## "Powering Thailand with our clean energy solutions"

IMPACT SOLAR > IMPACT SOLAR > HOME >

**Company Overview and Credentials** 

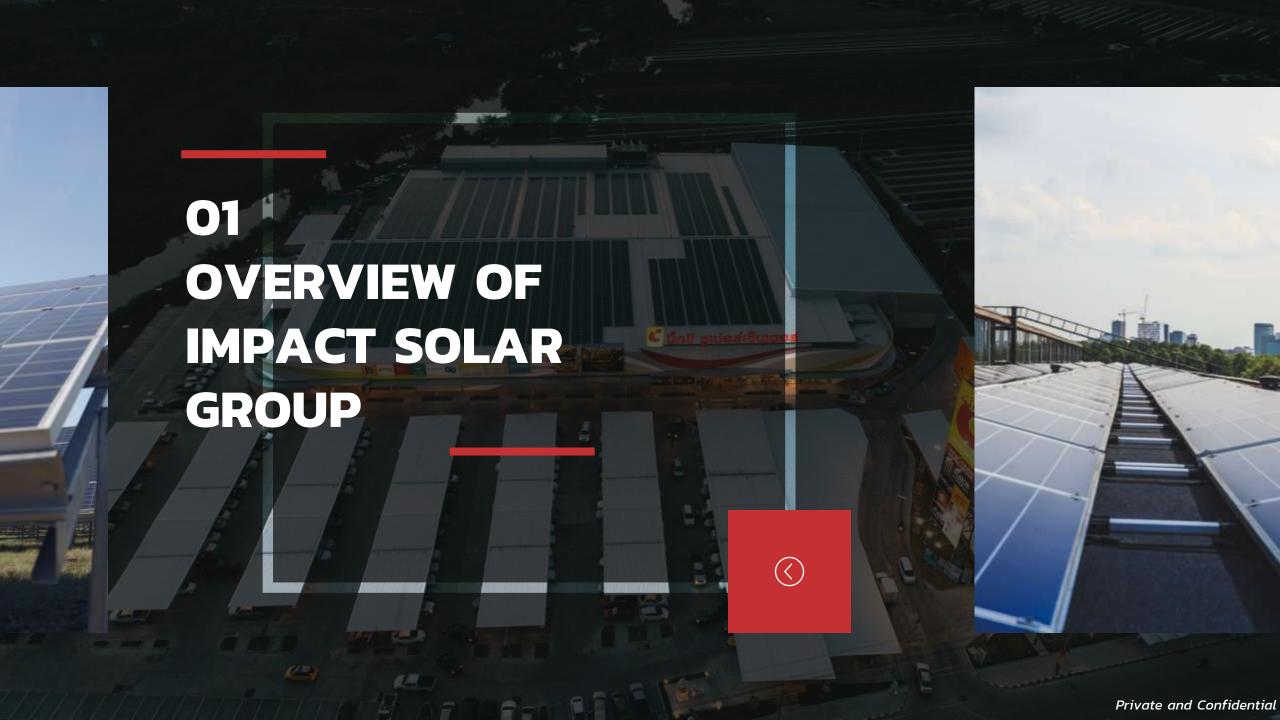
IMPACT SOLAR GROUP

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# **First Rooftop Solar Private PPA in Thailand since 2015** IMPACT SOLAR GROUP 45 Provinces **101** Solar Systems under our management

### **Key Facts**





38

147 > 4.1

Customers

Committed MW

Billion THB Investment

>9,302

Saving to Customers

> 5,472

**Electricity Production** 

> 3.27

Million Ton CO<sub>2</sub> Carbon Reduction

Calculate based on project lifetime

#### **Our Customers**

























































## **Our Technology Partners**



















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## **Our Strong Experienced and Shareholders**

Strong shareholder to support ISG growing business, combining strength of 1) IES as a regional developer who has strong experience in clean energy developments in Asia Pacific and 2) MC, a global investor in power business, various network and new energy technology partner.

**Overview of Our Company** 



IMPACT SOLAR

IMPACT SOLAR

IMPACT SOLAR GROUP



Impact Solar Group ("ISG") has been founded by Impact Electrons Siam ("IES") and Mitsubishi Corporation ("MC") to drive the energy market transformation from conventional power plant to renewable, distributed, and digital energy with focused in Asia Pacific region.

Established since 2015, and restructuring in 2019



> 2.172 billion THB combine registered capital, and over 3 billion THB committed investments

Our subsidiaries and affiliated:

- Impact Solar Limited ("ISL")
- Impact Solar Group (Thailand) Co., Ltd. ("ISGT"),
- Impact Solar Home ("ISH")

Based in Bangkok, Thailand

- > 40 professional staffs
- · staffs and partner in Ho Chi Min City

Secured Portfolio of 147MW and target to reach 500MW in 2025.





Throughout 10 years of operation, IES Group directly and indirectly invests, develops, advises, and drives projects toward success and achievement of key milestones of over 1,000 MW.



IES Group is developing three types of renewable energy in Thailand, Japan, Laos, and exploring the opportunity in Hong Kong, Taiwan and Vietnam with focusing in distributed, digital, and new initiatives.

- Bangkok, Thailand (2011)
- · Development, Investment
- Registered Cap 1.25 billion THB
- 3 Countries
- > 1 GW development experienced
- · Renewable, Distributed, Digital





Mitsubishi Corporation ("MC") is a global integrated business with 10 Business Groups that operate across virtually every industry and globally.



The power industry is one of the most important business spheres of MC's activities including equipment supplier, turnkey EPC, developer and investor.



MC manage the power business in Asia Pacific through Diamond Generating Asia ("DGA")

#### Our Shareholders

- Tokyo, Japan (1954)
- · Conglomerate, Trading, Investment
- Market Cap 3.9 Trillion JPY
- 10 B.U., 90 Countries, 1,700 subsidiaries
- 25GW (Gross) 7.9GW (Equity)
- IPP, Renewable, Retail, Digital

## **Our carbon neutral network**

ISG has been participated in various carbon reduction program including JCM program, Thailand Carbon Neutral Network (TCNN) and RE100 Thailand Club to contribute and support the reducing GHG and move toward the net-zero emission target.





ISG has invested and managing clean energy projects of more than 100 systems and contributed a carbon reduction by more than 3 million tons along project life.



Since 2016, ISG was successfully registered our project with JCM (Thailand-Japan collaboration) as a largest solar rooftop project at that time.



Now, ISG contribute more than 10% of carbon reduction under Thailand JCM (among 38 registered companies/projects)



In 2021, ISG participate in three carbon emission reduction networks

- · Joint Credit Mechanism (JCM) Thailand/Japan Bilateral Program
- Thailand Carbon Neutral Network (TCNN) Official Thailand Network under TGO and FTI, >120 companies
- RE 100 Thailand Club Private Network with leading companies more than 500 companies participated

#### **Thailand Carbon Neutral Network**

#### **RE 100 Thailand Club**



Key Members









## **Overview of Impact**

Electrons Siam ("IES")

## **Our Story**

- IES Group was established in 2011 at 4 million THB registered Capital by experienced former senior management of Hong Kong listed company's CLP Holding Limited, a leading IPP in Asia Pacific.
- The core team of IES was the key person to pioneer the development one of the world's first and largest 84 MW solar project in the central of Thailand, Natural Energy Development Co., Ltd. (NED), jointly owned by CLP, EGCO, and Mitsubishi Corporation. The project has been developed successfully by implementing a good combination of EPC turnkey commercial package provided by Sharp Corporation and Italian Thai Group together with the financing of USD 200 million from Asian Development Bank (ADB) assisted with co financing from top three leading Thai banks, namely Bangkok Bank, Siam Commercial Bank, and Kasikorn Bank. The success of this project has been proven by many awards received from reputable institutes including Euro money and PFI.

- IES Group has been a lead developer of one of the first wind farm power projects in Thailand; a 120 MW wind farm located in Nakhon Ratchasima. IES Group took part in every step of the development until the project has successfully reached its stage of PPA signing with EGAT. Thereafter, such wind farm power projects were divested to a strategic investor as IES Group shifted its investment to Solar Farm Project in Japan.
- Throughout 8 years of business operation, IES Group directly and indirectly invests, develops, advises, and drives projects toward success and achievement of key milestones of over 300 MW. The extensive experience of IES management team enables IES Group the competitive edge in this business and an ability to generate greater value for the firm and its investors.

















#### **Our Future**

- Registered capital of THB 1,254 million with THB 854 million paid
- Dynamic team with extensive experiences comprising of diverse skills in Greenfield project development, asset management, construction management and project financing
- Successfully emerged in the renewable energy industry with a strong focus on developing clean and reliable energy in order to build a better future for the community
- Focused on developing solar, wind, and biomass energy with the goal of becoming the leading renewable energy producer in the Asia Pacific
- Currently, IES Group is developing three types of renewable energy in Thailand, Japan, Laos, and exploring the opportunity in Hong Kong, Taiwan and Vietnam with plans to continuously expand its investment portfolio in the future









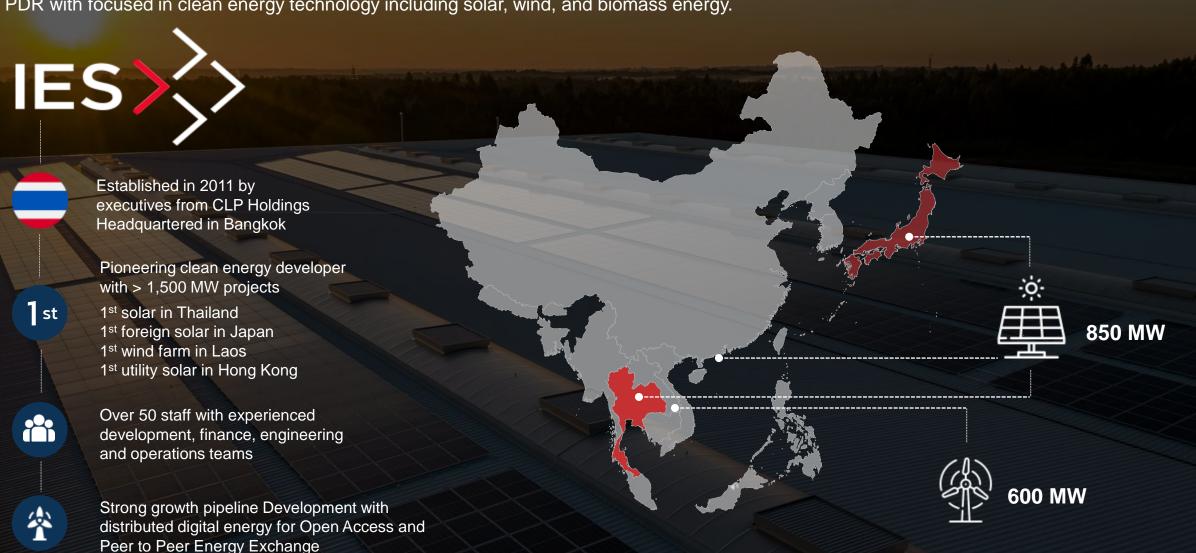






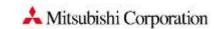
## Overview of Impact Electrons Siam ("IES")

IES business operations are located across APAC including Thailand, Japan and Lao PDR with focused in clean energy technology including solar, wind, and biomass energy.

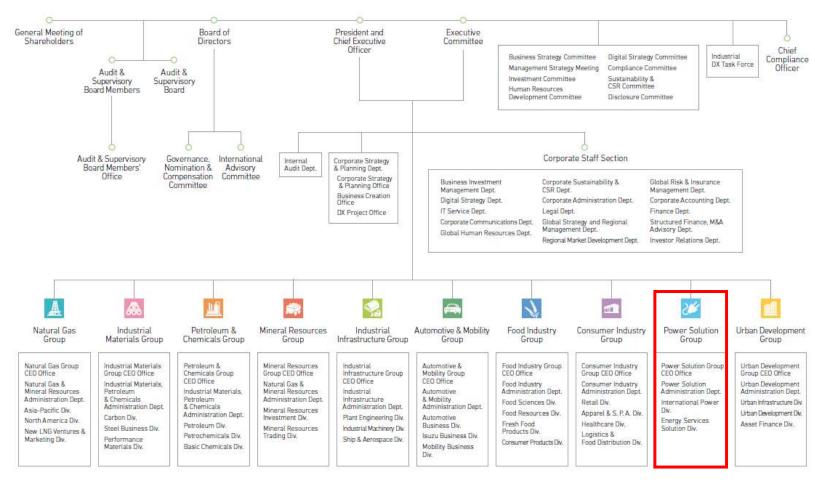


## Overview of Mitsubishi Corporation ("MC")

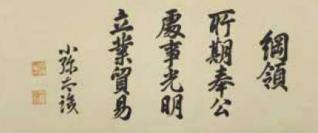
MC is a global integrated business enterprise that develops and operates its businesses together with its offices and subsidiaries in approximately 90 countries and regions worldwide, as well as global network of around 1,700 group companies.











#### **Corporate Responsibility to Society** "Shoki Hoko"

Strive to enrich society, both materially and spiritually, while contributing towards the preservation of the global environment.

#### **Integrity and Fairness**

"Shoji Komei"

Maintain principles of transparency and openness, conducting business with integrity and fairness.

#### Global Understanding Through Business "Ritsugyo Boeki"

Expand business, based on an allencompassing global perspective.

(The modern-day interpretation of the Three Corporate Principles, as agreed on at the Mitsubishi Kinyokai meeting of the companies that constitute the so-called Mitsubishi group in January 2001.)

Date Established July 1, 1954



**Number of Employees** Consolidated 82,997



**Global Network** Over 120 Offices, 90 Countries

## **Overview of Mitsubishi Corporation ("MC")**

MC invest in power business globally with combine capacity of 9GW through diversified portfolio and technology.









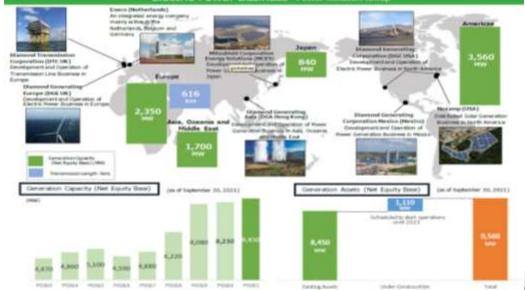






Subsidiary/ Affiliate	Company Name (Country)	Business Description	Equity Holding
		4	(%)
Subsidiary	N.V. Eneco (Netherlands)	Electric Power Business	80.00
Subsidiary	Diamond Generating Asia, Limited (Hong Kong)	Electric Power Business	100.00
Subsidiary	DIAMOND GENERATING CORPORATION (U.S.A.)	Electric Power Business	100.00
Subsidiary	DIAMOND GENERATING EUROPE LIMITED (U.K.)	Electric Power Business	100.00
Subsidiary	DIAMOND TRANSMISSION CORPORATION LIMITED (U.K.)	Power Transmission Business	100.00
Subsidiary	Mitsubishi Corporation Energy Solutions Ltd. (Japan)	Electric Power Business	100.00

#### Electric Power Business Power Solution Group



Mitsubishi Corporation (MC) has established new greenhouse-gas (GHG) emissions reduction targets and energy-transformation (EX) investment guidelines. In recognition of its multi-industry interests and business activities, MC will continue to simultaneously fulfill its responsibility to provide stable energy supply, such as natural gas, while rising to the global challenge of realizing a carbon neutral society.

## GHG Emissions Halved by FY2030 (FY2020 baseline) Net Ze

We will utilize every means available, aiming to reduce total emissions to a level consistent with the Paris Agreement, including by replacing assets and by switching operations to renewable energy and alternative fuels.

#### 25,30 MMTCO2e<sup>1</sup>

FY2020 (baseline) 2

#### Portfolio Replacement

. Divestment of thermal power and other assets

#### Procurement of Renewable Energy

For mines, production facilities and distribution networks

#### Impact of Energy Savings / DX

- · Systems to support energy savings, virtual power plants
- Supply chain optimization

#### Fuel Switching, etc.

Hydrogen and ammonia co-firing in thermal power plants

#### Net Zero GHG Emissions by 2050

We aim to achieve a Paris-aligned target of net zero by 2050 by leveraging our collective capabilities to drive industrial transformation, as well as by embracing new technologies and innovation.



Halved

Industry Transformation New Technologies and

Innovations



FY2030 Target 2050 Target

- \*1 The above figures represent the Scope 1 and Scope 2 emissions of MC and its consolidated companies, including affiliates, based on the equity share approach (for details, refer to our Sustainability Website).
- \*2 FY2020 is set as the new baseline, as it provides the most accurate affiliate data that was previously unavailable, e.g. Scope 2 market-based method emissions. The data are currently under detailed examination and may be subject to minor revisions.
- "3 Any residual emissions, after reduction efforts have been made, will be neutralized using internationally-accepted offsetting methods including carbon removal.
- Management and disclosure of Scope 3 emissions of particularly large emission categories, including those of affiliated companies' emissions will be considered in tandem with future international debate and frameworks.
- The specific reduction plan and measures for the GHG emissions reduction targets will be adjusted as required in line with progress of technological developments, economic viability and policy/institutional support.

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## **Total Solutions for Clean Energy Projects**

Our key business model is Private PPA (Third Party Investment for Corporate Buyer) and EPC (Turnkey Construction Services) business, backed by various applications, technologies, and customs solutions to meet your energy needs.



## **Rooftop Solar**



We have an extensive experienced in rooftop solar development, with flexible contract and cutting-edge solutions, and manage multisites portfolio with complexity of permits, roof condition, business type in all area of Thailand.



## **Floating Solar**

Our Floating Solar solutions will utilize an unused water surface such as pond, reservoir to generate a clean energy



while increase a water quality by stimulate a water flow by different surface temperature.



## **Car Parking Solar**



We provide a complete solutions to renovate a waste space to be a solar car parking with enhanced a green image of the customer and supply a clean energy to the facility in parallel.



### EV Charging/ Energy Storage

Opening and experience and potential of clean energy by add on EV Charging and Energy Storage to your facility.



Our company provide a total solution to support the customer since feasibility study stage until completion.



#### Residential

Impact Solar Home is our initiative for the residential rooftop solar market with breakthrough technology providing the customer with the comprehensive energy produce/consume performance monitoring system. Please visit our page at www.impacthome.co.th



## **Total Solutions for Clean Energy Projects**

Our key business model is Private PPA (Third Party Investment for Corporate Buyer) and EPC (Turnkey Construction Services) business, backed by various applications, technologies, and customs solutions to meet your energy needs.

EPC service, Installations and O&M

Generated electricity

**Long Term** 

**Private PPA** IMPACT SOLAR GROUP



Customer

Electricity payments at price discounted from retail selling price

## **Our Business Model**

#### **Solar PPA**

VS

#### **Solar Sale**

We invest, own, operate and take care of all costs while you simply enjoy saving through solar

Key Features

You buy the system outright while we provide full turnkey solution for your new solar system

0

**Investment Cost** 

< THB 30/Wdc<sup>2</sup>

Pay with a discount from what you pay now



Monthly Payment

None

Impact Solar<sup>1</sup>



**Ownership** 

You

Free



Operation & Maintenance

Free for 2 years

Free



System Warranty

Free

Free



**System Insurance** 

Optional

- Ensure saving since day one with zero investment cost
- Guaranteed discount regardless of utility tariffs
  - Worry-free as we handle construction, operation and maintenance throughout the contract term



- Hedge against rising utility tariffs
- No long-term contract which maximized your flexibility
- Enjoy BOI tax privileges for system owners at up to 50% of investment cost.

<sup>2</sup>With free transfer to you at the end of contract term

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<sup>&</sup>lt;sup>1</sup>Subject to technical requirements and other factors

