxing	Zhejiang
366	Ningbo Jingyuan Solar PV Project	1	Ningbo	Zhejiang
367	NB Solar Factory Solar PV Pilot Project	1	Ningbo	Zhejiang
368	Ninghai No.1 Hospital Solar PV Project	1	Ningbo	Zhejiang
369	Qunsheng Group Building Solar PV Project	2	Jinhua	Zhejiang
370	Zhejiang Xiaoshan 2.7MW Roof Top Solar PV Project	2	Hangzhou	Zhejiang
371	Pingyang Nanjidao Solar PV Project	1	Wenzhou	Zhejiang
372	Changxing SinoSteel Roof Top Solar PV Project	2	Huzhou	Zhejiang
373	Hangzhou High-tech Zone Communication Industrial Park Solar PV Project	1	Hangzhou	Zhejiang
374	Jiuchuan Group Solar PV Project	4	Huzhou	Zhejiang
375	Bolumeng Solar PV Project	2	Huzhou	Zhejiang
376	Desai Solar PV Project	1	Huzhou	Zhejiang

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
377	Hangzhou Railway East Station Roof Top Solar PV Project Phase1	3	Hangzhou	Zhejiang
378	Hangzhou Railway East Station Roof Top Solar PV Project Phase2	5	Hangzhou	Zhejiang
379	Zhejiang SinoSteel Roof Top Solar PV Project Phase2	2	Huzhou	Zhejiang
380	Haining Leather City Solar PV Project	4	Jiaxing	Zhejiang
381	Hengdian Solar PV Project	1	Jinhua	Zhejiang
382	Ningbo City College of Vocational Technology Solar PV Project	2	Ningbo	Zhejiang
383	SUNOWE Photovoltaic 10MW Roof Top Solar PV Project Phase2	8	Shaoxing	Zhejiang
384	Amplesun Solar BIPV Project	1	Hangzhou	Zhejiang
385	Ruineng 3MW BIPV Project	3	Jiaxing	Zhejiang
386	Wuzhou Industry 2MW BIPV Project	2	Lishui	Zhejiang
387	Haining Economic Development Zone Solar PV Project	10	Jiaxing	Zhejiang
388	Qinanzi Roof Top Solar PV Project	2	Jiaxing	Zhejiang
389	Flat Group Roof Top Solar PV Project	3	Jiaxing	Zhejiang
390	Yongkang Economic Development Roof Top Solar PV Project	20	Jinhua	Zhejiang
391	Deqingtianma Factory Roof Top Solar PV Project	16	Huzhou	Zhejiang
392	Wenzhou Economic Development Zone Solar PV Project	10	Wenzhou	Zhejiang
393	Hengdian Group Roof Top Solar PV Project	21	Jinhua	Zhejiang
394	Zehjiang Jiabao New Fiber Roof Top Solar PV Project	3	Shaoxing	Zhejiang
395	Hangzhou Linjiang Industrial Zone Roof Top Solar PV Project	18	Hangzhou	Zhejiang
396	Hangzhou Jianxinfufa Glass Roof Top Solar PV Project	9	Hangzhou	Zhejiang

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
397	Shangyu Solar PV Project	5	Shaoxing	Zhejiang
398	Jiashan Solar PV Project	5	Jiaxing	Zhejiang
399	Jiashan Economic Development Zone Solar PV Project	30	Jiaxing	Zhejiang
400	Yuanhua Industrial Zone Roof Top Solar PV Project	12	Jiaxing	Zhejiang
401	Shaoxing Shimao Square Solar PV Project	2	Shaoxing	Zhejiang
402	Jinhua PujiangSolar PV Project	9	Jinhua	Zhejiang
403	Pinghu Solar PV Project	20		Zhejiang
404	Sopray Energy Solar PV Project	14		Zhejiang
405	Sopray Energy Solar PV Project	5		Zhejiang
406	Jianshen New District Beijing CORONA Solar PV Project	4	Jiaxing	Zhejiang
407	Jianshen New District Beijing CORONA 1MW Solar PV Project	1	Jiaxing	Zhejiang
408	Jianshen New District Beijing CORONA 15MW Solar PV Project	15	Jiaxing	Zhejiang
409	Ningbo Beicang Solar PV Project	20	Ningbo	Zhejiang
410	Jiaxing Economic Development Zone Solar PV Project Phase1	12		Zhejiang
411	China Merchants New Energy Group Xinchang Wanfeng Industry Solar PV Project	20		Zhejiang
412	Jiaxing Economic Development Zone Solar PV Project Phase2	8		Zhejiang
413	Changxing Economic Development Zone Solar PV Project Phase2	20	Huzhou	Zhejiang
414	Hangzhouwan New District Solar PV Project	20	Ningbo	Zhejiang
415	Yiwu International Trade City BIPV Project Phase3	1	Yiwu	Zhejiang
416	Tonglu Economic Development Zone Solar PV Project Phase1	50	Hangzhou	Zhejiang

China's PV Project Database				
No.	**Projects Name**	**Capacity（MWp）**	**Location**	**Provice**
417	Shaoxing Bintan Solar PV Project Phase1	49	Shaoxing	Zhejiang
418	Shaoxing Bintan Solar PV Project Phase2	101	Shaoxing	Zhejiang
419	Hangzhou Energy and Environment Industrial Park 20MW Roof Top Solar PV Project Phase1(2MW)	1	Hangzhou	Zhejiang
420	SUNOWE Photovoltaic 10MW Roof Top Solar PV Project Phase1	2	Shaoxing	Zhejiang
421	Hailipu Smart Grid Project	1	Jiaxing	Zhejiang
422	SUNOWE Photovoltaic Roof Top Solar PV Project	2	Shaoxing	Zhejiang
423	Jiashan Furniture City 1.5MW Roof Top Solar PV Project	2	Jiaxing	Zhejiang
424	Wenling Exhibition Center 1.2MW Solar PV Project	1	Taizhou	Zhejiang
425	Wenzhou Economic Development Zone 20MW Solar PV Project	20	Wenzhou	Zhejiang
426	Hangzhou Energy and Environment Industrial Park 20MW Roof Top Solar PV Project Phase2	18	Hangzhou	Zhejiang

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
1	KELINGTON GROUP BERHAD, SOLAR PV, 0.0161MW	0.0161	SHAH ALAM, SELANGOR DARUL EHSAN
2	DITROLIC SDN BHD, SOLAR PV, 0.0129MW	0.0129	JOHOR BAHRU, JOHOR DARUL TAKZIM
3	HOTEL PENAGA SDN BHD, SOLAR PV, 0.0208MW	0.0208	GEORGETOWN, PULAU PINANG
4	ELEKTRONIK KECK SENG SDN BHD, SOLAR PV, 0.0036MW	0.0036	SKUDAI, JOHOR DARUL TAKZIM
5	LIVER & GASTRO CENTRE SDN BHD, SOLAR PV, 0.0106MW	0.0106	SETIA TROPIKA, JOHOR DARUL TAKZIM
6	DAIDEN EQUIPMENT SDN. BHD., SOLAR PV, 0.0059MW	0.0059	BANDAR TUN RAZAK, W.P. KUALA LUMPUR
7	SELANGOR INDUSTRIAL CORPORATION SDN BHD, SOLAR PV, 0.0052MW	0.0052	SHAH ALAM, SELANGOR DARUL EHSAN
8	PALAM MESRA SDN. BHD., SOLAR PV, 0.0096MW	0.0096	KUALA LUMPUR, W.P. KUALA LUMPUR
9	THE TITULAR SUPERIOR OF THE INSTITUTE OF THE MARIST BROTHERS, SOLAR PV, 0.0648MW	0.0648	PETALING JAYA, SELANGOR DARUL EHSAN
10	MRCB SENTRAL PROPERTIES SDN. BHD., SOLAR PV, 0.0208MW	0.0208	LEMBAH PANTAI, W.P. KUALA LUMPUR
11	KEMUNING STRUCTURES SDN BHD, SOLAR PV, 0.0030MW	0.003	SHAH ALAM, SELANGOR DARUL EHSAN
12	YU-MING MARKETING SDN BHD, SOLAR PV, 0.0053MW	0.0053	PETALING JAYA, SELANGOR DARUL EHSAN
13	MALAYSIA TRADE & TRANSPORT COMPANY SDN BHD, SOLAR PV, 0.0062MW	0.0062	GEORGETOWN, PULAU PINANG
14	SUTERA UTAMA SDN. BHD., SOLAR PV, 0.0033MW	0.0033	JOHOR BAHRU, JOHOR DARUL TAKZIM
15	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.1716MW	0.1716	JOHOR BAHRU, JOHOR DARUL TAKZIM
16	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.1716MW	0.1716	JOHOR BAHRU, JOHOR DARUL TAKZIM
17	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.1728MW	0.1728	PASIR GUDANG, JOHOR DARUL TAKZIM
18	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.0858MW	0.0858	JOHOR BAHRU, JOHOR DARUL TAKZIM

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
19	PETRONAS DAGANGAN BERHAD, SOLAR PV, 0.0644MW	0.0644	HULU LANGAT, SELANGOR DARUL EHSAN
20	PARAMOUNT PROPERTIES SDN BHD, SOLAR PV, 0.0323MW	0.0323	LEMBAH PANTAI, W.P. KUALA LUMPUR
21	MACGLO STEEL SERVICE CENTRE SDN BHD, SOLAR PV, 0.4693MW	0.4693	SHAH ALAM, SELANGOR DARUL EHSAN
22	SUNWAY DAMANSARA SDN BHD, SOLAR PV, 0.0152MW	0.0152	KOTA DAMANSARA, SELANGOR DARUL EHSAN
23	AXIS 11 SDN BHD, SOLAR PV, 0.0350MW	0.035	SEPANG, SELANGOR DARUL EHSAN
24	JOHBAKTI MEWAH SDN BHD, SOLAR PV, 0.0025MW	0.0025	TAMAN MOLEK, JOHOR DARUL TAKZIM
25	ALPHA AUTOMATION (SEL) SDN BHD, SOLAR PV, 0.1760MW	0.176	NILAI, NEGERI SEMBILAN DARUL KHUSUS
26	REGAL EDGE SDN BHD, SOLAR PV, 0.0101MW	0.0101	KUALA LUMPUR, W.P. KUALA LUMPUR
27	SUNWAY SPK HOMES SDN BHD, SOLAR PV, 0.0052MW	0.0052	BATU, W.P. KUALA LUMPUR
28	KRIYALAKSHMI MANDIR SHREE SAI GURUKUL CHARITABLE SOCIETY KUALA LUMPUR, SOLAR PV, 0.0010MW	0.001	TITIWANGSA, W.P. KUALA LUMPUR
29	SURIA KLCC SDN BHD, SOLAR PV, 0.1702MW	0.1702	KUALA LUMPUR, W.P. KUALA LUMPUR
30	MRCB SENTRAL PROPERTIES SDN. BHD., SOLAR PV, 0.0415MW	0.0415	LEMBAH PANTAI, W.P. KUALA LUMPUR
31	KOPERASI BUDDHISME MALAYSIA BERHAD, SOLAR PV, 0.0040MW	0.004	PETALING JAYA, SELANGOR DARUL EHSAN
32	EMC M&E SDN BHD, SOLAR PV, 0.0090MW	0.009	PUCHONG, SELANGOR DARUL EHSAN
33	UTAMA LODGE SDN BHD, SOLAR PV, 0.0403MW	0.0403	SEPUTIH, W.P. KUALA LUMPUR
34	ASSOCIATED AIR-PAK INDUSTRIES SDN. BHD., SOLAR PV, 0.0106MW	0.0106	IPOH, PERAK DARUL RIDZUAN
35	DELANO FURNITURE INDUSTRIES (M) SDN BHD, SOLAR PV, 0.0700MW	0.07	SEBERANG PRAI SELATAN, PULAU PINANG
36	CENTURY MOVE FURNITURE SDN BHD, SOLAR PV, 0.0700MW	0.07	NIBONG TEBAL, PULAU PINANG
37	GUESS.COM SDN BHD, SOLAR PV, 0.0300MW	0.03	CHERAS, W.P. KUALA LUMPUR
38	GUPPY PLASTICS INDUSTRIES SDN BHD, SOLAR PV, 0.0720MW	0.072	SEBERANG PRAI TENGAH, PULAU PINANG

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
39	NEW HOONG FATT AUTO SUPPLIES SDN BHD, SOLAR PV, 0.1780MW	0.178	SEGAMBUT, W.P. KUALA LUMPUR
40	PERFECT CRYSTAL SDN BHD, SOLAR PV, 0.0420MW	0.042	GEORGETOWN, PULAU PINANG
41	KIP MANAGEMENT SDN. BHD., SOLAR PV, 0.0302MW	0.0302	KAJANG, SELANGOR DARUL EHSAN
42	THE HAVEN SDN BHD, SOLAR PV, 0.0307MW	0.0307	KINTA, PERAK DARUL RIDZUAN
43	JISHAN PACK SDN BHD, SOLAR PV, 0.1790MW	0.179	NIBONG TEBAL, PULAU PINANG
44	PERUNDING BONLEO SDN. BHD., SOLAR PV, 0.0120MW	0.012	SHAH ALAM, SELANGOR DARUL EHSAN
45	ENERGY PLATFORM SDN BHD, SOLAR PV, 0.0494MW	0.0494	KUALA LUMPUR, W.P. KUALA LUMPUR
46	SOLPLUS SDN BHD, SOLAR PV, 0.5000MW	0.5	KINTA, PERAK DARUL RIDZUAN
47	ENERGY PLATFORM SDN BHD, SOLAR PV, 0.0165MW	0.0165	KUALA LUMPUR, W.P. KUALA LUMPUR
48	DEWAN PERHIMPUNAN CINA KEDAH, SOLAR PV, 0.0230MW	0.023	KOTA SETAR, KEDAH DARUL AMAN
49	THE METHODIST CHURCH IN MALAYSIA, SOLAR PV, 0.1646MW	0.1646	PORT DICKSON, NEGERI SEMBILAN DARUL KHUSUS
50	HEXATECH ENGINEERING SDN BHD, SOLAR PV, 0.1720MW	0.172	ALOR GAJAH, MELAKA BANDARAYA BERSEJARAH
51	TS SOLARTECH SDN BHD, SOLAR PV, 0.1766MW	0.1766	SEBERANG PRAI TENGAH, PULAU PINANG
52	MERIT INDUSTRIES SDN BHD, SOLAR PV, 0.0106MW	0.0106	KAMUNTING, PERAK DARUL RIDZUAN
53	GOLDEN SAND ANSON SDN BHD, SOLAR PV, 0.0120MW	0.012	BIDOR, PERAK DARUL RIDZUAN
54	AIC INGREDIENTS SDN BHD, SOLAR PV, 0.0720MW	0.072	SHAH ALAM, SELANGOR DARUL EHSAN
55	PERUSAHAAN SAUDEE SDN BHD, SOLAR PV, 0.0700MW	0.07	SG. PETANI, KEDAH DARUL AMAN
56	SAI KIM ENTERPRISE SDN BHD, SOLAR PV, 0.0720MW	0.072	PUCHONG, SELANGOR DARUL EHSAN
57	PERCETAKAN MEWAH PEK SDN BHD, SOLAR PV, 0.1800MW	0.18	KULIM, KEDAH DARUL AMAN
58	VIZ URBANA SDN BHD, SOLAR PV, 0.0199MW	0.0199	ULU CHOH, JOHOR DARUL TAKZIM
59	VIZ URBANA SDN BHD, SOLAR PV, 0.0209MW	0.0209	ULU CHOH, JOHOR DARUL TAKZIM
60	SOLAR INTERACTIVE SDN BHD (FORMERLY KNOWN AS TRUE INTERACTIVE SDN BHD), SOLAR PV, 0.4980MW	0.498	KINTA, PERAK DARUL RIDZUAN
61	HOSPITAL LAM WAH EE, SOLAR PV, 0.1793MW	0.1793	GEORGETOWN, PULAU PINANG
62	SUN SOLARTECH SDN BHD, SOLAR PV, 0.5000MW	0.5	BESUT, TERENGGANU DARUL IMAN

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
63	MUDAJAYA LAND SDN. BHD., SOLAR PV, 0.0515MW	0.0515	PETALING JAYA, SELANGOR DARUL EHSAN
64	MUTIARA NAFIRI SDN BHD, SOLAR PV, 0.0240MW	0.024	IPOH, PERAK DARUL RIDZUAN
65	DYNAMIC PRIMAJAYA SDN BHD, SOLAR PV, 0.0092MW	0.0092	BANDAR BARU MERGONG, KEDAH DARUL AMAN
66	BAKE WITH YEN (KL) SDN. BHD., SOLAR PV, 0.0720MW	0.072	PUCHONG, SELANGOR DARUL EHSAN
67	ENTRYPOINT FARMS SDN BHD, SOLAR PV, 0.1800MW	0.18	LENGGENG, NEGERI SEMBILAN DARUL KHUSUS
68	VIZ URBANA SDN BHD, SOLAR PV, 0.1020MW	0.102	JOHOR BAHRU, JOHOR DARUL TAKZIM
69	LEMBAGA PENGELOLA SMJK KATHOLIK, PETALING JAYA, SOLAR PV, 0.1800MW	0.18	PETALING, SELANGOR DARUL EHSAN
70	PLATINUM VICTORY DEVELOPMENT SDN. BHD., SOLAR PV, 0.0592MW	0.0592	KUALA LUMPUR, W.P. KUALA LUMPUR
71	FUSELINE ELECTRIC & ENGINEERING SDN BHD, SOLAR PV, 0.0720MW	0.072	GLENMARIE COVE, SELANGOR DARUL EHSAN
72	CHENG HUA ENGINEERING WORKS SDN BHD, SOLAR PV, 0.1800MW	0.18	KLANG, SELANGOR DARUL EHSAN
73	USAHA PIMPINAN SDN. BHD., SOLAR PV, 0.0720MW	0.072	KLANG, SELANGOR DARUL EHSAN
74	USAHA PIMPINAN SDN. BHD., SOLAR PV, 0.0720MW	0.072	KLANG, SELANGOR DARUL EHSAN
75	SHAW & SONS (KUALA LUMPUR) SDN. BHD., SOLAR PV, 0.3000MW	0.3	KLANG, SELANGOR DARUL EHSAN
76	TELUK MESTIKA SDN. BHD., SOLAR PV, 0.0660MW	0.066	SEMENYIH, SELANGOR DARUL EHSAN
77	RENOSUN SDN. BHD., SOLAR PV, 0.0420MW	0.042	KOTA SETAR, KEDAH DARUL AMAN
78	PIBG SJK (C) DAMANSARA, SOLAR PV, 0.0040MW	0.004	PETALING JAYA, SELANGOR DARUL EHSAN
79	JEFI AQUATECH RESOURCES SDN BHD, SOLAR PV, 0.1790MW	0.179	SEBERANG PRAI TENGAH, PULAU PINANG
80	PHOENIX CONGLOMERATE SDN. BHD., SOLAR PV, 0.0720MW	0.072	KUALA LANGAT, SELANGOR DARUL EHSAN

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
81	PROTECT PRINT SDN BHD, SOLAR PV, 0.0420MW	0.042	PUCHONG, SELANGOR DARUL EHSAN
82	CA FLAVOR SDN BHD, SOLAR PV, 0.0317MW	0.0317	PUCHONG, SELANGOR DARUL EHSAN
83	SINERGI DIKARI SDN. BHD., SOLAR PV, 0.0700MW	0.07	KAJANG, SELANGOR DARUL EHSAN
84	SRS POWER ENGINEERING SDN BHD, SOLAR PV, 0.0720MW	0.072	PUCHONG, SELANGOR DARUL EHSAN
85	GLOBAL KIARA SDN. BHD., SOLAR PV, 0.0240MW	0.024	PETALING JAYA, SELANGOR DARUL EHSAN
86	PKT LOGISTICS (M) SDN. BHD, SOLAR PV, 0.0400MW	0.04	SHAH ALAM, SELANGOR DARUL EHSAN
87	U-TEKNIK TRADING SDN BHD, SOLAR PV, 0.0240MW	0.024	BUKIT MERTAJAM, PULAU PINANG
88	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.1716MW	0.1716	SENAI, JOHOR DARUL TAKZIM
89	URBAN AQUAPONICS SDN. BHD., SOLAR PV, 0.4250MW	0.425	KUALA KEDAH, KEDAH DARUL AMAN
90	THE TITULAR SUPERIOR OF THE INSTITUTE OF THE MARIST BROTHERS, SOLAR PV, 0.0600MW	0.06	PORT DICKSON, NEGERI SEMBILAN DARUL KHUSUS
91	EVERGREEN MERGE SDN BHD, SOLAR PV, 0.0700MW	0.07	SEBERANG PRAI UTARA, PULAU PINANG
92	SUNRISE PRIMA SDN BHD, SOLAR PV, 0.4200MW	0.42	SHAH ALAM, SELANGOR DARUL EHSAN
93	AQUAPONICS ENERGY GARDEN SDN. BHD., SOLAR PV, 0.4250MW	0.425	KT. KUALA MUDA, KEDAH DARUL AMAN
94	ESH RESOURCE MANAGEMENT SDN BHD, SOLAR PV, 0.0690MW	0.069	BUKIT MERTAJAM, PULAU PINANG
95	THE TITULAR SUPERIOR OF THE INSTITUTE OF THE MARIST BROTHERS, SOLAR PV, 0.0675MW	0.0675	PORT DICKSON, NEGERI SEMBILAN DARUL KHUSUS
96	PERKASA BERNAS (M) SDN. BHD., SOLAR PV, 0.0050MW	0.005	KUALA LUMPUR, W.P. KUALA LUMPUR
97	KINZPOINT SDN BHD, SOLAR PV, 0.0470MW	0.047	KLANG, SELANGOR DARUL EHSAN
98	AQUAPONICS SOLAR FARM SDN. BHD., SOLAR PV, 0.3400MW	0.34	KUALA MUDA, KEDAH DARUL AMAN
99	UWC ELECTRIC (M) SDN BHD, SOLAR PV, 0.0702MW	0.0702	SEBERANG PRAI TENGAH, PULAU PINANG
100	PESATUAN MENINGGIKAN AKHLAK CHE SIR KHOR, SOLAR PV, 0.0200MW	0.02	MASAI, JOHOR DARUL TAKZIM
101	YAYASAN TAIWAN BUDDHIST TZU CHI, MALAYSIA (TAIWAN	0.0432	KUALA LUMPUR, W.P. KUALA LUMPUR

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
	BUDDHIST TZU-CHI FOUNDATION MALAYSIA), SOLAR PV, 0.0432MW		
102	WT PLASTIC PRODUCTS SDN. BHD., SOLAR PV, 0.1440MW	0.144	KLANG, SELANGOR DARUL EHSAN
103	IPMA INDUSTRY SDN BHD, SOLAR PV, 0.0690MW	0.069	JITRA, KEDAH DARUL AMAN
104	MARA INCORPORATED SDN. BHD., SOLAR PV, 0.1778MW	0.1778	BESUT, TERENGGANU DARUL IMAN
105	SOLAR MANAGEMENT (CHEMBONG) SDN BHD, SOLAR PV, 0.5000MW	0.5	PEDAS, NEGERI SEMBILAN DARUL KHUSUS
106	TANJUNG BINTANG SDN BHD, SOLAR PV, 0.0400MW	0.04	JOHOR BAHRU, JOHOR DARUL TAKZIM
107	GUOMAX SDN BHD, SOLAR PV, 0.0720MW	0.072	SHAH ALAM, SELANGOR DARUL EHSAN
108	SOLAR MANAGEMENT (REMBAU) SDN BHD, SOLAR PV, 0.5000MW	0.5	PEDAS, NEGERI SEMBILAN DARUL KHUSUS
109	BUTTERWORTH PAPER CUPS SDN BHD, SOLAR PV, 0.1766MW	0.1766	NIBONG TEBAL, PULAU PINANG
110	LABEL CONQUEST SDN BHD, SOLAR PV, 0.0720MW	0.072	SEBERANG PRAI TENGAH, PULAU PINANG
111	KARISMA DAIMAN SDN. BHD., SOLAR PV, 0.0720MW	0.072	PETALING JAYA, SELANGOR DARUL EHSAN
112	LEONG BEE & SOO BEE SDN BHD, SOLAR PV, 0.1470MW	0.147	PERAI, PULAU PINANG
113	REVISION SOLAR SDN BHD, SOLAR PV, 0.1800MW	0.18	SEBERANG PRAI TENGAH, PULAU PINANG
114	KLASIK AKTIF SDN BHD, SOLAR PV, 0.1800MW	0.18	SEBERANG PRAI TENGAH, PULAU PINANG
115	LASERSONIC SDN BHD, SOLAR PV, 0.0690MW	0.069	JITRA, KEDAH DARUL AMAN
116	HBH GLOBAL ENERGY SDN. BHD., SOLAR PV, 0.5000MW	0.5	PEDANG SIDING, PERLIS INDERA KAYANGAN
117	OUTREACH GREEN SDN BHD, SOLAR PV, 0.5000MW	0.5	PEDANG SIDING, PERLIS INDERA KAYANGAN
118	OUTREACH GREEN SDN BHD, SOLAR PV, 0.5000MW	0.5	PEDANG SIDING, PERLIS INDERA KAYANGAN
119	MILLEON EXTRUDER SDN BHD, SOLAR PV, 0.5000MW	0.5	RAWANG, SELANGOR DARUL EHSAN

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
120	VERDURE CULTURE INDUSTRIES SDN BHD, SOLAR PV, 0.0240MW	0.024	RASA, SELANGOR DARUL EHSAN
121	SOLRA SDN BHD, SOLAR PV, 0.4830MW	0.483	BALING, KEDAH DARUL AMAN
122	JISHAN CAPITAL SDN BHD, SOLAR PV, 0.0720MW	0.072	NIBONG TEBAL, PULAU PINANG
123	HARTAMAS MENTARI SDN BHD, SOLAR PV, 0.5000MW	0.5	PUCHONG, SELANGOR DARUL EHSAN
124	INFRA MASYHUR SDN. BHD., SOLAR PV, 0.3400MW	0.34	CYBERJAYA, SELANGOR DARUL EHSAN
125	SUN SENG FATT SDN. BERHAD, SOLAR PV, 0.5000MW	0.5	KINTA, PERAK DARUL RIDZUAN
126	VERDURE CULTURE INDUSTRIES SDN BHD, SOLAR PV, 0.0720MW	0.072	RASA, SELANGOR DARUL EHSAN
127	TS WORLDWIDE WAREHOUSING SDN BHD, SOLAR PV, 0.1800MW	0.18	KLANG, SELANGOR DARUL EHSAN
128	DITROLIC SDN BHD, SOLAR PV, 0.0460MW	0.046	JOHOR BAHRU, JOHOR DARUL TAKZIM
129	YIQI SDN BHD, SOLAR PV, 0.1800MW	0.18	SHAH ALAM, SELANGOR DARUL EHSAN
130	JAMBATAN KEDUA SDN BHD, SOLAR PV, 0.0400MW	0.04	SEBERANG PRAI SELATAN, PULAU PINANG
131	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.4200MW	0.42	SENAI, JOHOR DARUL TAKZIM
132	ELEGANT GROUP SDN BHD, SOLAR PV, 0.1350MW	0.135	SUBANG JAYA, SELANGOR DARUL EHSAN
133	THUMBPRINTS UTD SDN BHD, SOLAR PV, 0.5000MW	0.5	RAWANG, SELANGOR DARUL EHSAN
134	BINA PURI PROPERTIES SDN. BHD., SOLAR PV, 0.0626MW	0.0626	PUCHONG, SELANGOR DARUL EHSAN
135	SOLARCORP SDN BHD, SOLAR PV, 0.4250MW	0.425	MELAKA TENGAH, MELAKA BANDARAYA BERSEJARAH
136	SOLARCO HOLDINGS SDN BHD, SOLAR PV, 0.4870MW	0.487	KULIM, KEDAH DARUL AMAN
137	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.1716MW	0.1716	SENAI, JOHOR DARUL TAKZIM
138	AMANJAYA SPECIALIST CENTRE SDN BHD, SOLAR PV, 0.0400MW	0.04	SG. PETANI, KEDAH DARUL AMAN
139	FUNDWIN SDN BHD, SOLAR PV, 0.5000MW	0.5	SEPANG, SELANGOR DARUL EHSAN

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
140	LESTARI MAJUMAS SDN BHD, SOLAR PV, 0.5000MW	0.5	SEPANG, SELANGOR DARUL EHSAN
141	KOMBINASI BUMI SOLAR SDN BHD, SOLAR PV, 0.3130MW	0.313	SHAH ALAM, SELANGOR DARUL EHSAN
142	CENTRAL HOLDINGS BERHAD, SOLAR PV, 0.0360MW	0.036	KUALA LUMPUR, W.P. KUALA LUMPUR
143	UPAYA JAYAMAS SDN BHD, SOLAR PV, 0.4950MW	0.495	SUBANG JAYA, SELANGOR DARUL EHSAN
144	PESAKA NURI (M) SDN BHD, SOLAR PV, 0.5000MW	0.5	SEPANG, SELANGOR DARUL EHSAN
145	URBAN SPRING SDN BHD, SOLAR PV, 0.0720MW	0.072	HULU SELANGOR, SELANGOR DARUL EHSAN
146	KUB-BERJAYA ENERGY SDN BHD, SOLAR PV, 0.1250MW	0.125	HULU SELANGOR, SELANGOR DARUL EHSAN
147	EVERGREEN GOLDYEAR SDN BHD, SOLAR PV, 0.4950MW	0.495	PELABUHAN KLANG, SELANGOR DARUL EHSAN
148	STAR PUBLICATIONS (MALAYSIA) BERHAD, SOLAR PV, 0.5000MW	0.5	SHAH ALAM, SELANGOR DARUL EHSAN
149	ROVSKI INDUSTRIES SDN BHD, SOLAR PV, 0.1790MW	0.179	SUBANG JAYA, SELANGOR DARUL EHSAN
150	KURNIA MAJURIA SDN BHD, SOLAR PV, 0.4950MW	0.495	PELABUHAN KLANG, SELANGOR DARUL EHSAN
151	EAGLETECH INDUSTRIES SDN BHD, SOLAR PV, 0.1800MW	0.18	CHERAS, SELANGOR DARUL EHSAN
152	SUN SENG FATT SDN. BERHAD, SOLAR PV, 0.5000MW	0.5	KINTA, PERAK DARUL RIDZUAN
153	MARAN ROAD SAWMILL SDN BHD, SOLAR PV, 0.5000MW	0.5	TEMERLOH, PAHANG DARUL MAKMUR
154	HERCULES SDN BHD, SOLAR PV, 0.0240MW	0.024	SHAH ALAM, SELANGOR DARUL EHSAN
155	UMP HOLDINGS SDN. BHD., SOLAR PV, 0.0061MW	0.0061	KUANTAN, PAHANG DARUL MAKMUR
156	ISKANDAR REGION DEVELOPMENT AUTHORITY, SOLAR PV, 0.0600MW	0.06	JOHOR BAHRU, JOHOR DARUL TAKZIM
157	CANDELA GREEN ENERGY SDN BHD, SOLAR PV, 0.0702MW	0.0702	PAKA, TERENGGANU DARUL IMAN
158	ALPHA AUTOMATION (SEL) SDN BHD, SOLAR PV, 0.0720MW	0.072	PETALING JAYA, SELANGOR DARUL EHSAN
159	STRUKTUR REALITY SDN BHD, SOLAR PV, 0.0300MW	0.03	KUANTAN, PAHANG DARUL MAKMUR

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
160	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.1716MW	0.1716	SENAI, JOHOR DARUL TAKZIM
161	ACIDCHEM INTERNATIONAL SDN BHD, SOLAR PV, 0.5000MW	0.5	PERAI, PULAU PINANG
162	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 0.1716MW	0.1716	SENAI, JOHOR DARUL TAKZIM
163	ACE PIXEL SDN BHD, SOLAR PV, 0.4000MW	0.4	SEPANG, SELANGOR DARUL EHSAN
164	ACE PIXEL SDN BHD, SOLAR PV, 0.4000MW	0.4	SEPANG, SELANGOR DARUL EHSAN
165	KUALITI ALAM SDN BHD, SOLAR PV, 0.1500MW	0.15	PORT DICKSON, NEGERI SEMBILAN DARUL KHUSUS
166	TWELVE STRANDDNA SDN BHD, SOLAR PV, 0.4250MW	0.425	JAWI, PULAU PINANG
167	CANDELA GREEN ENERGY SDN BHD, SOLAR PV, 0.1795MW	0.1795	DUNGUN, TERENGGANU DARUL IMAN
168	STERLING FIESTA SDN. BHD., SOLAR PV, 0.1630MW	0.163	MELAKA TENGAH, MELAKA BANDARAYA BERSEJARAH
169	CYPARK SURIA (PAJAM) SDN BHD, SOLAR PV, 5.0000MW	5	NILAI, NEGERI SEMBILAN DARUL KHUSUS
170	CYPARK SURIA (NEGERI SEMBILAN) SDN BHD, SOLAR PV, 3.0000MW	3	NILAI, NEGERI SEMBILAN DARUL KHUSUS
171	EXOTIC ACCESS SDN BHD, SOLAR PV, 0.5040MW	0.504	PELABUHAN KLANG, SELANGOR DARUL EHSAN
172	SAUJANA NAGAMAS S/B, SOLAR PV, 0.9900MW	0.99	SHAH ALAM, SELANGOR DARUL EHSAN
173	MUJUR SATRIA SDN BHD, SOLAR PV, 0.9900MW	0.99	SHAH ALAM, SELANGOR DARUL EHSAN
174	AMBANG FIESTA SDN BHD, SOLAR PV, 5.0000MW	5	KANGAR, PERLIS INDERA KAYANGAN
175	RENTAK RAYA SDN BHD, SOLAR PV, 2.0000MW	2	PONTIAN, JOHOR DARUL TAKZIM
176	WIBAWA HARMONI SDN BHD, SOLAR PV, 0.9900MW	0.99	SHAH ALAM, SELANGOR DARUL EHSAN
177	GAYA DUNIA SDN BHD, SOLAR PV, 3.0000MW	3	PORT DICKSON, NEGERI SEMBILAN DARUL KHUSUS
178	KEMUNING SUMIKIN BUSSAN SDN BHD, SOLAR PV, 1.0100MW	1.01	KUALA LANGAT, SELANGOR DARUL EHSAN
179	KAYANGAN MEGAJAYA SDN BHD, SOLAR PV, 0.5040MW	0.504	SHAH ALAM, SELANGOR DARUL EHSAN

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
180	BROADWAY VICTORY SDN BHD, SOLAR PV, 0.9900MW	0.99	KLANG, SELANGOR DARUL EHSAN
181	SYNERGY SOLAR DEVELOPMENT SDN BHD, SOLAR PV, 1.3728MW	1.3728	SKUDAI, JOHOR DARUL TAKZIM
182	KUMPULAN MELAKA BERHAD, SOLAR PV, 1.3000MW	1.3	ALOR GAJAH, MELAKA BANDARAYA BERSEJARAH
183	KUMPULAN MELAKA BERHAD, SOLAR PV, 1.2200MW	1.22	ALOR GAJAH, MELAKA BANDARAYA BERSEJARAH
184	SELASIH MENTARI SDN BHD, SOLAR PV, 1.3000MW	1.3	RANTAU, NEGERI SEMBILAN DARUL KHUSUS
185	CYPARK SURIA (PAJAM) SDN BHD, SOLAR PV, 5.0000MW	5	PAJAM, NEGERI SEMBILAN DARUL KHUSUS
186	BAGAN DATOH SOLAR FARM SDN BHD, SOLAR PV, 2.5000MW	2.5	BAGAN DATOH, PERAK DARUL RIDZUAN
187	AMBANG FIESTA SDN BHD, SOLAR PV, 1.0000MW	1	KANGAR, PERLIS INDERA KAYANGAN
188	KUMPULAN MELAKA BERHAD, SOLAR PV, 2.4800MW	2.48	ALOR GAJAH, MELAKA BANDARAYA BERSEJARAH
189	PEPS-JV (M) SDN BHD, SOLAR PV, 2.0000MW	2	BATANGKALI, SELANGOR DARUL EHSAN
190	FORTUNE 11 SDN BHD, SOLAR PV, 5.0000MW	5	SEPANG, SELANGOR DARUL EHSAN
191	EMERALD ESTEEM SDN BHD, SOLAR PV, 0.9900MW	0.99	PELABUHAN KLANG, SELANGOR DARUL EHSAN
192	SELASIH MENTARI SDN BHD, SOLAR PV, 2.0000MW	2	RANTAU, NEGERI SEMBILAN DARUL KHUSUS
193	SILVERSTAR PAVILION SDN BHD, SOLAR PV, 5.0000MW	5	SEPANG, SELANGOR DARUL EHSAN
194	SUPERSPAN SDN BHD, SOLAR PV, 1.5000MW	1.5	KUALA LANGAT, SELANGOR DARUL EHSAN
195	SILVERSTAR PAVILION SDN BHD, SOLAR PV, 5.0000MW	5	SEPANG, SELANGOR DARUL EHSAN
196	VOLTAGE RENEWABLES SDN BHD, SOLAR PV, 1.0100MW	1.01	KUANTAN, PAHANG DARUL MAKMUR
197	VOLTAGE RENEWABLES SDN BHD, SOLAR PV, 5.0000MW	5	KUANTAN, PAHANG DARUL MAKMUR
198	GUBAHAN CERIA SDN BHD, SOLAR PV, 4.5000MW	4.5	TAMPIN, NEGERI SEMBILAN DARUL KHUSUS

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
199	CEMARA ANGSANA SDN BHD, SOLAR PV, 4.5000MW	4.5	TAMPIN, NEGERI SEMBILAN DARUL KHUSUS
200	CEMARA ANGSANA SDN BHD, SOLAR PV, 1.2500MW	1.25	TAMPIN, NEGERI SEMBILAN DARUL KHUSUS
201	CORPORATE SEASON SDN BHD, SOLAR PV, 4.0000MW	4	SEPANG, SELANGOR DARUL EHSAN
202	BAGAN DATOH SOLAR FARM SDN BHD, SOLAR PV, 2.5000MW	2.5	BAGAN DATOH, PERAK DARUL RIDZUAN
203	IVORY DAZZLE SDN BHD, SOLAR PV, 0.9900MW	0.99	SHAH ALAM, SELANGOR DARUL EHSAN
204	SPECIAL UNIVERSAL SDN BHD, SOLAR PV, 2.5000MW	2.5	KUANTAN, PAHANG DARUL MAKMUR
205	SPECIAL UNIVERSAL SDN BHD, SOLAR PV, 2.5000MW	2.5	KUANTAN, PAHANG DARUL MAKMUR
206	SUCCESS SIGNET SDN BHD, SOLAR PV, 1.7470MW	1.747	KUALA MUDA, KEDAH DARUL AMAN
207	KOMITMEN MANTAP SDN BHD, SOLAR PV, 2.0000MW	2	PASIR MAS, KELANTAN DARUL NAIM
208	IRM SOLAR SDN BHD, SOLAR PV, 5.0000MW	5	KANGAR, PERLIS INDERA KAYANGAN
209	PANTAS LESTARI SDN BHD, SOLAR PV, 0.4250MW	0.425	SHAH ALAM, SELANGOR DARUL EHSAN
210	VOLTAGE RENEWABLES SDN BHD, SOLAR PV, 3.0000MW	3	KUANTAN, PAHANG DARUL MAKMUR
211	VOLTAGE RENEWABLES SDN BHD, SOLAR PV, 1.0100MW	1.01	KUANTAN, PAHANG DARUL MAKMUR
212	KOMITMEN MANTAP SDN BHD, SOLAR PV, 2.0000MW	2	PASIR MAS, KELANTAN DARUL NAIM
213	ATEN SDN BHD, SOLAR PV, 0.5060MW	0.506	SEPANG, SELANGOR DARUL EHSAN
214	GADING KENCANA SDN BHD, SOLAR PV, 5.0000MW	5	ALOR GAJAH, MELAKA BANDARAYA BERSEJARAH
215	SELASIH MENTARI SDN BHD, SOLAR PV, 2.0000MW	2	RANTAU, NEGERI SEMBILAN DARUL KHUSUS
216	SYNERGY MUST SDN BHD, SOLAR PV, 1.0100MW	1.01	SEPANG, SELANGOR DARUL EHSAN
217	SYNERGY MUST SDN BHD, SOLAR PV, 1.0000MW	1	SEPANG, SELANGOR DARUL EHSAN
218	UPTOWN SYSTEM SDN BHD, SOLAR PV, 2.4700MW	2.47	SEPANG, SELANGOR DARUL EHSAN
219	SPECIAL UNIVERSAL SDN BHD, SOLAR PV, 5.0000MW	5	KUANTAN, PAHANG DARUL MAKMUR
220	GADING KENCANA SDN BHD, SOLAR PV, 3.0000MW	3	DURIAN TUNGGAL, MELAKA BANDARAYA BERSEJARAH
221	KOMBINASI BUMI SOLAR SDN BHD, SOLAR PV, 1.0102MW	1.0102	KUALA LANGAT, SELANGOR DARUL EHSAN

Malaysia's PV Project Database			
No.	**Projects Name**	**Capacity （MW）**	**Location**
222	SYNERGY GENERATED SDN BHD, SOLAR PV, 5.0000MW	5	SETIU, TERENGGANU DARUL IMAN

Singapore's PV Project Database			
No.	**Projects Name**	**Capacity [kWp]**	**Location**
1	Applied Materials (AMAT) A	380.26	Changi
2	Applied Materials (AMAT) B	14.4	Changi
3	Applied Materials (AMAT) C	4.8	Changi
4	GKE Warehouse & Logistics	100.8	Pioneer Rd
5	HDB - Bukit Panjang Ring Blk 236 - A	30	Bukit Panjang
6	HDB - Bukit Panjang Ring Blk 237 - B	50	Bukit Panjang
7	HDB - Bukit Panjang Ring Blk 238 - C	35	Bukit Panjang
8	HDB - Bukit Panjang Ring Blk 239 - D	35	Bukit Panjang
9	HDB - Bukit Panjang Ring Blk 240 - E	35	Bukit Panjang
10	HDB - Marine Crescent Blk 30 - A	35.42	East Coast
11	HDB - Marine Crescent Blk 31 - B	35.42	East Coast
12	HDB - Marine Crescent Blk 32 - C	35.42	East Coast
13	HDB - Marine Crescent Blk 33 - D	35.42	East Coast
14	HDB - Marine Crescent Blk 34 - E	25.3	East Coast
15	HDB - Serangoon North Blk 548 - A	10	Serangoon
16	HDB - Serangoon North Blk 549 - B	10	Serangoon
17	HDB - Serangoon North Blk 550 - C	10	Serangoon
18	HDB - Serangoon North Blk 550a MSCP - H	3.2	Serangoon
19	HDB - Serangoon North Blk 551 - D	10	Serangoon
20	HDB - Serangoon North Blk 552 - E	10	Serangoon
21	HDB - Serangoon North Blk 553 - F	10	Serangoon
22	HDB - Serangoon North Blk 554 - G	10	Serangoon
23	HDB - Tampines Ave 7 Blk 390 - A	45.54	Tampines
24	HDB - Tampines Ave 7 Blk 391 - B	40.48	Tampines
25	HDB - Tampines Ave 7 Blk 392 - C	35.42	Tampines
26	HDB - Tampines Ave 7 Blk 393 - D	30.36	Tampines
27	HDB - Wellington Circle Blk 508 MSCP - H	3.3	Wellington Circle

Singapore's PV Project Database			
No.	**Projects Name**	**Capacity [kWp]**	**Location**
28	HDB - Wellington Circle Blk 508a - A	10.35	Wellington Circle
29	HDB - Wellington Circle Blk 508b - B	10.35	Wellington Circle
30	HDB - Wellington Circle Blk 508c - C	10.35	Wellington Circle
31	HDB - Wellington Circle Blk 509a - D	10.35	Wellington Circle
32	HDB - Wellington Circle Blk 509b - E	10.35	Wellington Circle
33	HDB - Wellington Circle Blk 510a - F	10.35	Wellington Circle
34	HDB - Wellington Circle Blk 510b - G	10.35	Wellington Circle
35	Lonza Biologics	180.92	Tuas
36	Ngee Ann Polytechnic A	5.25	Bukit Timah
37	Ngee Ann Polytechnic B	5.2	Bukit Timah
38	Ngee Ann Polytechnic C	2.43	Bukit Timah
39	Ngee Ann Polytechnic D	1.25	Bukit Timah
40	Ngee Ann Polytechnic E	0.65	Bukit Timah
41	NUS High School A	2.1	Clementi
42	NUS High School B	2.03	Clementi
43	NUS High School C	2.1	Clementi
44	Ocean Financial Centre	75.03	CBD
45	Renewable Energy Corportation (REC)	300.38	Tuas
46	Republic Polytechnic A	15.05	Woodlands
47	Republic Polytechnic B	15	Woodlands
48	Resorts World Sentosa (RWS)	503.37	Sentosa
49	Robert Bosch Southeast Asia A	40.48	Bishan
50	Robert Bosch Southeast Asia B	42.57	Bishan
51	Robert Bosch Southeast Asia C	5.1	Bishan
52	Sentosa Cove Bungalow	5.71	Sentosa
53	Singapore Polytechnic A - T19	19.2	Dover
54	Singapore Polytechnic B - T8/1	2.09	Dover
55	Singapore Polytechnic C - T8/2	2.08	Dover
56	Singapore Polytechnic D - T8/3	2.04	Dover

Singapore's PV Project Database			
No.	**Projects Name**	**Capacity [kWp]**	**Location**
57	Singapore Polytechnic E - InnoVillage 1	22.55	Dover
58	Singapore Polytechnic F - InnoVillage 2	4.4	Dover
59	Singapore Prison Service	30	Changi
60	SingTel	39.98	Pasir Ris
61	Urban Redevelopment Authority (URA) Centre	50.51	Maxwell Road
62	Woh Hup Building A	25.21	Upper Bukit Timah
63	Woh Hup Building B	8.7	Upper Bukit Timah
64	Zero Energy House A	4.8	Siglap
65	Zero Energy House B	3.78	Siglap

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
1	Linden Solar Farm	4	Linden	NJ
2	Imperial Valley Solar Project Phase 1	200	Imperial Valley	CA
3	Port Allen Solar Farm	6	Kauai	HI
4	South Burlington Solar Farm	2	South Burlington	VT
5	Yardville Solar Farm	5	Hamilton	NJ
6	Campbell Soup Solar Array	2	Sacramento	CA
7	William Stanley Business Park	2	Pittsfield	MA
8	Napoleon Solar Facility	4	Napoleon	OH
9	Rancho Seco Nuclear Station	3	Herald	CA
10	Foothills Solar Plant	17	Yuma County	AZ
11	Prescott Solar Power Plant	3	Prescott	AZ
12	AstroSol Tech Park AZ	5	Tucson	AZ
13	Cascade Solar Park	10	Joshua Tree	CA
14	Manis Solar Farm	2	Laurinburg	NC
15	UMMS Solar Farm	4	Somerset	MD
16	BNB Napoleon Solar LLC: Phase 1	10	Napoleon	OH
17	Plymouth Schools Solar Farm	6	Plymouth	MA
18	Edwards Air Force Base Solar Farm	3	Kern County	CA
19	Madera Community Hospital	1	Madera	CA
20	Long Island Solar Farm	32	Brookhaven	NY
21	Colorado State University, Pueblo Solar Farm	1	Pueblo	CO
22	USMC 29 Palms	1	Twentynine Palms	CA
23	Pearson County Airport	3	Timberlake	NC
24	Person County Solar Farm	1	Person County	NC
25		5	Westford	MA
26	Nickel 1 Solar Farm	2	Kern County	CA
27	Questa	1	Questa	NM

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
28	CalRENEW - 1	5	Mendota	CA
29	Alamosa Solar Generating Project	30	Alamosa	CO
30	Sterling Project	2	Sterling	MA
31	Keystone Solar Project	6	Lancaster County	PA
32	Berkley Solar Farm	3	Berkley	MA
33	East Wayne Solar	2	Goldsboro	NC
34	West Wayne Solar	2	Goldsboro	NC
35	Castalia Solar	2	Castalia	NC
36	Franklin Solar 2	2	Franklin	NC
37	Kinston Solar	2	Kinston	NC
38	Arba Solar	2	Snow Hill	NC
39	Snow Hill Solar 2	2	Snow Hill	NC
40	Snow Hill Solar 1	2	Snow Hill	NC
41	Shrewsbury Solar Farm	3	Shrewsbury	MA
42	Frenchtown I	3	Frenchtown	NJ
43	Frenchtown II	3	Frenchtown	NJ
44	Dartmouth II	2	Dartmouth	MA
45	Lebanon Solar	2	Glen Gardner	NJ
46	Dartmouth Business Solar Park	2	Dartmouth	MA
47	Alcatel - Lucent Solar Farm	1	Murray Hill	NJ
48	Pilesgrove Solar Project	18	Pilesgrove Township	NJ
49	Exelon - Conergy Solar Energy Center	3	Fairless Hills	PA
50		5	Holyoke	MA
51	Stroud Solar Station	20	Fresno	CA
52	Huron Solar Farm	20	Fresno	CA
53		20	Huron	CA
54	Westside Solar Station	15	Fresno	CA
55		10	Huron	CA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
56	Porterville Solar Plant	5	San Joaquin Valley	CA
57	Washington White Post Solar Project	13	Bath	NC
58	Valencia Solar	13	Tucson	AZ
59	Slayton Solar	2	Slayton	MN
60	Catalina Solar Project	60	Kern County	CA
61	Catalina Solar Project	50	Kern County	CA
62	Corcoran	20	Kings County	CA
63	Eastern Long Island Solar Project II	5		NY
64	Pocono Raceway Solar Facility	3	Lond Pond	PA
65	Belle Mead Solar Project	2	Belle Mead	NJ
66	Bellevue Solar	2	Yamhill	OR
67	Sacramento Soleil 2008	1	Sacramento	CA
68	Yamhill Solar	1	Yamhill	OR
69		1	Knox County	TN
70		1	Jackson	TN
71	Stillwater Solar - Geothermal Plant	24	Fallon	NV
72	Kent County Public Works Solar Array	1	Kent	DE
73	Southern Vermont Solar Array	2	Williamstown	VT
74		1	Blairsville	GA
75	Martins Creek Solar Farm	1	Murphy	NC
76	Murphy Farm	1	Culberson	NC
77	Wingate Solar Farm	1	Murphy	NC
78	Holiness Solar Farm	1	Murphy	NC
79	Indianapolis Airport Solar Farm Phase 1	10	Indianapolis	IN
80	Sun City Project	23	Avenal	CA
81	Sand Drag Solar Project	22	Avenal	CA
82	Avenal Park Solar Project	6	Avenal	CA
83	Campo Verde	139	Imperial County	CA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
84	Imperial Solar Energy Center South	120	Imperial County	CA
85	AV Solar Ranch One	115	Antelope Valley	CA
86	Agua Caliente	100	Yuma County	AZ
87	Copper Mountain 2	92	Boulder City	NV
88	Agua Caliente	70	Yuma County	AZ
89	Alpine Solar Project	66	Lancaster	CA
90	Silver State North Solar Project	50	Primm	NV
91	Agua Caliente	50	Yuma County	AZ
92	Topaz Solar Farm	34	Carrizo Plains	CA
93	Cimarron I Solar Project	30	Cimarron	NM
94	Agua Caliente	30	Yuma County	AZ
95	Agua Caliente	28	Yuma County	AZ
96	Avra Valley	25	Pima	AZ
97	NRG Blythe	21	Blythe	CA
98	Roadrunner Solar Electric Facility	20	Santa Theresa	NM
99	Maryland Solar Farm	20	Hagerstown	MD
100	Paloma Solar Plant	17	Gila Bend	AZ
101	Mount St. Mary's University Solar Farm	14	Emmitsburg	MD
102				
103	Hondale Solar Farm	5	Deming	NM
104	Alamogordo Solar Energy Center	5	Alamogordo	NM
105	Las Vegas Solar Center	5	Las Vegas	NM
106	Los Morros	5	Los Lunas	NM
107	Albuquerque Solar Center	2	Albuquerque	NM
108	Copper Mountain Solar Project	48	Boulder City	NV
109	El Dorado Energy Solar Project	10	Boulder City	NV
110	Kapolei Sustainable Energy Park	1	Oahu	HI
111	Alpaugh	50	Tulare County	CA
112	Alpaugh North	20	Tulare County	CA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
113	White River	20	Tulare County	CA
114	Northfield Mountain Solar Farm	2	Northfield	MA
115	Rio Rico Phase 1	4	Rio Rico	AZ
116	Springerville Generating Station Solar System	5	Springerville	AZ
117	Springerville Generating Station Solar System (expansion)	2	Springerville	AZ
118	Pennsylvania Solar Park	10	Nesquehoning	PA
119		2	Burlington	VT
120	San Luis Valley Solar Ranch	30	Alamosa County	CO
121	Chattanooga Metropolitan Airport Solar Farm	1	Chattanooga	TN
122	Grand Ridge Solar Plant	20	LaSalle County	IL
123	Silver Lake Solar Farm	2	Edison	NJ
124	Back River Wastewater Solar Farm	1	Essex	MD
125	Queen Creek Solar Farm	19	Queen Creek	AZ
126	Blue Wing Solar Project	14	San Antonio	TX
127	Jacksonville Solar	12	Jacksonville	FL
128	Milford Solar Farm	12	Kent	DE
129	Wyandot Solar Facility	10	Upper Sandusky	OH
130	Mill Creek Solar Farm	4	Burlington Township	NJ
131	Mars Solar Garden	2	Hackettstown	NJ
132	Mars Chocolate Solar Farm	1	Henderson	NV
133	Lawrenceville School Solar Farm	6	Lawrence	NJ
134	Atlantic Coast Feezers Solar Farm	2	Vineland	NJ
135	Camp Pendleton Solar Facility	1	San Diego	CA
136	Pine Tree Solar Project	9	Lone Pine	CA
137	Lanai Solar Electric Plant	1	Lanai	HI
138	Gridley Solar Farm	4	Gridley	CA
139	NJ Oak Solar Farm	10	Fairfield Township	NJ

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
140	Centinela Solar Energy	170	Imperial Valley	CA
141	Arlington Valley Solar Project II	19	Arlington	AZ
142	Arizona Western College	5	Yuma	AZ
143	Berry Plastics Corp Solar Farm	14	Phillipsburg	NJ
144	Camp Roberts Solar Farm	1	San Miguel	CA
145	Paradise Solar Energy Center	5	Gloucester County	NJ
146	Hatch Solar Center	5	Hatch	NM
147	McGraw - Hill Solar Farm	14	East Windsor	NJ
148	Vineland Solar Farm	5	Vineland	NJ
149	Manalapan Solar Farm	4	Manalapan	NJ
150	Borrego Solar Project	26	Borrego Springs	CA
151	Neuse River Wastewater Treatment Plant Solar Array	1	Raleigh	NC
152	Ararat Rock Solar	4	Mt.Airy/Surry	NC
153	Progress Solar 1	4	Bunn	NC
154	Progress Solar 2	4	Fairmont	NC
155	Progress Solar 3	4	Maxton	NC
156	Sandy Cross Solar Farm	2	Elm City	NC
157	Mayberry Solar Farm	1	Mount Airy	NC
158	DIA 3	4	Denver	CO
159	DIA 1	2	Denver	CO
160	DIA 2	2	Denver	CO
161	Outback Solar	5	Lake County	OR
162	Black Cap Solar Project	2	Lake County	OR
163	Delsea Road	3	Vineland	NJ
164	Onslow Solar	2	Jacksonville	NC
165	VW Solar	8	Chattanooga	TN
166	Berkshire School Solar Farm	2	Sheffield	MA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
167	Crayola Solar Farm	2	Easton	PA
168	Cantua	20	Fresno	CA
169	Giffen	10	Fresno	CA
170	Kapaa Solar Farm	1	Kapaa	HI
171	Hayward Wastewater Solar Facility	1	Hayward	CA
172	McKenzie Road Solar Farm	30	Galt	CA
173	Kansas South	20	Lancaster	CA
174	TA - High Desert	20	Kings County	CA
175	Kammerer	19	Elk Grove	CA
176	Bruceville	18	Elk Grove	CA
177	Bagdad Solar Project	15	Yavapai	AZ
178	Dillard	12	Sacramento	CA
179	Ajo	5	Ajo	AZ
180	Sunset Reservoir Solar Power System	4	San Francisco	CA
181	Stanton Solar Farm	6	Orange	FL
182	Haverhill Solar Farm	1	Haverhill	MA
183	Bryan Solar Array	3	Bryan	OH
184	Mesquite Solar	66	Arlington	AZ
185	Mesquite Solar	46	Arlington	AZ
186	Mesquite Solar	38	Arlington	AZ
187		4	Twin Cities	CA
188	White Sands Missile Range Solar Project	4		NM
189	West Tennessee Solar Farm	4	Haywood County	TN
190	Pulaski Energy Park Solar Farm	1	Pulaski	TN
191	Prescott Valley Tank Farm	2	Prescott Valley	AZ
192	Nichols Farm	1	Hanford	CA
193	Upson County Solar Farm	1	Upson County	GA
194	Palm Springs Solar PV Project II	8	Palm Springs	CA
195	Aerojet Solar Facility	5	Sacramento	CA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
196				
197	West County Wastewater District Solar	1	Richmond	CA
198	Atwell Island	20	Tulare County	CA
199	East Bridgewater Solar Farm	2	East Bridgewater	MA
200	Celina Solar Farm	5	Celina	OH
201	Highlander 1	11	Twentynine Palms	CA
202	Adelanto	10	Adelanto	CA
203	Highlander 2	10	Twentynine Palms	CA
204	Cotton Center	17	Gila Bend	AZ
205	Five Points Solar Station	15	Fresno	CA
206	Prairie Fire	5	Tucson	AZ
207	Vaca - Dixon Solar Station	2	Vacaville	CA
208	La Senita Solar Farm	1	Kingman	AZ
209	Black Mountain Solar Project	8	Kingman	AZ
210	Marlboro Mushrooms Solar Farm	1	West Grove	PA
211	Canton Landfill Solar Facility	6	Canton	MA
212	Oberlin College Solar Farm	2	Oberlin	OH
213	RCCLA Amalia Solar Array 1	2	Amalia	NM
214	Bowling Green Solar Farm	2	Bowling Green	KY
215	Whiteville - Bowman	7	Whiteville	NC
216	AM Best	7	Wayne	NC
217	Mount Olive 2 Solar Farm	7	Wayne	NC
218	Bolton Solar Farm	7	Warren	NC
219	Mocksville Solar Farm	6	Mocksville	NC
220	Raeford Solar Farm	6	Raeford	NC
221	Fuquay Solar Farm	6	Middle Creek	NC
222	Two Lines Solar Farm	6	Catawba	NC
223	Rock Farm	6		NC
224	Lenoir 2 Solar Fam	6	Lenoir	NC

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
225	Dibrell Solar Farm	6		NC
226	Lenoir 1	6	Lenoir	NC
227	Wilson Solar Farm	6		NC
228	Warrenton Solar Farm	6	Warrenton	NC
229	Kings Mountain Solar Farm	5	Kings Mountain	NC
230	Watts Farm	5	Maxton	NC
231	South Robeson Farm	5	Rowland	NC
232	Shannon Farm Project	5	Shannon	NC
233	Railroad Farm Project	5	St. Pauls	NC
234	Arndt Farm Project	5	Clines	NC
235	Bellwood Solar Farm	5	Lawdale	NC
236	Kearny Landfill Solar Farm	3	Kearny	NJ
237	Global Pharma Co Solar Farm	2	Raritan	NJ
238	Rutgers University Solar Farm	1	Piscataway	NJ
239	Austin Energy PV Project	30	Webberville	TX
240	Apex	20	Las Vegas	NV
241	Centennial Solar Farms	20	San Antonio	TX
242	Tucson Solar Project	20	Tucson	AZ
243	Hyder Solar Plant	17	Hyder	AZ
244	Davidson County Solar Farm	16	Davidson County	NC
245	Las Cruces Centennial Solar Farm	12	El Paso	NM
246	Somerset Solar Farm	11	Somerset	TX
247	El Chaparral Solar Farm	11	El Paso	NM
248	SPS - Hope	10	Lea & Eddy Counties	NM
249	SPS - Dollarhide	10	Lea & Eddy Counties	NM
250	SPS - Jal	10	Lea & Eddy Counties	NM

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
251	SPS - Lea	10	Lea & Eddy Counties	NM
252	SPS - Monument	10	Lea & Eddy Counties	NM
253	Prescott	10	Prescott	AZ
254	Alamosa Photovoltaic Solar Plant	7	Alamosa	CO
255	Lakeland Linder Regional Airport Solar Farm	6	Lakeland	FL
256	Colorado State University, Fort Collins Solar Farm	5	Fort Collins	CO
257	Georgetown Solar Farm	4	Georgetown	DE
258	Rifle Energy Innovation	2	Rifle	CO
259	Trenton Solar Farm	1	Trenton	NJ
260	City of Madera Wastewater Solar Farm	1	Madera	NM
261	Santa Fe Wastewater Treatment Solar Farm	1	Santa Fe	NM
262	Pima County Wastewater Reclamation Solar Farm	1	Tucson	AZ
263	Taylorsville Solar Farm	1	Taylorsville	NC
264	Sutton Solar Farm	1	Wilmington	NC
265	Plymouth Solar Center Phase 1	2	Plymouth	NC
266	Imperial Valley Solar Company 1	23	Niland	CA
267	California Valley Solar Ranch	250	San Luis Obispo	CA
268	DeSoto Next Generation Solar Energy Center	25	Arcadia	FL
269	McHenry Solar Farm	25	Modesto	CA
270	Apple Data Center Solar Farm	20	Maiden	NC
271	Apple Data Center - Conover	20	Conover	NC
272	Greater Sandhill Solar Plant	19	Alamosa	CO
273	China Lake	14	China Lake	CA
274	Space Coast Next Generation Solar Energy Center	10	Kennedy Space Center	FL

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
275	West Pullman Industrial Redevelopment Area	8	Chicago	IL
276	Phoenix Water Treatment Solar Farm	8	Phoenix	CA
277	Air Force Academy	5	Colorado springs	CO
278	Princeton University Solar Farm	5	Princeton	NJ
279	Kalaeloa Solar Plant	5	Oahu	HI
280	Inland Empire Utilities Agency Solar Farm	3	Chino	CA
281	Lake County Sanitation District Solar Farm	2	Lakeport	CA
282	Bloomberg Solar Farm	2	Skillman	NJ
283	Merck & Co. Headquarters Solar Farm	2	Whitehouse Station	NJ
284	SAS Solar Farm 1	1	Cary	NC
285	Western Riverside County Regional Wastewater Authority Solar Farm	1	Corona	CA
286	Rancho California Water District Solar Farm	1	Murrieta	CA
287	Senga Doherty Pump Station	1	Riverside	CA
288	Rio Vista Water Treatment	1	Santa Clarita	CA
289	ASU Solar Array	1	Mesa	AZ
290	Bakersfield College Solar Farm	1	Bakersfield	CA
291	Grundfos Pumps Solar Farm	1	Fresno	CA
292	Gap Inc. West Coast Distribution Center	1	Fresno	CA
293	La Ola Solar Farm	1	Lanai	HI
294	University of California, Merced, Solar Farm	1	Merced	CA
295	Liberty Media QVC Distribution Center	1	Rocky Mount	NC
296	Bell Labs Global HQ Solar Farm	1	Murray Hill	CA
297	Sonoma Valley County Sanitation District Solar Farm	1	Sonoma	CA
298	Tucson Water Department	1	Tucson	AZ
299	Yolo County Justice Campus Solar Farm	1	Woodland	CA
300	Vineland Solar One	4	Vineland	NJ

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
301	Murfreesboro Solar Project	5	Murfreesboro	NC
302	Shelby Solar Project	1	Shelby	NC
303	Copper Crossing	20	Pinal County	AZ
304	Dover SUN Park	10	Dover	DE
305	Nellis Air Force Base	12	Clark County	NV
306	Robert O Schulz Solar Farm	1	Stanislaus County	CA
307	North Bay Regional Water Treatment Solar Array	1	Vacaville	CA
308		2	Gainesville	FL
309				
310	Fort Carson Army Base	2	Colorado Springs	CO
311	Rockford Solar Project	2	Rockford	IL
312	Indian Orchard PV Facility	2	Springfield	MA
313	Tinton Falls Solar Farm	16	Tinton Falls	NJ
314	Janssen Pharmaceutica Solar Farm	5	Titusville	NJ
315	Las Vegas Water Treatment Solar Farm	3	Las Vegas	NV
316	SunGen1	3	Sharon	VT
317	NC One	2	Northampton	NC
318	Agua Pennsylvania Pickering Solar Farm	2	Phoenixville	PA
319	Washington Township Solar Array	1	Washington	OH
320	Dorchester Solar Site	1	Suffolk	MA
321	Mount Signal Solar Farm	200	Imperial Valley	CA
322		2	Boston	MA
323	Franklin County Solar Farm	2	Louisburg	NC
324	Airport Ground Solar 1	2	Johnston County	NC
325	Foothills Solar Plant	18	Yuma County	AZ
326	Beautiful Energy	34	Lancaster	CA
327	Beautiful Energy	16	Lancaster	CA
328		3	Lilesville	NC

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
329	Sorrento Eagle Dunes Solar Farm	40	Sorrento	FL
330	Easthampton Landfill Solar Project	2	Easthampton	MA
331	Scituate Landfill Solar	3	Scituate	MA
332	East Providence Landfill Solar Array	4	East Providence	RI
333	Vineland Solar One Expansion	12	Vineland	NJ
334	Ingram's Mill Farm	1	Chester County	PA
335	Washington White Post Solar Project II	5	Bath	NC
336	Lepomis Solar Project	6	Plymouth	MA
337	Desert Sunlight	550	Desert Center	CA
338	Topaz Solar Farm	516	Carrizo Plains	CA
339	Solar Gen 2	150	El Centro	CA
340	AV Solar Ranch One	115	Antelope Valley	CA
341	Copper Mountain 2	58	Boulder City	NV
342	Macho Springs Solar Project	50	Deming	NM
343	Agua Caliente	12	Yuma County	AZ
344	Imperial Solar Energy Center South	10	Imperial County	CA
345	Otero County Solar Energy Center	8	Otero County	NM
346	Rio Rico Phase 2	3	Rio Rico	AZ
347	GrandView Solar PV One	20	Mountain Home AFB	ID
348	East Lyme Solar Park	5		CT
349	GV1	2	Byron	CA
350	Somers Solar Center	5	Somers	CT
351	Oahu Military Housing Solar Farm	1	Oahu	HI
352	Chattanooga Metropolitan Airport Solar Farm	3	Chattanooga	TN
353	Moapa Solar Project	350	Clark County	NV
354	Arlington Valley Solar Project II	106	Arlington	AZ
355	Agricenter International	1	Memphis	TN
356	Los Alamos County Landfill Solar Facility	2	Los Alamos	NM

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
357	Alamo 1 Solar Farm	41	San Antonio	TX
358	Pflugerville Solar Power Plant	48	Pflugerville	TX
359	Copper Mountain 3	250	Boulder City	NV
360	Simon Solar Farm	30	Social Circle	GA
361	South Central Regional Water Authority	1	Hamden	CT
362	Wapakoneta Solar Farm	3	Wapakoneta	OH
363		1	Kingman	AZ
364	Dement	7		NC
365	Mount Olive Solar Farm	6	Mount Olive	NC
366	McCallum	6		NC
367	White Cross	6	Orange	NC
368	Moorings Solar	6		NC
369	Spectrum Solar	30	Clark County	NV
370	Chino Valley Solar Plant	20	Chino Valley	AZ
371	Granville Solar Facility	3	Granville	NC
372	Plymouth Solar Center	8	Plymouth	NC
373	AVSP	579	Rosamond	CA
374	Yolo County Solar Farm	3	Woodland	CA
375	Yolo County Solar Farm	3	Davis	CA
376	Peninsula Solar Project	2	Wilmington	DE
377	Manzano Solar Energy Center	20	Los Lunas	NM
378		1	Northampton County	NC
379	Calexico Solar Farm 1	200	Imperial Valley	CA
380	Calexico Solar Farm 2	200	Imperial Valley	CA
381	Midway Solar Farm 3	200	Imperial Valley	CA
382	Midway Solar Farm 2	155	Imperial Valley	CA
383	Salton Sea Solar Farm 2	100	Imperial Valley	CA
384	Chocolate Mountains Solar Farm	50	Imperial Valley	CA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
385	Midway Solar Farm 1	50	Imperial Valley	CA
386	Midway Solar Farm 4	50	Imperial Valley	CA
387	Salton Sea Solar Farm 1	50	Imperial Valley	CA
388	Calipatria Solar Farm 1	27	Imperial Valley	CA
389	Lotus Solar Farm	67	Madera County	CA
390	Redcrest Solar Farm	20	Kern County	CA
391		200	Imperial Valley	CA
392	Imperial Valley Solar Project	500	Imperial Valley	CA
393		13	Palm Springs	CA
394	Kalaeloa Home Lands Solar	5	West Oahu	HI
395	GrandView Solar PV Four	20	Mountain Home AFB	ID
396	Grandview Solar PV Three	20	Mountain Home AFB	ID
397	Grandview Solar PV Two	20	Mountain Home AFB	ID
398	Searchlight Solar	20	Searchlight	NV
399		18	Cape Cod	MA
400		6		
401	Ridgecrest Center Solar Project	22	Ridgecrest	NC
402	Lucerne	14	Lucerne Valley	CA
403	Littlerock	5	Torrance	CA
404	Garnet	5		
405	Blythe	5		
406	Gila Bend Solar	32	Gila Bend	AZ
407	Hyder Solar Plant II	14	Hyder	AZ
408	Upper Pittsgrove Township Solar Farm	80	Salem County	NJ
409	The Greenfield Solar Farm	2	Greenfield	MA
410	Sorrento Eagle Dunes Solar Farm Expansion	60	Sorrento	FL

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
411	Rinehart Solar Farm Phase 2	8	Lake County	FL
412	Midland Solar Energy Project		Boulder City	NV
413				
414		19	Barstow	CA
415	Soda Mountain Solar Project	350	Baker	CA
416		10	Joshua Tree	CA
417	Lucerne Valley Solar Project	45	San Bernardino County	CA
418		300	Guadalupe County	NM
419	CPV Piney Reach Solar Farm	10	Charles County	MD
420	Ponterril Solar Project	3	Pittsfield	MA
421		10		IN
422		10		IN
423		10		IN
424	Desert Harvest	150	Riverside County	CA
425	Marin Solar Facility	31	Kern/Kings/Tulare	CA
426	Copper Rays Solar Farm	200	Nye County	NV
427	Mojave View Solar Farm	200	Kern	CA
428	Sun Streams Solar Farm	150	Maricopa	AZ
429	Great Valley Solar Farm	120	Tulare	CA
430	Wildflower Green Energy Farm	100	Los Angeles	CA
431	Little Mountain solar project	55	Weber County	UT
432	Alpine Solar Farm	50	Presidio	TX
433	Armadillo Flats Solar Farm	30	Pueblo	CO
434	Carlls Corner Solar Farm	20	Cumberland	NJ
435	Wild Sands Solar Farm	20	Riverside	CA
436	High Desert Solar Farm	16	Kern	CA
437	Marion Country Solar Farm	15	Marion	OH

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
438	New Market Solar Farm	15	Dorchester	MD
439	Florida Solar 1	25	Polk County	FL
440		24	Freeport	FL
441	Mojave Green Center Phase I	360		NV
442	Mojave Green Center Phase II	360		NV
443	Claysville Solar Farm	20	Washington	PA
444	Indianapolis Airport Solar Farm Phase 2	10	Indianapolis	IN
445	Stateline Solar Farm	300	San Bernardino County	CA
446	Silver State South Solar Project	250	Primm	NV
447	Cuyama	40	Santa Barbara	CA
448	Lost Hills	32	Kern County	CA
449		20		
450		7		NM
451		7		NM
452		7		NM
453	Babcock Ranch	75	Babcock Ranch	FL
454	Desert Hot Springs Solar Farm	20	Desert Springs	CA
455		3	Williamstown	VT
456		2	Pownal	VT
457	Pennsylvania Solar Park	10	Nesquehoning	PA
458	Florence Solar Farm	6	Florence	AZ
459	Garnet Solar Project	5	Palm Springs	CA
460	Hamilton County Solar Farm	70	Hamilton County	FL
461	Solar Forest	35		NC
462	Pumpjack Solar 1	20	Kern	CA
463	Wildwood Solar 1	20	Kern	CA
464		4	Jemez Pueblo	NM
465	Badger 1	15	Maricopa	AZ

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
466		7	Middlesex	NJ
467		37	Alamosa County	CO
468	Marathon Solar Project	25	San Bernardino County	CA
469	Agincourt Solar Project	13	San Bernardino County	CA
470	NJ Cedar Solar Plant	10	Manning Township	NJ
471	Arlington Valley Solar Project	125	Arlington	AZ
472	Mercer County Community College Solar Farm	8	West Windsor	NJ
473		150	Dragoon	AZ
474		25	Cochise	AZ
475	Gadsden Solar Farm	400	Gadsden County	FL
476	Hardee Solar Farm	200	Hardee	FL
477	Liberty County Solar Farm	100	Liberty	FL
478	Sterling Project	1200	Lake Havasu City	CA
479	Turning Point Solar	50	Cumberland	OH
480		8	Newberry	CA
481	McCoy Solar Energy Center	750	Riverside County	CA
482	Blythe Solar Power Project: Phase I	486	Blythe	CA
483	Sonoran Solar Energy Project	300	Maricopa County	AZ
484	Beacon Solar Energy Project	250		CA
485	Mountain View Solar	8	Clark County	NV
486		4	Bellingham	MA
487	North Star Power 1	60	Mendota	CA
488		7	San Diego County	CA
489	Wharton Generating Station	10	Houston	TX
490	Imperial Valley Campus Solar	5	Brawley	CA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
491	Neuse River Wastewater Treatment Plant Solar Array II	5	Raleigh	NC
492	Biscoe Solar		Montgomery	NC
493	Turkey Branch solar		Robeson	NC
494	Rockwell Solar		Rowan	NC
495	Montgomery Solar		Montgomery	NC
496	Wake Solar		Wake	NC
497	Selma Solar		Johnston County	NC
498	Alamo Solar Farm	359	San Antonio	TX
499	Picture Rocks Solar Farm	200	Picture Rocks	AZ
500		20	West Sacramento	CA
501		10	Imperial Valley	CA
502	Sunshine Solar Farm	20	Coconino County	AZ
503	Amargosa North Solar Project	150	Nye County	NV
504	Mountain House Solar Farm	400	Alameda County	CA
505	True North Solar Farm	5	Salisbury	MA
506	Kauai Solar Project	12	Kauai	HI
507	Warren County Project	5	Warren County	NJ
508	Anahola Solar Energy Project	12	Kauai	HI
509		22	Kern County	CA
510		22	San Bernardino County	CA
511	RE Hassayampa I	20	Maricopa	AZ
512	RE Gillespie I	20	Maricopa	AZ
513		6	Kern County	CA
514	Frontier Solar	20	Stanislaus County	CA
515				
516	Redhills Renewable Energy Park	100	Iron County	UT
517	Westside Solar Ranch	50	Stanislaus County	CA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
518		6	Oahu	HI
519	Ocotillo Sol	14	Imperial Valley	CA
520		11	Egg Harbor	NJ
521		300	Boulder City	NV
522	Rosamond Solar	300	Rosamond	CA
523		2	Palmdale	CA
524		2	Twentynine Palms	CA
525	Central Antelope Dry Ranch	52	Lancaster	CA
526	Estancia Solar Farm	50	Estancia	NM
527	Elevation Solar	40	Fresno	CA
528	Western Antelope Blue Sky A	20	Lancaster	CA
529		20	San Diego County	CA
530	Western Antelope Blue Sky B	20	Los Angeles County	CA
531	Western Antelope Dry Ranch	10	Lancaster	CA
532	Victor Mesa Linda B Solar Project	5	Victorville	CA
533	Expressway B	2	Victorville	CA
534	Expressway A	2	Victorville	CA
535	Victor Mesa Linda A Solar Project	2	Victorville	CA
536	Azalea Solar Facility	10	Washington	GA
537	Rugged Solar Farm	80	Boulevard	CA
538	Tierra Del Sol Solar Farm	45	Borrego Springs	CA
539		30	San Diego County	CA
540	LanEast Solar Farm	22	Boulevard	CA
541	Desert Green Solar Farm	7	Borrego Springs	CA
542	LanWest Solar Farm	7	Boulevard	CA
543		50	San Diego County	CA
544	San Luis Solar	20	San Luis	AZ
545	West Texas Solar Park	300		TX

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
546	California Solar Park	100		CA
547	Charca	4	Wasco	CA
548	Wasco	4	Wasco	CA
549		10	Rio Linda	CA
550	Kahe Solar Farm	15	O'ahu	HI
551	Grove Farm	14	Kauai	HI
552	Charlton Solar Farm	2	Charlton	MA
553	Panoche Valley Solar Farm	420	San Benito County	CA
554	Ridgecrest	250	Kern County	CA
555	Amargosa Farm Road Solar Energy Project 1	242	Nye County	NV
556	Amargosa Farm Road Solar Energy Project 2	242	Nye County	NV
557	Crossroads Solar Energy Project	65	Gild Bend	AZ
558	Yellow Springs Solar Array	3	Yellow Springs	OH
559	Ravenbrook Landfill Solar Project	6	Carver	MA
560	Duplin Solar Project	100	Duplin	NC
561		20	McNairy	TN
562		20	McNairy	TN
563	Regulus Solar	75	Kern County	CA
564		20	Los Angeles County	CA
565	Antelope Solar Farm	20	Lancaster County	CA
566	Adobe Solar	20	Kern County	CA
567	North Lake I	20	Riverside	CA
568	Orion Solar	20	Kern County	CA
569	Mojave Solar	20	Kern County	CA
570	Charles M. Schulz - Sonoma County Airport Solar Farm	20	Sonoma	CA
571	North Lake I	20	Riverside	CA

USA PV Project Database				
No.	**Project Name**	**Capacity（MWp）**	**City/County**	**State**
572		8		CA
573	Boise Airport Solar	10	Boise	ID
574	Imperial Valley Solar Company 2	20	Niland	CA
575	Quinto	110	Los Banos	CA
576	Henrietta Solar Project	100	Kings County	CA
577	Apple Data Center Array - Washoe County	20	Waashoe	NV
578		2	Central Fla.	FL
579		20	Santa Ana	CA
580		23	Fresno	CA
581		3	Easthampton	NJ
582	Teanaway Solar Reserve	75	Cle Elum	WA
583	Silverleaf	160	Imperial Valley	CA
584	Imperial Solar Energy Center West	150	Imperial County	CA
585		3	Ashburnham	MA
586	Bright Tucson	2	Tucson	AZ
587	West Antelope Project	20	Lancaster	CA
588	Antelope Project	20	Lancaster	CA
589	Fish Springs Solar Ranch	750	Washoe County	NV
590	Rockford Solar Project	60	Rockford	IL
591		4	Springfield	MA
592	Yabucoa Solar Project	30	Yabucoa	PR
593	Westlands Solar Park	2700	Kings County	CA
594	Dairyland Power Cooperative	2	Olmsted County	MN
595	Arizona Public Service	15	Tonopah	AZ
596	Los Angeles Department of Water & Power	10	Owens Lake	CA
597	Coastal Electric Cooperative	3	Colleton	SC
598	Desert Hot Springs	3		CA

END