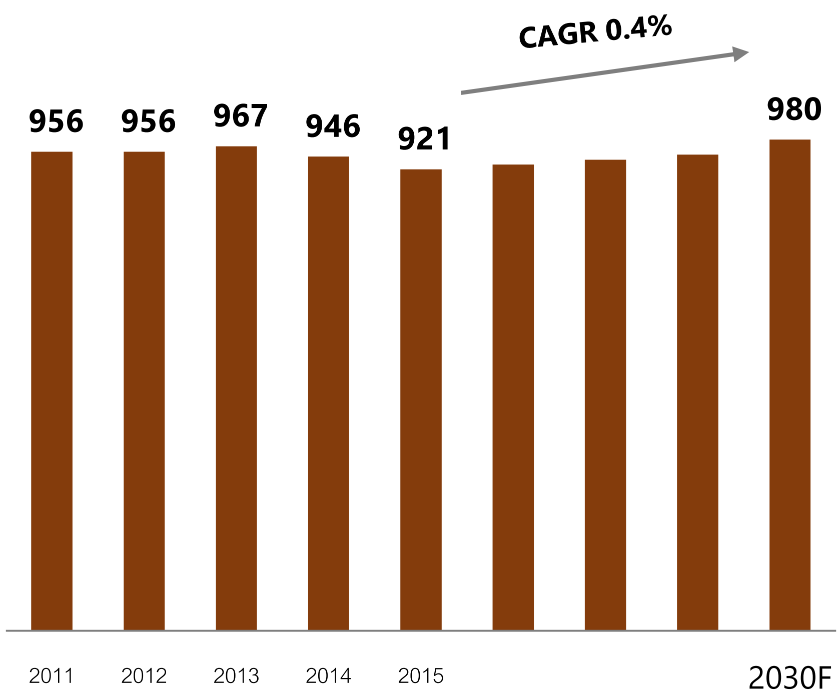
บริษัท โกลบอล เพาเวอร์ ซินเนอร์ยี่ จำกัด (มหาชน)
Global Power Synergy Public Company Limited

Knowledge Sharing Session
Solar Power Business in Japan

15th August 2016

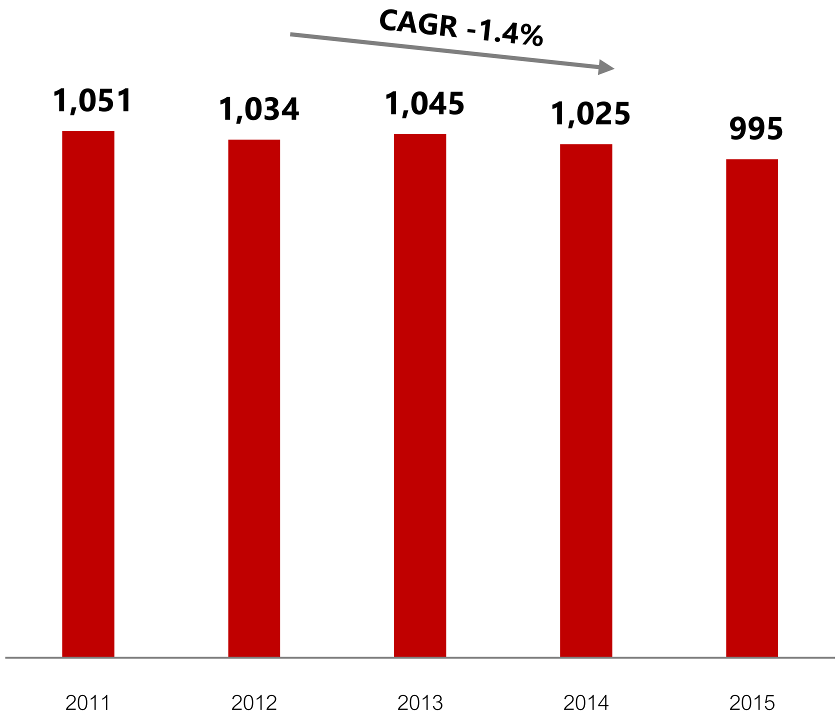
Japan's Electricity generation decreased during 2011 to 2015 from nuclear plant shutdown

Japan's electricity demand
(Unit: TWh)



- The demand of electricity in Japan was fluctuated in recent years
- However, the government has been forecasted that the demand would be **increased to 980 TWh within 2030 at 0.4% per annum**

Japan's electricity generation
(Unit: TWh)

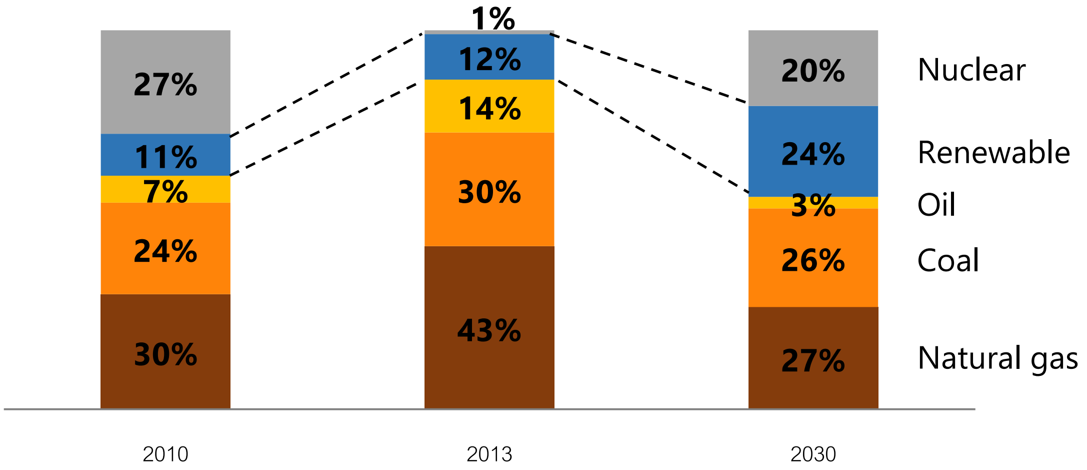


- As a result of the earthquake incident in 2011, some nuclear power plants, accounted for 15GW, had been shutdown
- Therefore, the electricity generation in Japan is in a decreasing trend at -1.4% CAGR

Source: Global Energy Statistic Yearbook 2016, Enerdata; Japan's electricity demand by Japan's Ministry of Economy Trade and Industry (METI)
Remark: 1 TWh = 1,000 GWh

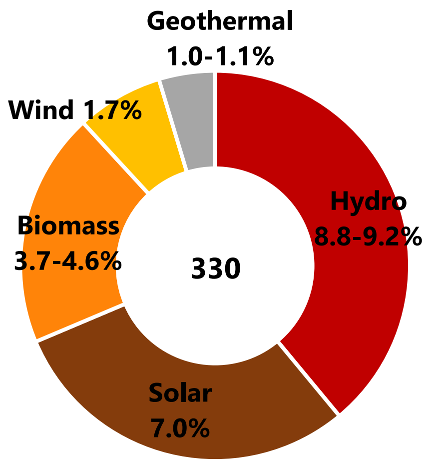
By 2030, renewable energy will be the third largest portion of Japan's electricity resources

Share of electricity generated by fuel
(%)



- Before the Fukushima incident portion of renewable energy is the second lowest source of fuel in Japan
- After the Fukushima incident in March 2011, Japan's Government have reconsidered their reliance on nuclear power and **shifted towards renewable energy**
- In 2030, **renewable energy will be doubled** its portion from 2013 to be approx. 24% of total electricity generation

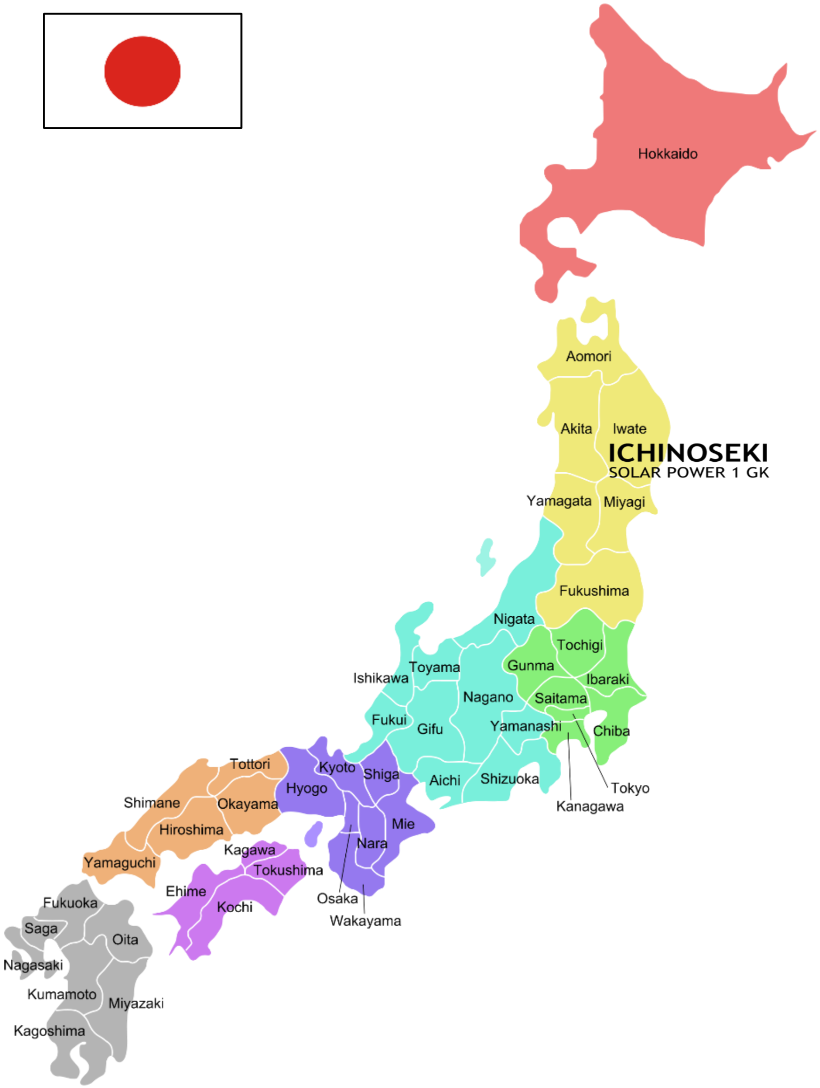
2030 Japan's Renewable Generation Mix Forecast
(Unit: GW)



- The total electricity generation is expected to be 330 GW in 2030
- According to the Government's policy, **renewable energy** will paly more role in the future where it **will be approx. 22-24% of total generation in 2030**
- **Solar** will increase its portion to **7% of total generation** within 2030 **which is accounted for 20-23 GW**

Source: U.S. Energy Information Administration (EIA), METI and Bloomberg New Energy Finance

GPSC has been invested in 20.8 MW solar PV in Ichinoseki, Japan which will COD in Q4 2017



GPSC's First Expansion to Japan's Renewable Energy Sector

- GPSC has tapped into Japan market with the current 20.8 MW solar project.
- Still, given the high feed-in tariffs, low financing cost, there are still the unutilized solar-potential areas worth exploring further.

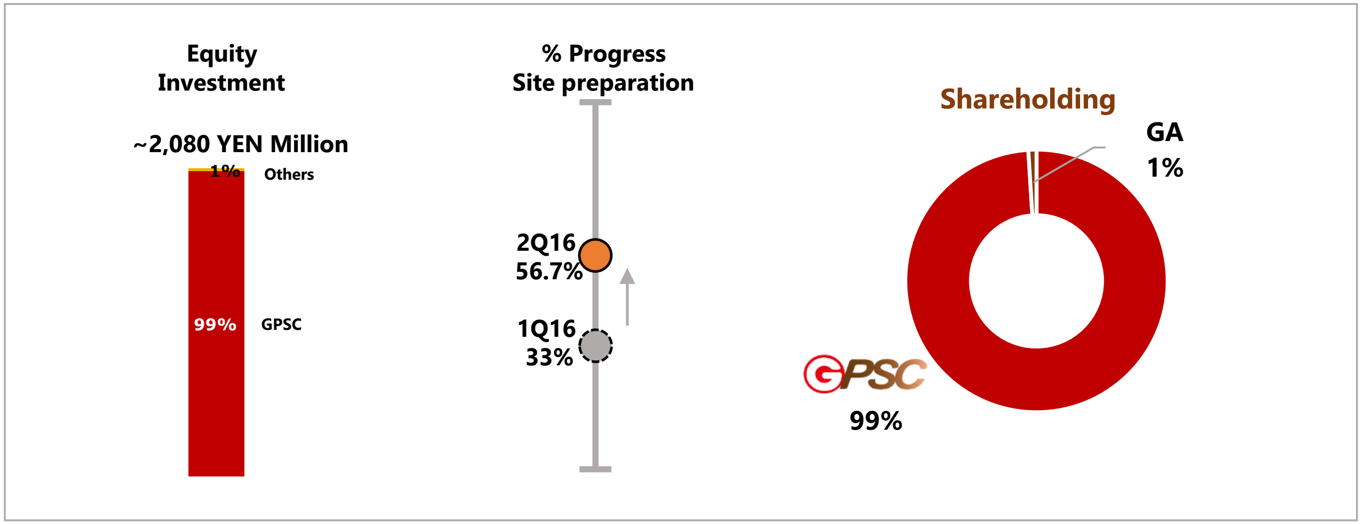
Project	Ichinoseki Solar Power 1 (ISP1)
Location	Ichinoseki, Iwate Prefecture, Japan
Type	Solar
Capacity	Electricity: 20.8 MW
Customer	Tohoku Electric Power (20 years)
SCOD	Q4 2017
Type of investment	Godo Kaisha Investment (GK)
Total Investment	~10,000 JPY million
D/E	4:1
Progress 2Q16	56.7% (Site preparation)
Feed in Tariff*	40 JPY/kWh for 20 years
Interest rate	< 2% for 20 years, Shinsei Bank
EPC	Conergy Group

*Remark: *Tax inclusive*

Ichinoseki Solar Power (ISP1)

ICHINOSEKI
SOLAR POWER 1 GK

Ichinoseki Solar Power (ISP1)
Japan

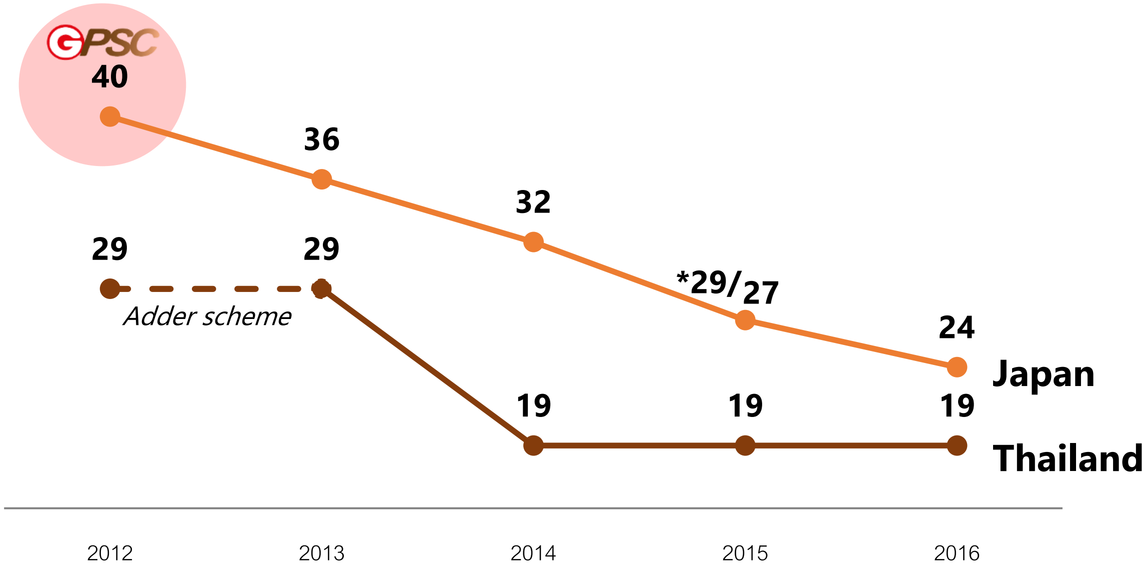


Progress update

- PPA contract with Tohoku Electric Power Company is concluded; secured FiT at 40 JPY/kWh for 20 years
- EPC contracts and Facility agreement have been executed
- Installation will start in Q3/2016
- Finalized loan agreement and ready to start drawdown the loan
- GPSC first international project to COD in 2017

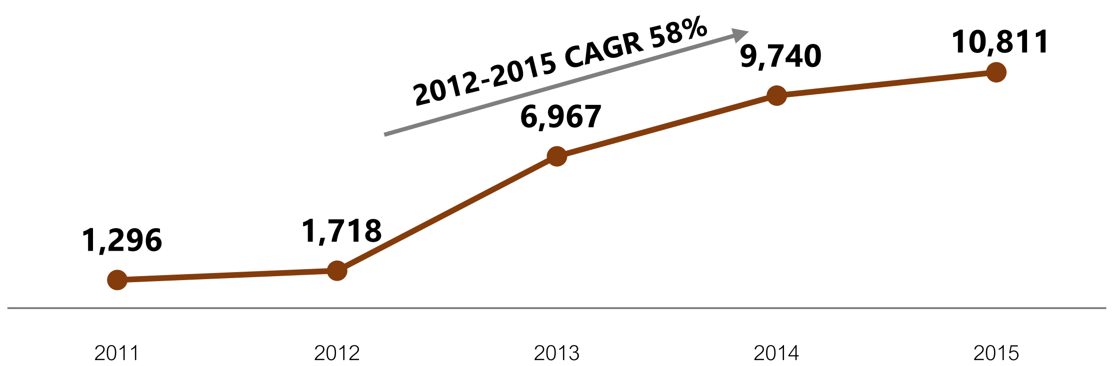
Japan's Solar FiT is higher than Thailand's FiT where GPSC has secured FiT at 40 JPY/kWh for 20 years

Japan vs. Thailand's Solar FiT
(JPY/kWh)



- In July 2012, Japanese Government has launched incentives through Feed-in-Tariff (FiT) with an attempt to rapidly encourage investment in renewable energy
- FiT for solar power is declined due to lower cost of panel and installation
- However, **FiT in Japan is still higher than FiT in Thailand** which is approx. 19 JPY/kWh**
- GPSC has **secured FiT at 40 JPY/kWh for 20 years**

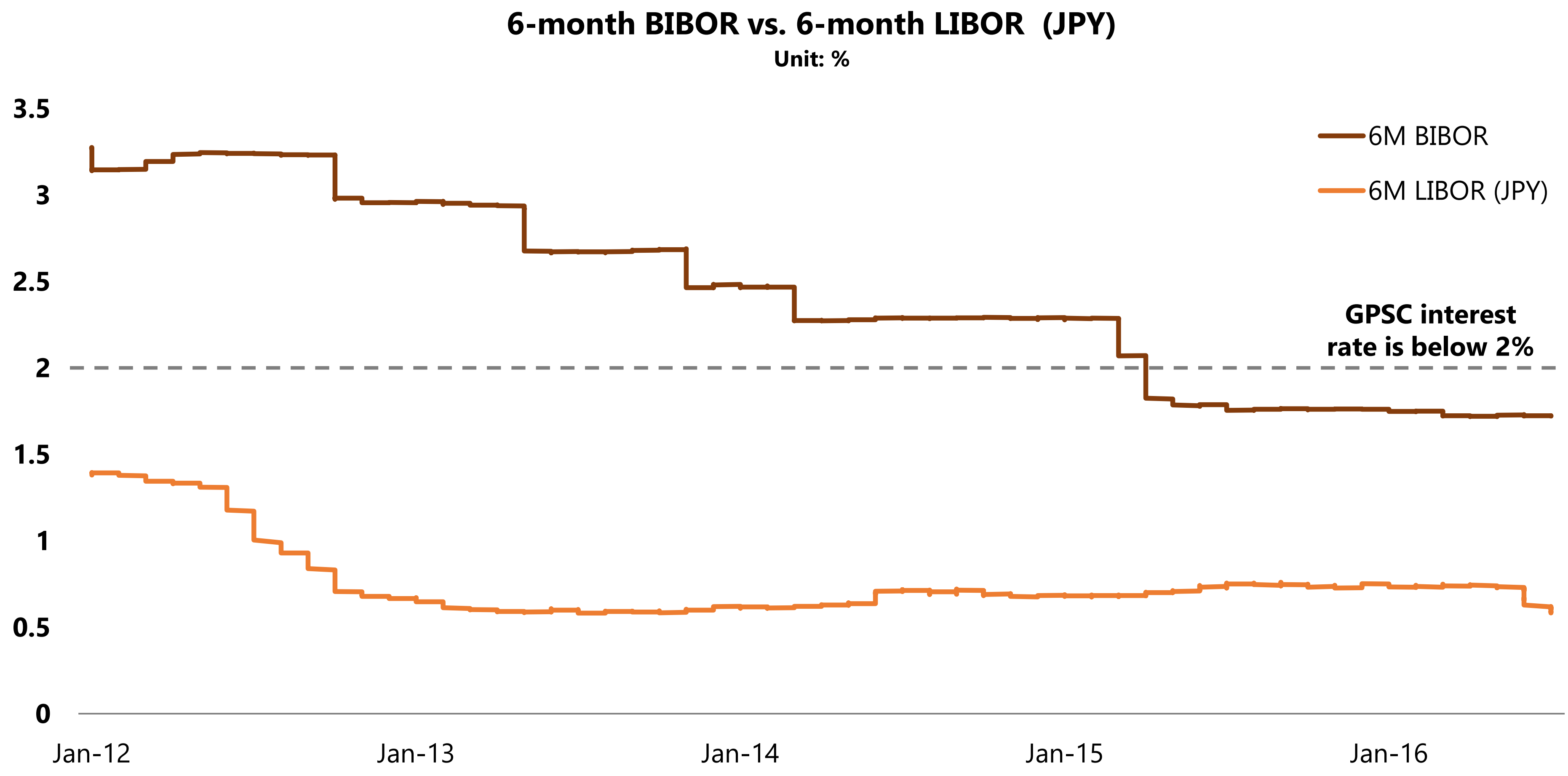
Cumulative installed capacity of solar PV
(MW)



- After Japanese Government's incentives, the number of solar PV **installed capacity has been increased since 2012 at 58 % per year** (2012-2015)

Source: METI
Remark: Thailand used adder system in 2012-2013 which is approx. 6.50 THB/kWh + 3 THB/kWh (Ft) = 9.50 THB/kWh
**29 JPY/kWh from April 1 to June 30, 27 JPY/kWh from July 1*
***Thailand's FiT for ground mounted solar is 5.66 THB/kWh announced by Energy Policy and Planning Office (EPPO), Ministry of Energy in 2014*

GPSC uses floating rate as reference of project's interest rate in which GPSC has secured interest at lower than 2%



- Over the past years, 6M LIBOR (JPY) is much lower than 6M BIBOR
- Whereas GPSC has secured interest rate at **6M LIBOR (JPY) plus margin which is below 2% for 20 years**

Source: Bank of Thailand
Remark: BIBOR is Bangkok Interbank Offered Rate
LIBOR is London Interbank Offered Rate (Japanese Yen)

GPSC uses the leading solar panel supplier to ensure quality of the project

Conergy Japan

Profile
- A subsidiary of Conergy Group which have been founded in 1998 in Hamburg, Germany
- The company is privately-held and majority-owned by Miami-based asset management firm Kawa Capital Management, Inc.
- Regional headquarter: Singapore and Bangkok

Experiences & Services
- Have experiences more than 16 years
- Active in 40 countries on five continents with subsidiaries in 15 countries
- Installed over 2.2GW of solar energy to date
- Offers all services that are related to solar power; namely, Turnkey large-scale systems, Operations and Management, Project development & Finance
- Considered as of the leading photovoltaic providers

Solar farm installation
- Conergy has been installing solar farms in various countries; Germany, United Kingdom, USA, Canada, Spain, Italy, Australia, Philippines, Japan, Thailand, India, South Africa, Saudi Aribia,

Example of Conergy Group Portfolio

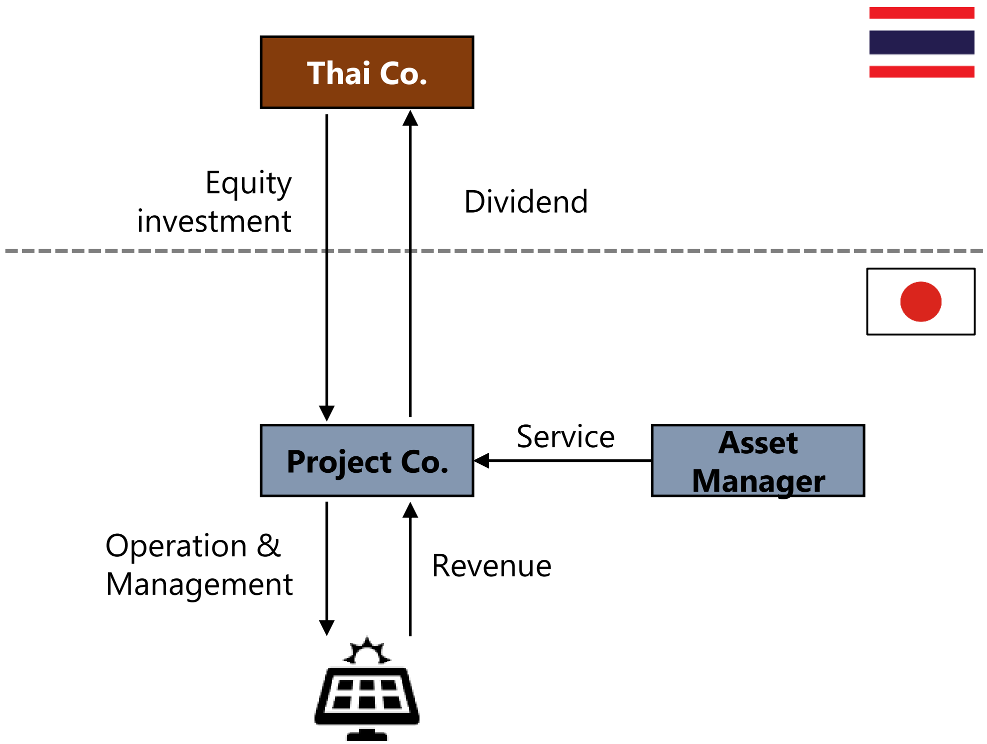
Solar farm Thüngen, Germany

Solar farm Negros Occidental, Philippines

Solar farm Hokkaido, Japan

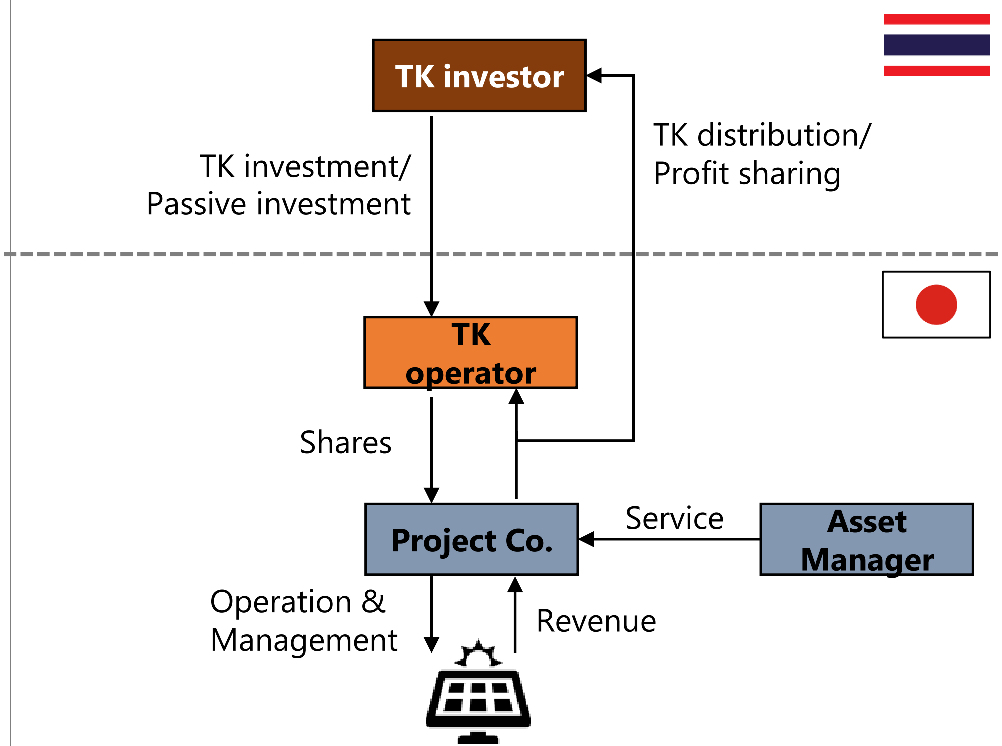
GPSC uses GK structure on ISP1 project to ensure control over the project company

Godo Kaisha (GK)



- GK structure is an **equity investment** in order to **have control** over project company
- Moreover, GPSC is **able to consolidate financial performance** of the project company **on GPSC's financial statement**
- The **dividend income** that GPSC receives **will be taxed, only once, at source (in Japan), as there is Double Tax Agreement**

Tokumei Kumiai (TK)



- TK structure is a **passive investment** where TK investors only provide funding through TK operator in which **TK investor has no share and control** over project company
- TK investor will receive **return in terms of TK distribution**; similar to profit sharing, which **depends on an agreement** between TK investor and TK operator **called TK agreement**
- TK investor will **be doubled tax according to Japanese and Thai laws**

GPSC deliberately uses GK structure to comprehend all information for the first investment in Japan

	Godo Kaisha (GK)	Tokumei Kumiai (TK)	Implication to GPSC
Structure	• Equity investment	• TK investment	• As a first investment in Japan, GPSC would like to ensure its **control over the project company** • GPSC is **able to consolidate the project's financial performance** onto GPSC's financial statement, hence, enhancing GPSC's revenue and balance sheet
Control	• Full control	• No control	
Return form	• Consolidation of Financial performance • Dividend income	• TK distribution	
Japanese effective tax rate	• ~ 35%	• ~ 35% • TK distribution is treated as taxable expense • Less taxable income	• The project company is taxed at the same corporate income tax rate, **where GK structure is taxed as normal Japanese corporate** • While **TK structure allows project company to treat TK distribution as taxable expense**, thus, the taxable income is lesser than the company using GK structure; implying **low tax payment**
Japanese taxation on dividend/ TK distribution	Project Co. Dividend: **15%** withholding tax at source	Project Co. TK distribution: **15%** withholding tax at source (tax credit)	• According to the Japanese tax treaty, TK distribution will be subjected to **15% withholding tax in case TK investor has operating business in Thailand, where it is recognized as tax credit** • **GPSC's dividend income,** from GK structure, **is subjected to 15% withholding tax**
Cash received from dividend/ TK distribution	**No** Corporate income tax GPSC	**20%** Corporate income tax TK investor	• **Corporate tax income exemption on GPSC's cash received from dividend** according to Double Tax Agreement • Whereas the **TK distribution is not defined** in the Double Tax Agreement, thus, **Thai corporate income tax will be applied to the money received**
Total effective tax rate*	• ~ 44%	• ~ 20.00%-40%	• Even though GPSC has pay higher effective tax rate, the company **consider control over the project co. as priority**

*Remark: *Effective tax rate are calculated from assumptions and factors which may differ in other cases. The calculation of effective tax rate assumes transferring all profit to TK investor and withholding tax paid in Japan is creditable for CIT paid in Thailand; according to Double Tax Treaty.*

Options of business structure and implications

	Godo Kaisha (GK)	Tokumei Kumiai (TK)	Implication
Japanese effective tax rate	• ~ 35%	• ~ 35% • TK distribution is treated as taxable expense • Less taxable income	• Both GK and TK structure have to pay effective tax rate at 35% • However, TK structure allows project company to treat TK distribution as taxable expense
Japanese taxation on dividend/ TK distribution	**Project Co.** Dividend: **5%** withholding tax at source	**Project Co.** TK distribution: **20.42%** withholding tax at source	• According to the Japanese tax treaty, **TK distribution** will be subjected to **20.42% withholding tax when transferring money to Hong Kong** • While dividend income, from **GK structure**, will be subjected to **withholding tax at 5% due to the tax treaty between Japan and Hong Kong**
Cash received from project co.	**No** Corporate income tax **Holding Co.**	**No** Corporate income tax **Holding Co.**	• The **money received from Japan to a holding company in Hong Kong**, both GK and TK structure, **is accounted as dividend income** • According to **Hong Kong tax treaty, there is a tax exemption on dividend income**, thus, both holding companies **do not have to pay corporate tax income**
Cash received from holding company	**No** Corporate income tax **Thai Co.**	**No** Corporate income tax **TK investor**	• **Given Thai co./TK investor is granted with IHQ privilege, Cash received from holding company** is not subject to tax (IHQ is International Headquarters privilege granted by the Revenue department, Thailand)
Total effective tax rate*	• ~ 38%	• ~ 20.42%	• By assuming that all profit from project co. is distributed to TK investors, hence, no tax paid on effective rate in Japan; only 20.42% withholding tax is calculated as total effective tax rate • As s result **total effective tax rate to Thai Co. and TK investor are approx. 38% and 20.42%, respectively** • In this case, establishing a holding company could help minimize effective tax rate

*Remark: *Effective tax rate are calculated from assumptions and factors which may differ in other cases*

Knowledge Sharing

Concerns towards investment in Japan

Concerns
• Creditability of solar panels manufacturer
• Timeline and Cost of grid connection
• Creditability of asset manager and Contractors
• Cost overrun
• Exchange rate fluctuation
• Curtailment
• Permission

GPSC's strong footsteps in Renewable Energy in Japan

Investment Opportunity

WHY JAPAN?

- ✓ **Huge growth potential for Renewable Energy** installed capacity in Japan
- ✓ **Attractive FiT scheme**, higher than in Thailand
- ✓ **Lower financial cost**
- ✓ Stronger grid stability than many other Asian countries
- ✓ High skilled and experienced staffs
- ✓ Opportunities in investing in other renewable energy in Japan

Investment Rationale

ISP 1

- ✓ Highly attractive project as GPSC secured **highest FiT of 40 JPY/kWh for 20 years**
- ✓ GK structure allows GPSC to **enhance the company revenue and balance sheet**
- ✓ **Able to control** the project company
- ✓ **Understand business' structure** in Japan
- ✓ Have **good relationship with local bank**; increase possibility of obtaining lower interest rate for future project
- ✓ Receives **know-how from local project asset's operator**