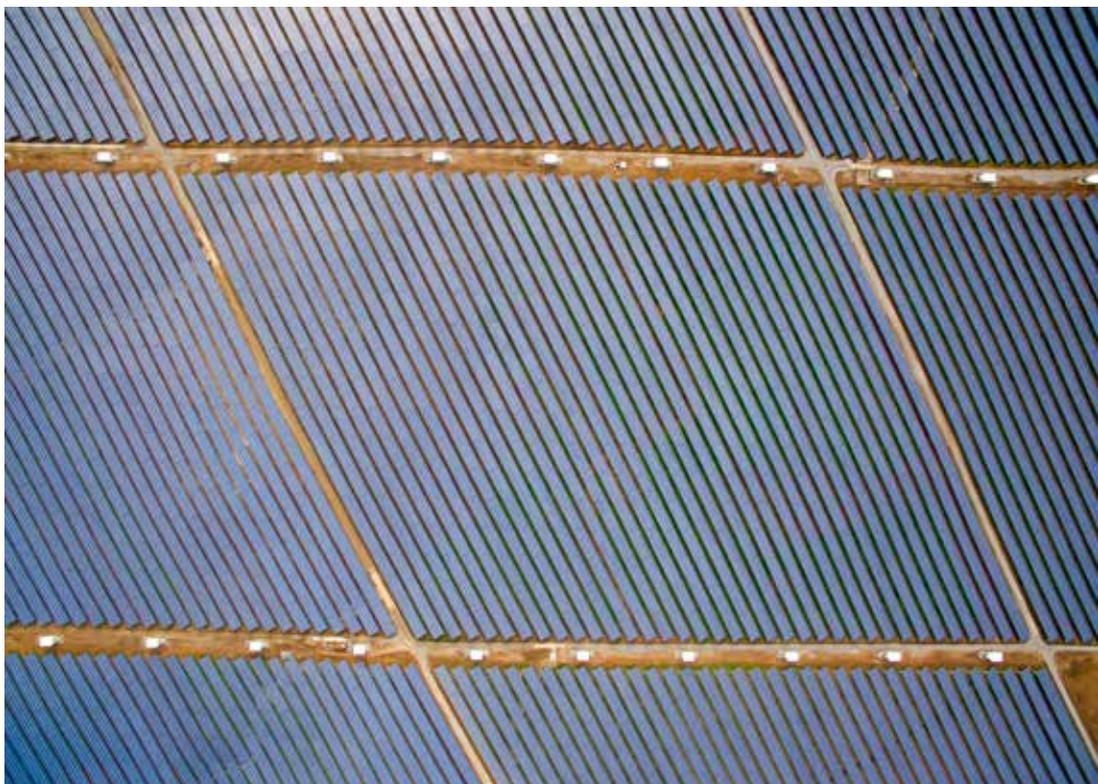
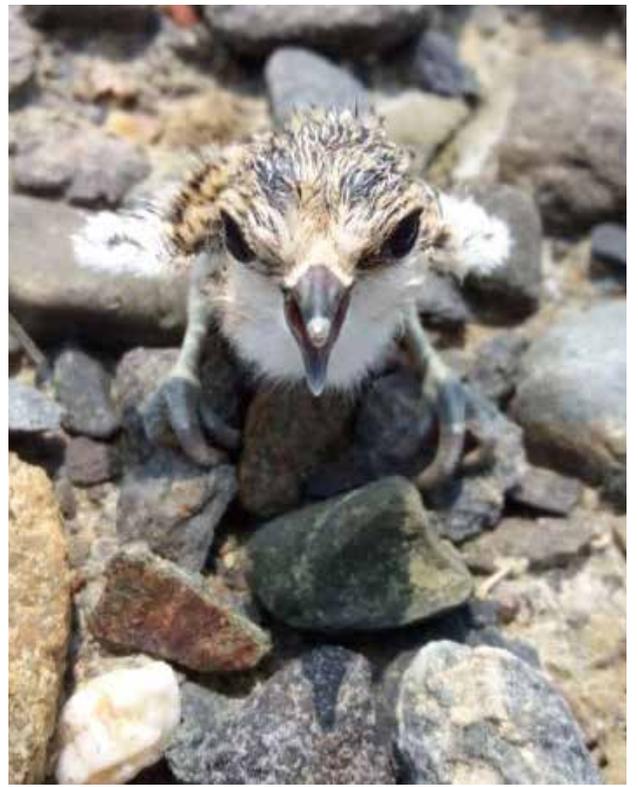


# SUSTAINABILITY & FINANCIAL REPORT 2019







# WELCOME FROM OUR CEO



**2019 has been a year to remember for Vena Energy, marking another consecutive year of double-digit growth in operating capacity, development project conversions, geographical expansion, functional integration, social initiatives, financial performance and talent onboarding in our ever more diversified regional team.**

As Chief Executive Officer of Vena Energy and Chairperson of our Sustainability Committee, I am very pleased to welcome you to Vena Energy's 2019 Sustainability Report.

2019 has been a year to remember for Vena Energy, marking another consecutive year of double-digit growth in operating capacity, development project conversions, geographical expansion, functional integration, social initiatives, financial performance and talent onboarding in our ever more diversified regional team. I wish to extend my gratitude to all our internal and external stakeholders for their invaluable contributions, which enabled us to achieve such remarkable results. This success makes us even prouder as it comes from activities entirely aligned with our corporate values, further proving that sustainability is an effective engine for responsible growth.

Collaborations with our host communities are stronger than ever, with new initiatives being carried out on healthcare, infrastructure, education, and the environment across Australia, Indonesia, India, Japan, Philippines, Singapore, South Korea, Taiwan, and Thailand. The cooperation and guidance from our local stakeholders were essential for the success and effectiveness of our corporate social responsibility initiatives. For example, in 2019 we successfully completed our wildlife and natural habitat preservation project at our 70 MW Mingus Solar Farm in Taiwan. A large number of local and migratory wild birds have made a permanent home within our 241,000m<sup>2</sup> Ecological Conservation Area, including the endangered Black-Faced Spoonbill which migrates to our site during the winter months. We are already onto the next initiative, ready to open our brand-new Mingus Education Centre to schools, NGOs and the general public, to promote education and appreciation

of clean green energy and its integration with the environment and wildlife. A great deal of merit goes to the residents of Chiayi County and all the organisations and institutions in Taiwan that have made this project a reality. We extend the same appreciation and gratitude to all our host communities across the Asia Pacific region, who allowed our many other initiatives to be equally effective.

We became a participant of the United Nations' Global Compact (UN GC), the world's largest corporate sustainability initiative. Vena Energy fully supports UN GC's ten founding principles related to human rights, labour standards, environmental protection and anti-corruption, and we are pleased to commit to the communication to our stakeholders on our progress and results in implementing these ten principles and the UN Sustainable Development Goals (UN SDG) through an annual Communication on Progress (COP).

From an operational perspective, Vena Energy commissioned 10 additional renewable energy projects during the year, an average of 1 new project every 5 weeks. At the same time, our team managed to further reduce our Levelised Cost of Energy (LCOE) for another consecutive year in a concerted effort among our engineering, procurement, operations and asset management teams, as we further integrated our business model, expanded the reach of our O&M activities and obtained new construction licenses. This virtuous trend paves the way for more competitive renewable projects,

enabling Vena Energy to deliver affordable clean energy to our customers and progressively approach grid parity in all our markets. Commercial corporate PPAs also continue to become a bigger part of our business, as we successfully signed new agreements in Australia and Taiwan while preparing to achieve similar success across our other markets, such as Japan and the Philippines.

In 2019 we welcomed some very important new stakeholders to our family as we launched our newest business activity of renewables fund management. Our first renewables fund placement saw us partner with a group of four leading ESG-driven institutional investors. We are honoured to have them as partners and are hopeful of more collaborations with them and other like-minded, sustainability-focused investors in the near future. We are proud to have become the partner of reference for many stakeholders who seek to make a positive impact on sustainability and ESG initiatives across the Asia Pacific region.

Another notable success in the past year was the preparation of our inaugural green bond issuance. This was a yearlong effort by the entire Vena Energy team, encompassing third-party reviews of all aspects of our business, including our operations, policies, risks and opportunities, as well as a thorough description of our portfolio and activities. The culmination of this effort was the US\$1,000,000,000 guaranteed euro medium-term note programme established in November 2019. Subsequently, Vena Energy's inaugural

bond was successfully issued and listed on the Singapore Exchange in February 2020 in compliance with the ICMA Green Bond Principles, and it became the first corporate USD Green Bond issuance by a Singapore-based company.

Prior to the bond issuance, Vena Energy also obtained investment grade credit ratings from both Standard and Poor's and the Japan Credit Rating Agency (JCR), a reflection of our diversified and resilient cash flows under long-term offtake arrangements as well as our in-house operational capabilities that enable us to control construction and operations while managing the associated risks. The limited exposure to individual off-takers and the associated regulatory and market risks allowed Vena Energy to demonstrate an impressive resilience to the challenges and effects of the COVID-19 pandemic, with minimal disruptions to our operations and no material impact on the company's budget.

On behalf of all of us at Vena Energy, we thank you for your continued interest in our company and we look forward to another year of successful collaboration with you in our joint mission to help combat climate change and decarbonize the economy through the generation of clean renewable energy.

**Nitin Apte**

*CEO of Vena Energy  
Chairperson of Vena Energy's  
Sustainability Committee*

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# 1. INTRODUCTION

## 1.1. CORPORATE OVERVIEW

### 1.1.1. About Vena Energy

Headquartered in Singapore, Vena Energy is one of the leading pure renewable energy Independent Power Producers (IPP) in the Asia Pacific region. We develop, construct, own and operate solar photovoltaic (PV), wind and energy storage projects in Japan, Australia, India, Indonesia, the Philippines, South Korea, Taiwan and Thailand, with an extensive local presence of over 500 employees across eighteen management offices and twenty-nine operational offices.

As of December 2019, Vena Energy's portfolio comprised of:

- 55 operating assets with a gross capacity of 1.7 GW;
- 26 construction and shovel-ready projects with a gross capacity of 0.8 GW;
- 86 projects under development with a gross capacity of 9.0 GW.

Vena Energy's revenues derive from the sale of 100% green power, generated by utility-scale renewable energy assets under long-term offtake arrangements. All operational, construction and shovel-ready assets are fully contracted with diversified and creditworthy counterparties for a period of over 19 years of residual average contractual life. Under these offtake contracts, Vena Energy's customers agree to purchase up to 100% of supplied power under take-or-pay arrangements, thereby significantly mitigating revenue-related risks. Nearly 90% of our operating

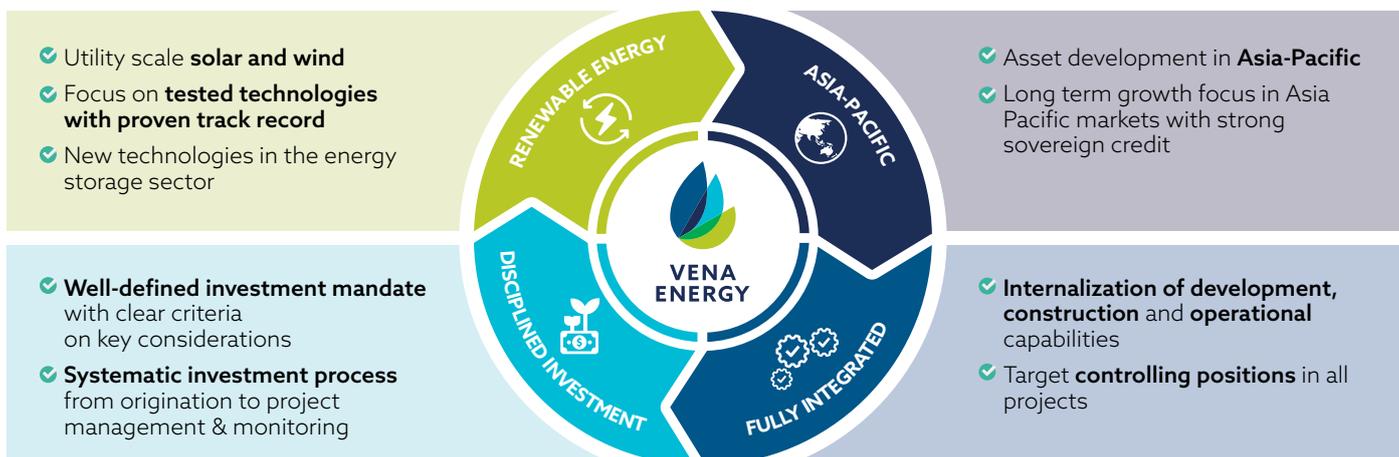
capacity is contracted with central or provincial state-owned utilities with strong credit profiles, and the remaining 10% of operating capacity is contracted under long term PPAs, predominantly with investment grade rated corporate off-takers. No single asset in Vena Energy's portfolio contributes to more than 10% of our total operational capacity, and this percentage has continued to decline as more assets were built and commissioned, further reducing project concentration risk. Both the operation & maintenance and asset management functions are often contracted to Vena Energy-owned entities on a long-term basis, providing visibility on recurring operational costs. Debt financing is arranged for each asset on a non-recourse basis, with tenors often comparable to the duration of the project's long-term offtake contracts. These arrangements, coupled with the statistical predictability of solar and wind resources, contribute to a stable long-term cash flow profile.

Vena Energy is fully integrated across the entire renewable energy project lifecycle, from project and site assessment, engineering and permitting, contracting and procurement, installation and commissioning to operations and maintenance. We have in-house experts dedicated to solar and wind energy and have centralised our intellectual property with respect to resource assessment, system design, equipment procurement, construction management and maintenance services. This in-house capability allows Vena Energy to develop

projects with superior performance standards, while minimising development and construction risks and utilising best-in-class technology and equipment. The ability to efficiently self-develop, build and operate assets has enabled us to reduce the Levelised Cost of Energy (LCOE) of our projects.

Sustainability remains the centrepiece of Vena Energy's corporate strategy, as we aim to deliver high performance to all our stakeholders including employees, host communities, suppliers, counterparties, partners and investors. Our sustainability goals are not only limited to providing clean renewable energy to our communities, but also sustaining their well-being by supporting quality healthcare and infrastructure for essential services, and fostering economic growth through job creation and quality education.

From an Environmental, Social and Governance (ESG) perspective, Vena Energy has in place comprehensive policies in accordance with local and international standards, including the International Finance Corporation (IFC) Performance Standards, International Labour Organisation Declaration on Fundamental Principles and Rights at Work and the UN Guiding Principles on Business and Human Rights. In addition, Vena Energy designed a detailed Green Financing Framework to enhance the transparency of the company's disclosures to our financial stakeholders, which is further detailed in Section 4.6.



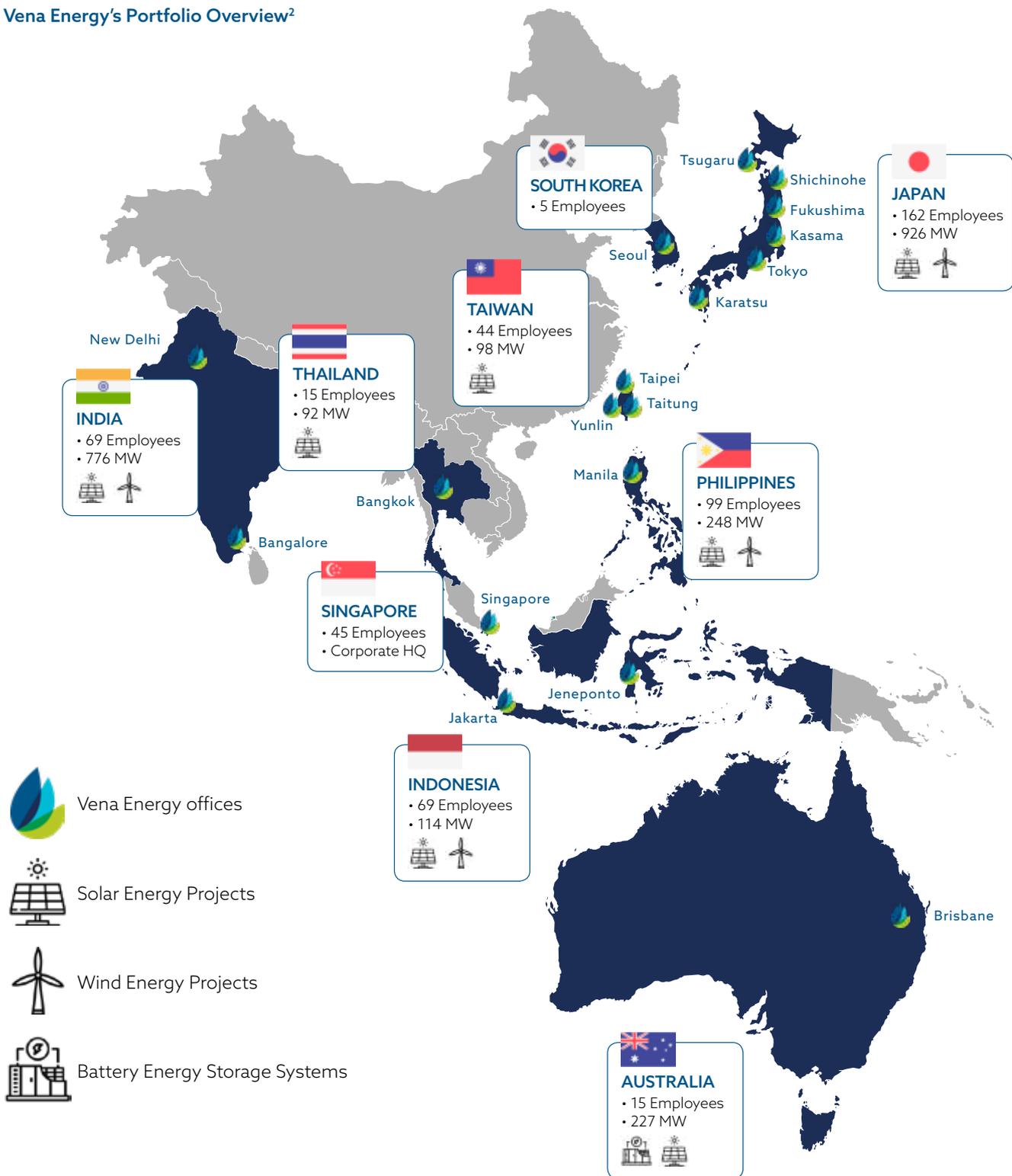
**11** Gigawatt Total Capacity<sup>1</sup>  
In wind and solar assets across Asia-pacific

**18** Management Offices

**523** Employees  
Multinational IPP

**29** Operational Offices  
Across 9 jurisdictions

Vena Energy's Portfolio Overview<sup>2</sup>



<sup>1</sup> Includes assets in Operation, Construction, and Shovel Ready (OCSR) stages, and assets in various stages of development.

<sup>2</sup> MWs indicate Gross Capacity of all Operational, Construction and Shovel Ready assets as of Dec 2019.

## AUSTRALIA

Locally headquartered in Brisbane, Vena Energy commissioned our first project, the 127 MW Tailern Bend Solar Project located in South Australia, in 2019.

## INDIA

With offices in Bangalore and New Delhi, Vena Energy owns and operates 11 solar and wind assets totalling 776 MW. Vena Energy's Bangalore office is also home to the Vena Energy Control and Diagnostic Centre, which tracks the status of all operating assets in the Vena Energy portfolio.

## INDONESIA

With offices in Jakarta and Jenepono, Vena Energy completed construction of our first renewable assets in 2019, the 72 MW Tolo 1 Wind Project, the 21 MW Minut Solar Project, and three solar projects in Lombok totalling 21 MW. Vena Energy's portfolio of operating assets totals 114 MW.

## JAPAN

Vena Energy saw a steady growth of assets, including two new solar projects totalling 52 MW, bringing the operational solar asset portfolio in Japan to 350 MW. An additional 576 MW of solar and wind assets comprise the growing Japan construction and shovel ready pipeline.

## PHILIPPINES

Locally headquartered in Manila, Vena Energy owns and operates 248 MW of solar and wind assets. Despite experiencing extreme weather conditions including some super typhoons in the past couple of years, the Philippines assets have maintained reliable energy outputs as a result of timely responses from the local Vena Energy Operations and Maintenance ("O&M") team.

## SINGAPORE

As the corporate headquarters of Vena Energy, the Singapore office oversees the development, construction and operation of more than 11 GW of renewable assets across nine jurisdictions in the Asia Pacific region.

## SOUTH KOREA

Vena Energy opened an office in Seoul in 2018 to establish relationships with local stakeholders and make a contribution to the collective effort to expand the renewable energy sector in South Korea.

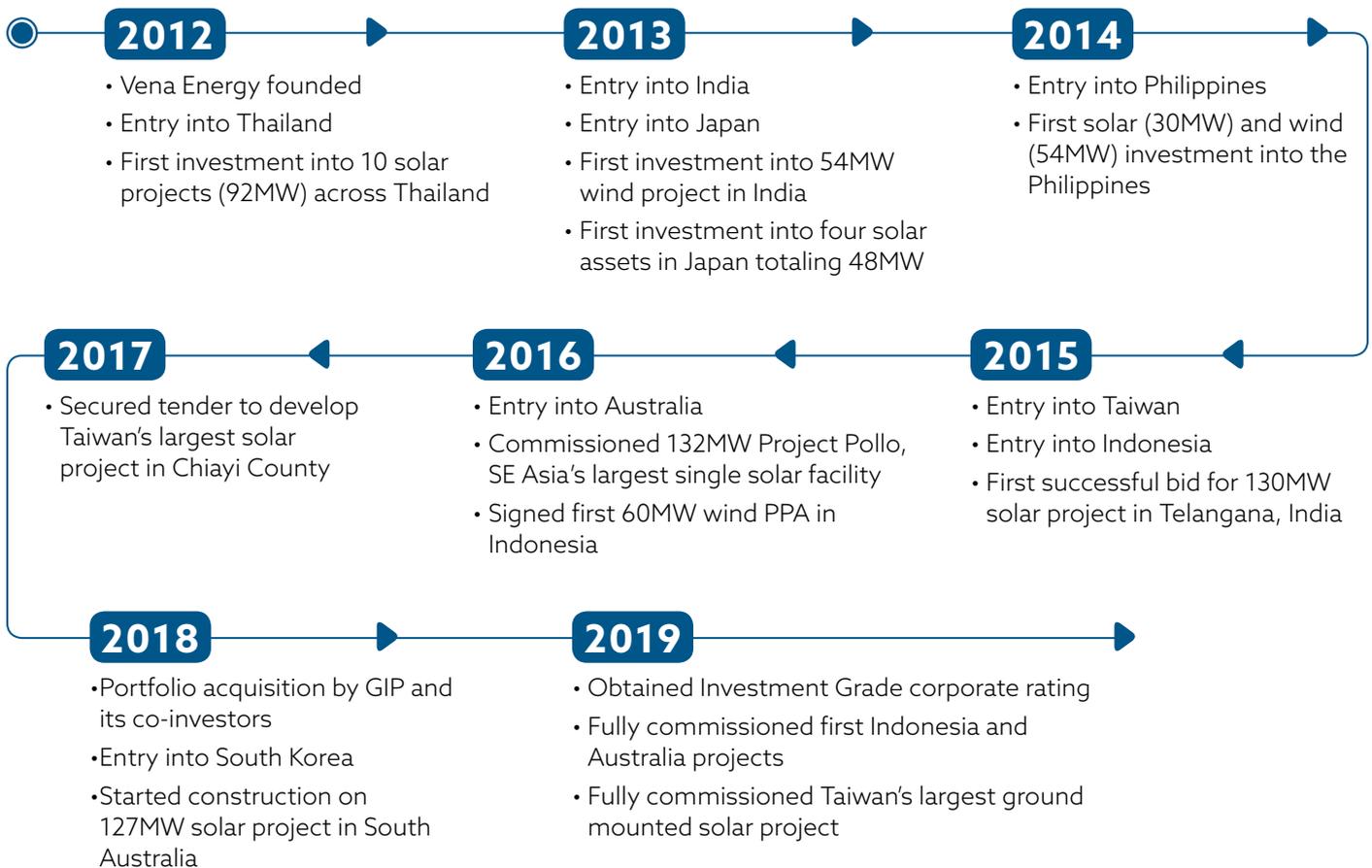
## TAIWAN

With offices in Taipei, Yunlin and Taitung, Vena Energy's portfolio of operational, construction and shovel ready solar assets has a total capacity of 98 MW, with an additional 838 MW in the development pipeline. The 70 MW Mingus Solar Project, the largest ground mount utility scale solar project in Taiwan, was commissioned in July 2019.

## THAILAND

Locally headquartered in Bangkok, Vena Energy owns a portfolio of 10 solar assets totalling 92 MW, which have been operational since 2013.

## 1.1.2. Our History and Key Milestones (2012-2019)



### 1.1.3. Corporate Leadership

The members of Vena Energy's senior management oversee the operations of all our assets and bring together strong qualifications and extensive industry experience.



## 1.2. 2019 HIGHLIGHTS

In 2019, Vena Energy generated and sold over 2.6 TWh of clean electricity from renewable energy sources, sufficient to meet the demands of over 2 million households. This generation output is equivalent to a reduction of more than 2.1 million tonnes of greenhouse gas (GHG) emissions and savings of nearly 2.5 billion litres of water compared to conventional fossil-fuel based energy. In the same year, we commissioned 10 projects totalling over 370 MW of capacity across solar and wind technologies in Australia, Indonesia, Japan and Taiwan, bringing our total operational capacity to 1,699 MW across the Asia-Pacific region. These projects created 3,540 jobs during their construction and enabled the addition of 55 full-time employees to Vena Energy.

Over the course of 2019, we obtained a EPC license and expanded our O&M team across the region, further enhancing the reach and integration of our construction and operational functions. We continued to successfully convert our development pipeline to construction stage, with 8 projects totalling 315 MW under construction as of December 2019. Additionally, a total of 466 MW of solar, wind and battery energy storage projects were further developed and are currently next in line for construction. We have also progressed the development of our extensive renewable pipeline totalling approximately 9 GW, which positions Vena Energy as one of the leading renewable energy IPPs in the Asia-Pacific region.

In 2019, we launched a new business activity by successfully placing our first renewable energy fund. Vena Energy now acts

as sponsor and general partner of a portfolio of select renewable energy assets, investing in and managing the fund on behalf of several leading institutional partners. In addition, we provide asset management, operations and maintenance services to the portfolio, leveraging on our strong operational expertise and integrated platform to deliver best-in-class performance and ESG standards.

In November 2019, we established a US\$1,000,000,000 guaranteed Euro Medium Term Note (EMTN) programme. Subsequently, Vena Energy's inaugural bond was successfully issued and listed on the Singapore Exchange (SGX) in February 2020, in compliance with the ICMA Green Bond Principles, and it became the first ever corporate USD Green Bond issuance by a Singapore-based company.

Prior to the bond issuance, Vena Energy obtained investment grade credit ratings from two independent agencies: Standard and Poor's and the Japan Credit Rating Agency (JCR). We also published an updated Green Financing Framework, which was established to enhance our planning and disclosure practices as well as provide transparency and accountability to all our stakeholders. Vena Energy's Green Financing Framework has been independently reviewed by Vigeo Eiris and JCR and has received the highest level of assurance from both agencies.

81

Total Number of  
OCSR Assets

2,480

Total MW Capacity of  
OCSR Assets

2,603,785

Total MWh generated  
and sold in FY19

2,125,485

Total Tonnes of GHG Emissions  
Reduced based on Operational  
Portfolio Generation

523

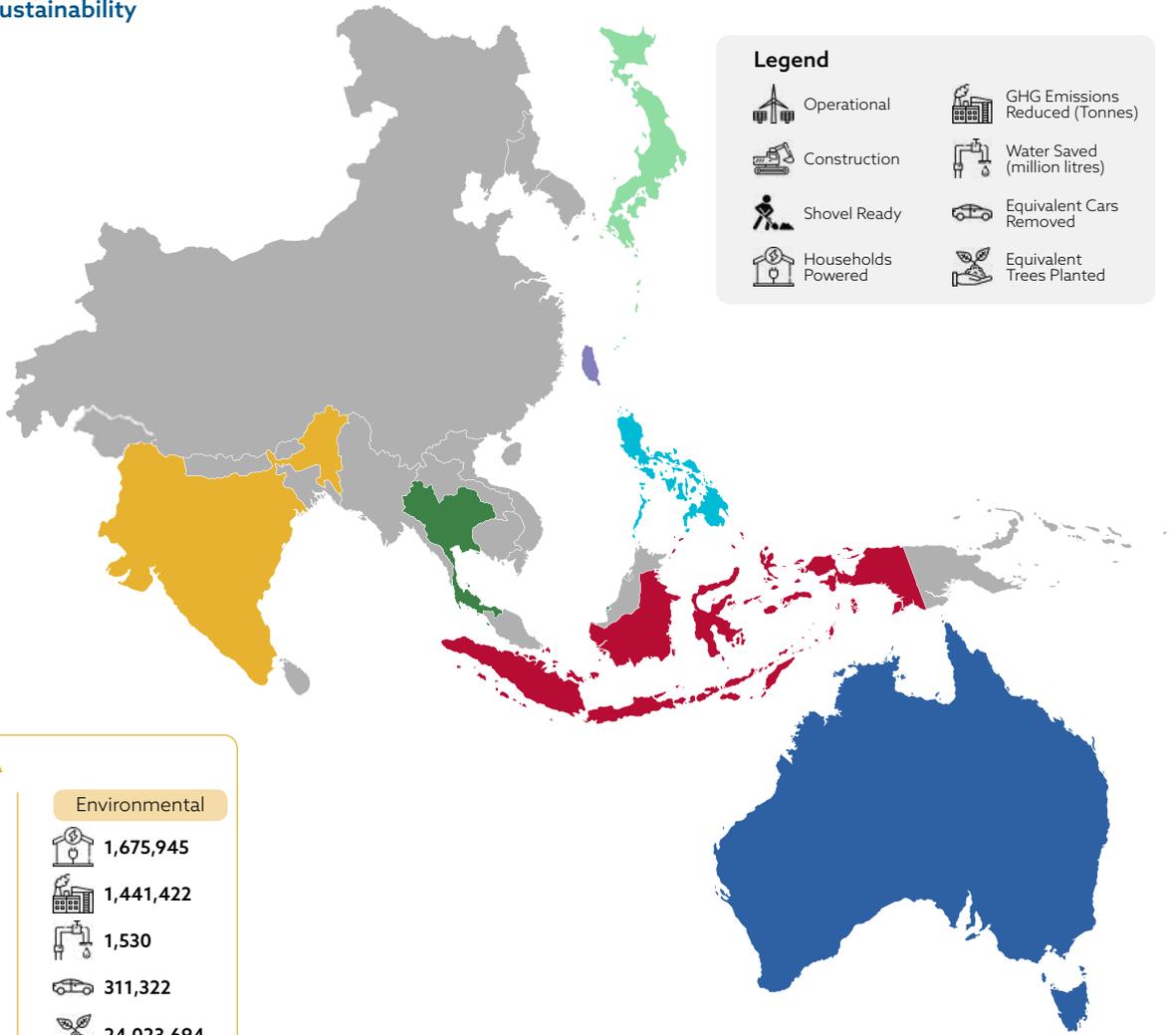
Total Number of  
Employees

\$352.9m

Total Revenue  
in FY19

# 1.2.1. Business Highlights

## Operational and Sustainability Impact Overview



**Legend**

- Operational
- Construction
- Shovel Ready
- Households Powered
- GHG Emissions Reduced (Tonnes)
- Water Saved (million litres)
- Equivalent Cars Removed
- Equivalent Trees Planted

**INDIA**

Portfolio (MW)			Environmental		
679	97	-	1,675,945	1,441,422	1,530
Employees					
			311,322	24,023,694	
57	12				

**AUSTRALIA**

Portfolio (MW)			Environmental		
127	-	100	34,632	210,348	195
Employees					
			45,432	3,505,799	
10	5				

**JAPAN**

Portfolio (MW)			Environmental		
350	218	358	230,507	688,753	1,091
Employees					
			148,759	11,479,210	
127	35				

**TAIWAN**

Portfolio (MW)			Environmental		
90	-	8	26,795	71,254	136
Employees					
			15,390	1,187,562	
29	15				

**INDONESIA**

Portfolio (MW)			Environmental		
114	-	-	235,188	261,340	292
Employees					
			56,445	4,355,659	
50	19				

**PHILIPPINES**

Portfolio (MW)			Environmental		
248	-	-	368,766	320,777	364
Employees					
			69,282	5,346,290	
70	29				

**THAILAND**

Portfolio (MW)			Environmental		
92	-	-	58,887	78,908	131
Employees					
			17,043	1,315,135	
10	5				

## 1.2.2. 2019 Commissioned Projects

In 2019, a total of 10 solar and wind projects totalling 373 MW were commissioned in Australia, Indonesia, Japan and Taiwan.



### INDONESIA

<b>Project Name</b>	Tolo 1 Wind Project		
<b>Technology</b>	Wind Turbine	<b>Location</b>	Jeneponto Regency, Indonesia
<b>Capacity</b>	72 MW	<b>Commercial Operation Date</b>	May 2019

The Tolo 1 Wind Project began construction in June 2017, and at its peak had a workforce of 760 workers, hired from neighbouring communities. Consisting of 20 wind turbines 133-metres tall and each equipped with 64-metre blades, the Tolo 1 Wind Project was commissioned in May 2019. The project can deliver more than 250,000 MWh of renewable energy annually and can power approximately 191,175 households while reducing an estimated 212,432 tonnes of GHG and save around 238 million litres of water every year.



### TAIWAN

<b>Project Name</b>	Coltrane Solar Project		
<b>Technology</b>	Photovoltaic	<b>Location</b>	Yunlin County, Taiwan
<b>Capacity</b>	10 MW	<b>Commercial Operation Date</b>	April 2019

The Coltrane Solar Project is located in Kouhu township within Yunlin County in Taiwan. The project consists of 26,780 solar panels, capable of producing over 14,800 MWh annually. Completed in April 2019, the project hired 130 local workers and provides clean energy to around 2,751 households per year. The project is expected to reduce approximately 7,314 tonnes of GHG and save approximately 14 million litres of water per year.

## AUSTRALIA



<b>Project Name</b>	Taillem Bend Solar Project		
<b>Technology</b>	Photovoltaic	<b>Location</b>	Adelaide, Australia
<b>Capacity</b>	127 MW	<b>Commercial Operation Date</b>	April 2019

The Taillem Bend Solar Project is Vena Energy's first Australian project since entering the market in 2016. Consisting of 390,000 solar panels, the project covers an area of approximately 280-hectares. The project is estimated to deliver about 206,000 MWh of renewable energy per year, which provides the annual generation needs of more than 34,000 homes. Completed in 12 months, the project workforce consisted of 251 local workers, contractors and vendors.

## JAPAN



<b>Project Name</b>	NEJ Solar Project		
<b>Technology</b>	Photovoltaic	<b>Location</b>	Aomori Prefecture, Japan
<b>Capacity</b>	34 MW	<b>Commercial Operation Date</b>	May 2019

The 34 MW Solar project was completed in May 2019 and consists of 99,936 solar panels covering an area of approximately 49 hectares in Aomori Prefecture in Japan. Over the course of its construction, the project hired 162 local workers, and is estimated to deliver over 37,000 MWh of clean energy to around 7,400 Japanese households per year. The Project is also expected to reduce 22,099 tonnes of GHG emissions and save an estimated 35 million litres of water annually.

## INDONESIA



<b>Project Name</b>	Lombok Solar Projects		
<b>Technology</b>	Photovoltaic	<b>Location</b>	Lombok, Indonesia
<b>Capacity</b>	21 MW total	<b>Commercial Operation Date</b>	July 2019

The 21 MW Lombok Solar Projects consists of three individual solar projects each with a capacity of 7 MW, located on the island of Lombok in Indonesia. The projects created 257 local jobs since their construction began in April 2018. Upon their completion in July 2019, the projects are capable of delivering an estimated 34,100 MWh of power and providing 26,000 local households with renewable energy yearly. The projects will also save approximately 32 million litres of water and reduce an estimated 28,892 tonnes of GHG emissions annually.

## INDONESIA



<b>Project Name</b>	Minut Solar Project		
<b>Technology</b>	Photovoltaic	<b>Location</b>	North Sulawesi, Indonesia
<b>Capacity</b>	21 MW	<b>Commercial Operation Date</b>	September 2019

The 21 MW Minut Solar Project is the largest ground-mounted solar project in Indonesia-to-date, and at the peak of its construction hired a workforce of 362 people, many of whom were hired from neighbouring communities. Capable of producing over 34,100 MWh of renewable energy, the project delivers clean energy to around 26,000 local households per year, while reducing approximately 28,866 tonnes of GHG emissions and saving 32 million litres of water annually.

## TAIWAN



<b>Project Name</b>	Mingus Solar Project		
<b>Technology</b>	Photovoltaic	<b>Location</b>	Chiayi County, Taiwan
<b>Capacity</b>	70 MW	<b>Commercial Operation Date</b>	July 2019

The Mingus Solar Project is the largest ground mount utility scale solar project in Taiwan, consisting of 200,000 solar panels that span an area of approximately 80-hectres. Nestled in the salt plains of Chiayi County in Taiwan, the project is capable of producing over 106,000 MWh of renewable energy annually. Built by a workforce of 522 local workers, the project will meet the electricity demands of approximately 19,700 households, while reducing around 52,347 tonnes of GHG emissions and saving 100 million litres of water per year.

## JAPAN



<b>Project Name</b>	Towada Solar Project		
<b>Technology</b>	Photovoltaic	<b>Location</b>	Aomori Prefecture, Japan
<b>Capacity</b>	18 MW	<b>Commercial Operation Date</b>	November 2019

The 18-megawatt Towada Solar Project is Vena Energy's 10th solar project in the Aomori Prefecture, and was completed in November 2019. Capable of producing around 19,615 MWh annually, the Towada Solar Project features 46,424 solar panels of 395-watt peak (Wp) each, covering an area of 28.53-hectares. At the peak of its construction, the Towada Solar Project created 146 jobs in the prefecture, and will supply clean, renewable energy to approximately 3,900 Japanese households per year. The project will reduce 11,674 tonnes of GHG emissions and save about 18 million litres of water annually.

### 1.3. PRECAUTIONS AGAINST COVID-19

With the recent Coronavirus pandemic, we have taken preventive measures in order to limit the spread of COVID-19 and to protect our people. Work-related activities have either been halted or restricted, depending on the nature of the job function. Apart from our offices in Taiwan and South Korea, which have deployed stringent sanitation and social distancing measures while reducing office attendance, the majority of our offices have implemented a full work-from-home strategy. All travel has been suspended since February 2020 and all communications

and meetings, including our regular business continuity plan ("BCP") meetings, are now conducted remotely.

In countries which have adopted limited restrictions, we have supplied additional PPE to and administered frequent temperature checks on onsite workers. Whenever possible, monitoring of our assets is performed remotely to reduce the site attendance of our O&M staff.

### 1.4. SUSTAINABLE BUSINESS MODEL

Since the development of our first asset in 2012, Vena Energy has grown into one of the leading renewable energy IPPs in the Asia-Pacific region, undertaking a prominent role in decarbonising the economy through the generation of clean renewable energy. Our corporate mission remains focused on the global fight against climate change and depletion of natural resources, and we play our part by accelerating the penetration of wind and solar generation in the Asia Pacific energy mix.

and practices, with the aim of becoming a model of excellence in sustainability and ESG standards. In accordance with our corporate mission, our business activities align with the United Nations' Sustainable Development Goals ("SDGs") as a blueprint for a better and more sustainable future. We believe that our business model contributes especially to SDG 7, SDG 8, SDG 9 and SDG 13, as they embody our strategic objectives for continued sustainable development.

Our business model has remained grounded in our sustainability principles. We continue to expand and improve our standards

**7 AFFORDABLE AND CLEAN ENERGY**



Core to our business is the provision of **sustainable energy**. Our business contributes to overcoming the barriers to a low carbon and sustainable future.

We aim to ensure the **affordability** of our clean renewable energy projects by constantly striving to be the most **cost-effective renewable energy developer and operator** in the region, whilst achieving excellence in our sustainability and ESG performance.

**8 DECENT WORK AND ECONOMIC GROWTH**



Vena Energy firmly believes in engaging with our local communities throughout the life cycle of our projects, with the objective of enabling sustainable social and economic development locally. We support local employment by creating job opportunities for the members of our host communities and we then focus on training and empowering our employees through numerous self-development programs. Our projects are often located in rural areas and offer an exciting opportunity to the younger generations to be gainfully employed and build their careers in their birthplaces. This allows them to remain closer to their families and contributes to preventing rural-urban migration with the consequent deterioration of local economies.

## 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Vena Energy promotes **long-term solutions** to environmental challenges with renewable energy and invests in technological developments in the storage of renewable energy.

We encourage **innovation and collaboration** in the renewable energy space through our partnerships and look to contribute to the strengthening of the renewable energy industry through knowledge sharing and the development of technical capabilities.

## 13 CLIMATE ACTION



Vena Energy works to **reduce emissions** through the investment and development of cleaner energy technologies. We closely monitor the impact of our operations compared to conventional energy sources.

Vena Energy also actively supports the development of **carbon pricing schemes** in the regions we operate through the sharing of our knowledge and experience.

We increasingly look to manage the physical impacts of climate change on our business by incorporating **climate resilience** considerations into our business activities.

To further integrate sustainability into the way we conduct business, we actively support partnerships and initiatives to advance the sustainability agenda:

### WE SUPPORT



#### UN GC PARTICIPANT

The United Nations Global Compact (UN GC) as a strategic policy initiative for organisations commits to align with the ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption. Vena Energy participates in the UN GC global movement to disclose publicly our commitments and progress and to shape the world's sustainability agenda.



#### TCFD SUPPORTER

In 2019, Vena Energy joined over 1,000 companies in publicly expressing our support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). We acknowledge that the implementation of the TCFDs is a journey, and as a new TCFD supporter, we will discuss the impact of climate change on our business at a Board level and will establish our road map to implementing the recommendations of the TCFDs.



#### CLP MEMBER

As a member of the Carbon Pricing Leadership Coalition (CPLC), we share our experience with over 164 businesses from a range of sectors and regions on designing and using carbon pricing, informing successful carbon pricing policy development and the use of carbon pricing in businesses.

# ENVIRONMENT



# 2. ENVIRONMENT

## 2.1. OUR COMMITMENT TO CLIMATE ACTION

The past five years from 2015 to 2019 have been the warmest years in history since recordkeeping began in 1880<sup>3</sup>. Global atmospheric concentrations of carbon dioxide are at a historical high and almost 800 weather-related natural catastrophes were reported in 2019 alone<sup>4</sup>.

Vena Energy has chosen to play a part in the global action against climate change by contributing to the decarbonisation of the energy sector, which is widely considered as one of the necessary steps to unlock the transition to a low carbon economy and a climate risk-resilient society. We execute this mission by increasing the generation of clean renewable energy in the Asia Pacific energy mix, in order to progressively displace thermal and other non-renewable generation capacity. Over the course of 2019, Vena Energy's solar and wind assets generated more than 2.6 TWh of clean electricity, equivalent to more than 2 million tonnes of GHG reductions.

We also aim to act as one of the catalysts for accelerating the ongoing energy transition. We include in our corporate strategy a disciplined data-driven approach to continuous improvement, aimed at increasing efficiency and compressing the levelised cost of renewable energy. This approach is designed to drive the sector towards grid parity, particularly in those markets where the cost of renewable energy is still above market levels. A successful transition to grid parity is a key step towards the displacement of thermal and non-renewable generation capacity.

Vena Energy continues to explore and invest in energy storage technologies, an area often regarded as the missing link to allow

a complete transition to renewable energy. We are currently building one of the largest Battery Energy Storage Systems (BESS) in Australia and we target to achieve a continuous cost compression of this technology, while exploring complementary storage solutions. The installation of significant energy storage capacity over the next decade is intended to support the power grid systems and provide stability to the intermittent supply of renewable energy generation.

We are committed to sustainable and environmentally ethical business practices at every stage of the projects' lifecycle. We have integrated these commitments in our sustainability strategy and policies, aligning to local and international standards including:

- Environmental, health and safety laws and regulations of our hosting jurisdictions
- IFC Performance Standards
- World Bank Group Environmental, Health and Safety Guidelines

Our policies provide guidelines on key environment-related areas, including the selection of investments in supporting the reduction in GHG emissions, assessment of environmental impacts of projects, and the monitoring, recording and protection of environmental issues. Furthermore, our investment policy explicitly prohibits activities which result in negative environmental impact.



<sup>3</sup> Bloomberg New Energy Finance (BNEF) Executive Factbook, Apr 2020.

<sup>4</sup> BNEF Executive Factbook, Apr 2020.

## 2.2. OUR ENVIRONMENTAL CONSIDERATIONS



We recognise that protecting and preserving biodiversity, maintaining ecosystem services and sustainably managing natural resources are a prerogative of sustainable development. In line with IFC Performance Standard 6, we promote responsible behaviour and support conservation efforts to preserve environment and biodiversity in the Asia-Pacific region.

### GHG Emissions

Human activity has caused a surge in carbon dioxide levels resulting in an unprecedented rate of increase in global average surface temperatures, which have resulted in extreme weather events and decreased habitable and agricultural areas. In addition to carbon dioxide, fossil fuels can also generate other air pollutants that are harmful to the health and well-being of humans, animals and the environment.

### Water

Reduction of water usage leads to less energy and chemicals used on the treatment and pumping of water, which further reduces our carbon footprint. A moderate amount of water is used to clean dust from our solar panels so they can increase the generation of clean energy. However, wind and solar generation assets do not use water to generate power and therefore do not strain the water supplies needed for agriculture, drinking or sanitation.

Our sewage and stormwater management policies comply with country, state, and local regulations, and are designed to minimize the impact to the natural environment surrounding our project sites. Wastewater is not disposed of in the surrounding soil or natural water bodies, but it is carefully collected in tanks and discarded in accordance with the applicable environmental regulations. No discharge permits are required, as power generation from solar and wind assets does not involve industrial processes which contaminate water.

### Waste Management

Non-sustainable waste disposal is increasing around the world due to rapid industrialisation, population growth and urbanisation. Non-biodegradable waste has been filling our oceans and landfills. The treatment of landfilled waste often releases dangerous levels of carbon dioxide, methane gas and other gaseous by-products, which contribute significantly to global warming and air pollution. This direct damage to our ecosystems further adversely impacts wildlife habitats and human health.

Vena Energy promotes the minimisation of waste generation as a sustainable practice. In all project sites, our project managers in consultation with local contractors ensure that our waste management procedures are optimised, while also complying with country, state, and local regulations. At our offices, we encourage the use of reusable items, discourage single-use disposables and provide recycling facilities where reusing is not possible. We also set up infrastructure and platforms to promote digital viewing and keep printing to a minimum.

### Biodiversity

Biodiversity is key for the continued productivity of ecosystem services. Vena Energy actively supports the protection and conservation of the flora and fauna in and around our project sites, and we closely assess and monitor our business activities to ensure we protect and enhance the environment. We undertake extensive environmental reviews and permitting processes for each of our renewable projects, which include the assessment of the impact on air and water quality, wildlife habitat, biodiversity, and other aspects of the natural environment.

Our robust environmental policies and procedures ensure that our development process for new projects meets or exceeds country, state, and local environmental requirements, and that our existing generation facilities operate well within the scope of their permits and regulatory approvals.

## 2.3. OUR ENVIRONMENTAL STRATEGIES

### 2.3.1. Firming Generation

Battery Energy Storage Systems play a pivotal role in the transition from traditional carbon-intensive baseload power to a low-carbon electricity sector. Renewable energy is naturally intermittent, as solar and wind resources are not always available for renewable energy facilities to generate power. The incorporation of energy storage systems into the grid is expected to provide the ultimate solution to the intermittency of solar and wind facilities, allowing a stable generation profile.

The research and development on economically viable and environmentally friendly energy storage systems is progressing at a remarkable rate, rendering obsolete many of the doubts and uncertainties surrounding these technologies. Battery Energy Storage Systems were considered as an expensive and uneconomical solution until very recently, but their cost plummeted and improved the cost competitiveness of large-scale renewable energy/BESS integrated facilities vis-à-vis conventional thermal or nuclear power. Green hydrogen technologies are advancing at a very fast pace, seemingly heading towards groundbreaking economic and technological innovations.

Vena Energy supports and invests in energy storage systems and has recently developed one of the largest BESS in Australia. We believe that the expansion of energy storage activities will contribute significantly to the complete transition to renewable energy. The ability to store energy when the grid is constrained and dispatch it when supply is needed will allow us to provide more diversified solutions to our customers and expand our capabilities and performance as a pure renewable energy IPP. In addition to energy storage, BESS can also be used efficiently for fast frequency control and other ancillary services, displacing fossil fuel facilities that currently provide these services.

Furthermore, the combination of BESS with solar and wind facilities and their increasing integration in the overall energy mix are anticipated to contribute to the advancement of BESS technologies and further reduction of their environmental impact and manufacturing cost. This increased efficiency and affordability are expected to further accelerate their penetration and utilisation.





### 2.3.2. Enabling Technology

Vena Energy believes in utilising state-of-the-art, cost-efficient and proven technologies. We pursue innovation by combining advanced and proven technology with optimal engineering and process management techniques, with the objective to increase the performance and reliability of our assets and ensure continuous generation of renewable energy at maximum output.

#### Bifacial Solar Photovoltaic Panels

The cost of bifacial solar photovoltaic panels has been reducing significantly and is fast approaching the cost of mono-facial panels. Bifacial panels offer a significant improvement in energy output, estimated in the range of 4-9% in most utility-scale projects, and are now generally considered bankable.<sup>5</sup>

Vena Energy was one of the precursors and early adopters of this technology in the Asia Pacific renewable energy market. We have installed and tested bifacial panels on our testbeds since 2018 and have since adopted them in our utility-scale development projects. The knowledge gained from our testbed research allowed our engineering team to understand the performance of this technology under different circumstances and optimise our designs to deliver higher efficiencies and reduce the LCOE of our projects.

#### Best-in-Class Wind Turbines

Our wind turbines are sourced from tier-1 equipment suppliers. Our projects are usually designed by our in-house engineers, which allows Vena Energy to pursue a continuous innovation and improvement strategy, while procuring the most optimal equipment for each site.

For instance, in 2019 we were awarded a competitive wind tender in India. Every aspect of our project was optimised



by our engineering team to achieve the lowest LCOE for the site, which allowed Vena Energy to be successful in one of the most competitive renewable energy markets worldwide. Our engineers designed the project with precise equipment specifications in mind, adopting the latest generation turbines available and selecting the optimal rotor diameter and hub height for the site. This resulted in a cost reduction together with an improved capacity factor for low-wind, low-turbulence conditions typical of the Indian market, offering an 8% increase in annual energy production compared to the previous design of the site. Additionally, the project was designed to minimise its environmental impact. The controller of the turbines utilises a software algorithm to optimise rotor speeds and pitch angle, which allows noise emissions to be kept below certain thresholds for the surrounding fauna without compromising on power output.

<sup>5</sup> BNEF: Solar trends to watch in 2020

### 2.3.3. Circular Economy Approach towards Project Lifecycle

Vena Energy seeks to minimise our footprint in terms of generation of carbon emissions, waste, and pollution as well as usage of natural resources. We have a three-pronged approach for the entire lifecycle of our projects:

- Plant design and process efficiency to minimise input resource requirement
- Constant focus on any reusing, refurbishment, and recycling opportunities
- Active management to preserve the lifespan of our equipment and infrastructure

#### Sustainable Procurement

Vena Energy is committed to incorporating our sustainability mission throughout the renewable energy development value chain, including the procurement process of key components and materials, and the engagement of construction contractors. The Vena Energy Procurement Policy and environmental strategy forms the basis for decisions around procurement. We ensure that the manufacturing process of equipment, which forms the foundation of our projects, is conducted in a manner that upholds strict environmental standards. The screening of counterparties for environmental impacts is undertaken during the investment due diligence process. Guidelines are also specified in tenders governing the responsible

procurement and use of raw materials, manufacturing processes, waste management and noise pollution control.

#### Active Construction & Asset Management

As an integrated platform with in-house engineering and operational capabilities, Vena Energy is fully engaged in and usually leads the construction management process of our sites. Vena Energy's policies and processes for sustainable project development are designed to protect and benefit our external stakeholders.

Following the development and construction of the sites, Vena Energy assumes the asset management and operational responsibilities, which allow us to properly monitor, operate and maintain our assets, maximising their availability. As we have full control over the sites, we strive to continuously improve the environmental impact of our sites with the implementation of resource-saving initiatives such as the effective usage of water for cleaning solar panels.

#### Asset Life Extension

Planning for future asset life extension is a key aspect of our business activities, as it provides a significant opportunity to enhance the output and the economics of our projects by potentially adding up to 20 years of operations while also increasing their efficiency. When the repowering

plan is factored in the original project development, the civil and electrical works needed for repowering the projects are likely to be minimised. This far-sighted approach creates long-term value for the projects well beyond the originally intended project life, while also minimising their LCOE and environmental impact.

#### End-of-Life Management

While none of our assets are planned or expected to be decommissioned in the next decade, Vena Energy takes a forward-looking approach towards the end-of-life management of our installed equipment. Our extensive Termination and Decommission Plan covers aspects of materials and equipment recovery, land restoration, waste disposal and environment monitoring and remediation.

We have designed our sustainable procurement practices to reuse and recycle most of the dismantled equipment and material. Disposal of excess material is strictly governed, according to regulations and guidelines, especially for hazardous waste. We always aim to restore land to pre-development state or agriculture capacity when appropriate. We actively monitor the potential disturbance to adjacent watercourses and natural features, mitigating such risks through our Environmental Management and Monitoring Plans.

## 2.4. ENVIRONMENTAL MANAGEMENT SYSTEM

Vena Energy has a robust framework in place to evaluate the potential environmental impact of our business activities. We align our environmental risk assessment and management process with the environmental regulations of our hosting jurisdictions as well as international best practices such as the IFC Performance Standards and World Bank Group Environmental, Health and Safety Guidelines. We assess the potential impact of all projects well before we invest. We identify the areas of environmental sensitivity and potential improvements, and then monitor the projects throughout their lives while applying appropriate mitigation and optimisation strategies for environmental and operational performance.

We apply special measures for projects we identify as sensitive. This category includes any projects that hold the potential for loss of a natural habitat or cultural heritage. We also include projects that affect sensitive communities or indigenous groups. For these sensitive projects, we conduct a full Environmental and Social Impact Assessment ("ESIA") carried out by independent experts and apply comprehensive mitigation measures to ensure our host communities and ecosystems are not harmed. Our purpose remains to defend and protect our local stakeholders and the environment, while contributing to the global action against climate change. ESIA's are generally conducted with the aim of minimising impact on the environment and its natural resources

and serve as a guidepost for our activities. Consideration is given to a wide range of factors, including:

- Land use compatibility and surrounding land uses
- Biological resources, including state and federally protected plant and animal species
- Hydrological resources, including jurisdictional wetlands and other water bodies
- Geological resources, including erosion considerations
- Flood plain management

The ESIA's enhance our understanding of the environmental conditions in which our projects are developed, built and operated in, representing an important tool for our continuous improvement of the environmental and operational efficiency of our sites.

During the lifecycle of our projects, we look for opportunities to engage with our host communities in a number of environmental preservation initiatives, with the aim of improving the ecosystems in and around our sites to an even better condition than prior to construction.

Where certain changes to the local sites seem necessary for the development of the projects, our line of action is based on the following mitigation hierarchy:

- Avoidance;
- Minimisation; and
- Compensation / Offset

However, Vena Energy takes the environmental and social risks very seriously, and our corporate policies explicitly prohibit the development of projects that would include any of the following activities:

- Project trading in wildlife or wildlife products regulated under CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)

- Project involving the production or use or trade in hazardous materials such as radioactive materials, unbounded asbestos fibres and products containing polychlorinated biphenyls (PCBs)
- Project having cross-border trade in waste and waste products unless compliant to the Basel Convention and the underlying regulations
- Project using drift net fishing in the marine environment using nets in excess of 2.5 km in length
- Project producing, using or trading in pharmaceuticals, pesticides/herbicides, chemicals, ozone depleting substances and other hazardous substances subject to international phase-outs or bans
- Project involving destruction of Critical Habitat

As of December 2019, our internal and external resources have cumulatively spent close to 100,000 hours conducting environmental assessments for our projects. As a result of our rigorous due diligence process and our compliance with relevant country, state and local regulations, we did not experience any unplanned project delays related to non-compliance of environmental regulations in 2019.

Vena Energy believes that comprehensive training activities are crucial to the success of our corporate objectives, including meeting our global environmental commitments. Our environmental training programmes deliver orientation, education and guidance to new personnel and ongoing refresher training for all personnel. All employees and contractors working under the direction of Vena Energy undergo training to carry out the environmental responsibilities associated with their positions.

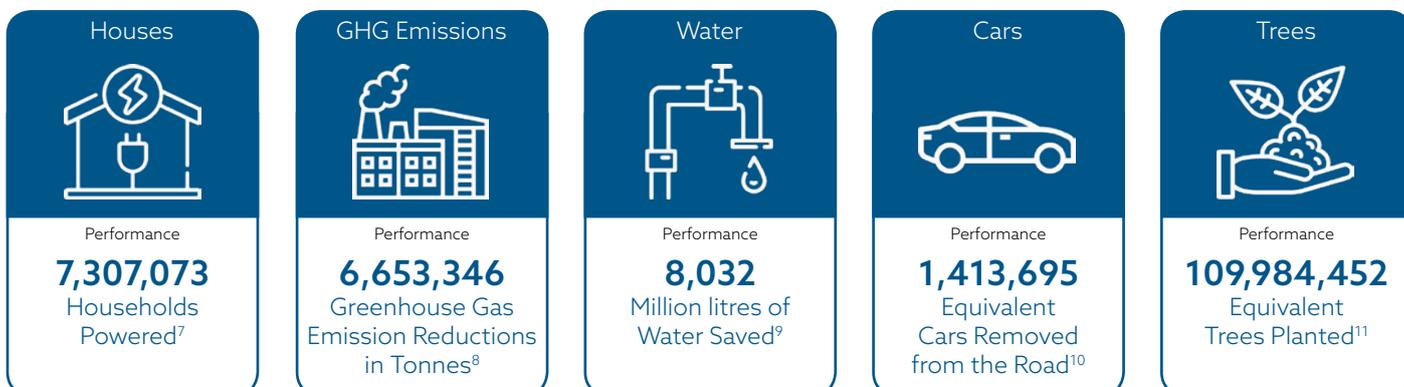
For third-party contractors to be able to work for Vena Energy, they are required to have appropriate training programmes that assure the compliance of their personnel with all legal environmental requirements. In some cases, we share our environmental training programmes with them to elevate and align their programmes to our expectations and best practices. Employees and contractors are required to comply with all applicable country, state and local requirements at all times.



## 2.5. OUR ENVIRONMENTAL IMPACT

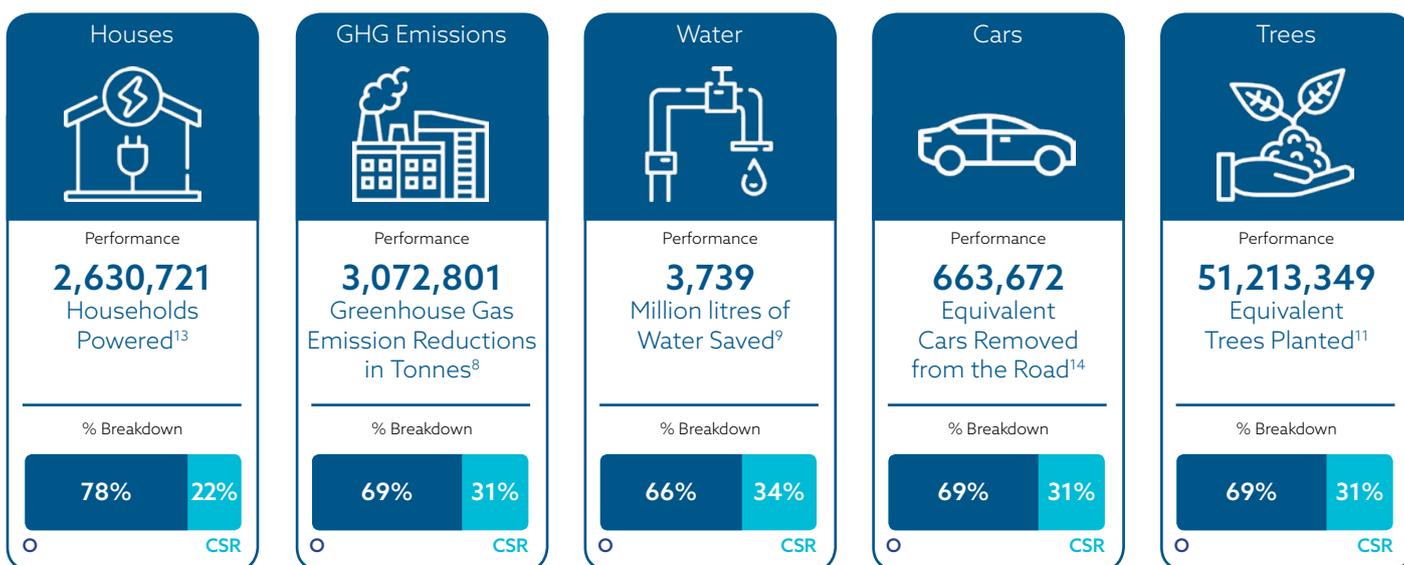
### Environmental Impact Metrics From Inception to 2019<sup>6</sup>

We measure and monitor the sustainability impact of our business activities through detailed metrics and Key Performance Indicators (KPIs), which allow us to perform continuous environmental and operational improvements on our projects. Below is a summary of five key indicators that we adopted to measure the sustainability impact of our business activities since inception:



### Environmental Impact Metrics in 2019

In 2019 the actual energy generation arising from operational assets was 2.6 TWh, whereas the estimated energy generation arising from construction & shovel-ready assets<sup>12</sup> was 1.4 TWh. The below metrics illustrate the sustainability impact of our business, arising from the actual and estimated energy generation from our assets in 2019:



**Legend** O: Operational Assets CSR: Construction & Shovel Ready Assets

<sup>6</sup> Based on accumulative actual generation from operational assets since inception.

<sup>7</sup> Households Powered is based on annual household electricity consumption of each operating country derived from Residential Electricity Consumption data obtained from the International Energy Agency (2017) and number of households data obtained from the United Nations and Taiwan Statistical Bureau (2019). This figure represents the cumulative number of Households Powered based on household electricity consumption on an annual basis. The previously reported number of 1,664,289 households powered was based on Vena Energy's generation of the operating assets since inception divided by the ratio of total electricity consumption of the operating countries (residential, industrial and commercial electricity consumption) to the number of households of the operating countries.

<sup>8</sup> Greenhouse Gas (GHG) Emissions Reduction is calculated assuming that the generation from renewable energy plants replaces an equal quantity of electricity generated using fossil fuels. Respective country generation and emissions data obtained from Bloomberg New Energy Finance (2018).

<sup>9</sup> Water Saved is based on water usage factors of solar and wind power plants compared against coal-based power plants using once-through cooling, generic technology. Data obtained from National Renewable Energy Laboratory report (2012), by the national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy.

<sup>10</sup> This figure represents the cumulative number of Cars Removed from the Road based on GHG emissions per passenger vehicle on an annual basis.

<sup>11</sup> Equivalent Trees Planted is based on the amount of GHG sequestered by a medium growth coniferous or deciduous tree, planted in an urban setting and allowed to grow for 10 years, data obtained from the United States Environmental Protection Agency website, last updated: May 27, 2020.

<sup>12</sup> Contribution by CSR assets includes pre-commissioning estimations for projects commissioned in 2019.

<sup>13</sup> Households Powered is based on annual household electricity consumption of each operating country derived from Residential Electricity Consumption data obtained from the International Energy Agency (2017) and number of households data obtained from the United Nations and Taiwan Statistical Bureau (2019).

<sup>14</sup> Equivalent Cars Removed from the Road is based on annual GHG emissions of passenger vehicles obtained from the United States Environmental Protection Agency (2019).

# Case Study: Wildlife Conservation At Project Mingus

## Executive Summary



The 70 MW Mingus Solar Project is located in Chiayi County, and is Vena Energy's fourth renewable energy project in Taiwan. The project consists of 200,000 photovoltaic panels capable of generating more than 106,000 MWh of renewable energy annually and achieved its Commercial Operation Date (COD) in July 2019.

The project is the largest operating solar plant in Taiwan, and was built directly by Vena Energy. For its construction, Vena Energy hired 522 workers from our hosting local communities, with the intention of stimulating local employment.

The project site includes 80-hectares of a long-abandoned plain, which was previously used for salt production by local farmers through evaporation ponds. As part of the environmental conservation plan, Vena Energy successfully restored this site and created an Ecological Conservation Area for local and migratory wildlife.



The site is also the breeding ground for a large variety of local and migratory wild birds including the Kentish Plover (*Charadrius alexandrinus*), Black-winged Stilt (*Himantopus himantopus*), and the Black-Winged Kite (*Elanus caeruleus*), amongst others. Most importantly, the site is frequented by the Black-Faced Spoonbill (*Platalea minor*), the rarest of the six spoonbill species in the world, during the winter months. With approximately 1,600 mature adults in the world, the Black-Faced Spoonbill is currently listed as an endangered species by the International Union for Conservation of Nature (IUCN)<sup>15</sup>.



Vena Energy partnered with the Chinese Wild Birds Federation (中華民國野鳥學會) and a member of the Kun Shan University (崑山科技大學) as observers, with the objective of conducting frequent on-site surveys prior to and during the construction phase of the project, and continued to monitor the status and habitat of the wild birds in the purpose-built 24.1-hectare Ecological Conservation Area after the completion of the Mingus Solar Project.

This initiative is aligned with the International Finance Corporation (IFC) Performance Standards — particularly Guidance Note 6: "Biodiversity Conservation and Sustainable Management of Living Natural Resources"<sup>16</sup>.

Vena Energy also engaged an independent environmental consulting company to conduct due diligence and reporting on the reserved areas during the rehabilitation and construction period, as well as to provide guidance on the mitigation of potential disturbance to wildlife prior to the initiation of project construction. The independent environmental consultants were invited to contribute to and participate in several meetings and discussions with the Chinese Wild Birds Federation organised by the Chiayi County Government and Vena Energy, and the findings were published on Vena Energy's website for public disclosure<sup>17</sup>.

<sup>15</sup> Source: Bird Conservation International: Population trends of the Black-faced Spoonbill *Platalea minor*: analysis of data from international synchronised censuses

<sup>16</sup> Source: Vena Energy Green Financing Framework: ESG Policy

<sup>17</sup> Source: Vena Energy: Environmental Protection (環境保護)

## Findings

The immediate concern for Vena Energy was the conservation of the natural habitat of both local and migratory wild birds, as well as the fragmentation of the immediate habitat in the project site. One of the main issues that we identified was the lack of water-flow into the crystallisation and evaporation ponds, which could have been caused by the lack of rainfall in the Chiayi County, or due to the construction of the project. This particular issue could have adversely contributed to the loss of food for the birds, such as inland-crabs, fish, shrimp and mosquito-larvae. In addition, human and vehicular traffic could hinder the breeding and feeding of the wild birds during the construction phase, as well as pose danger to hatchlings and eggs within the project's vicinity.

## Solutions For The Preservation Of Biodiversity

To minimise any potential disturbances to the biodiversity that reside in the vicinity of the Mingus Solar Project, Vena Energy committed a significant amount of resources to shorten the construction period and avoid creating disruptions and noise during the migratory months, while at the same time consulting with Non-Governmental Organizations (NGOs), subject-matter experts and the Chiayi County government throughout the process.

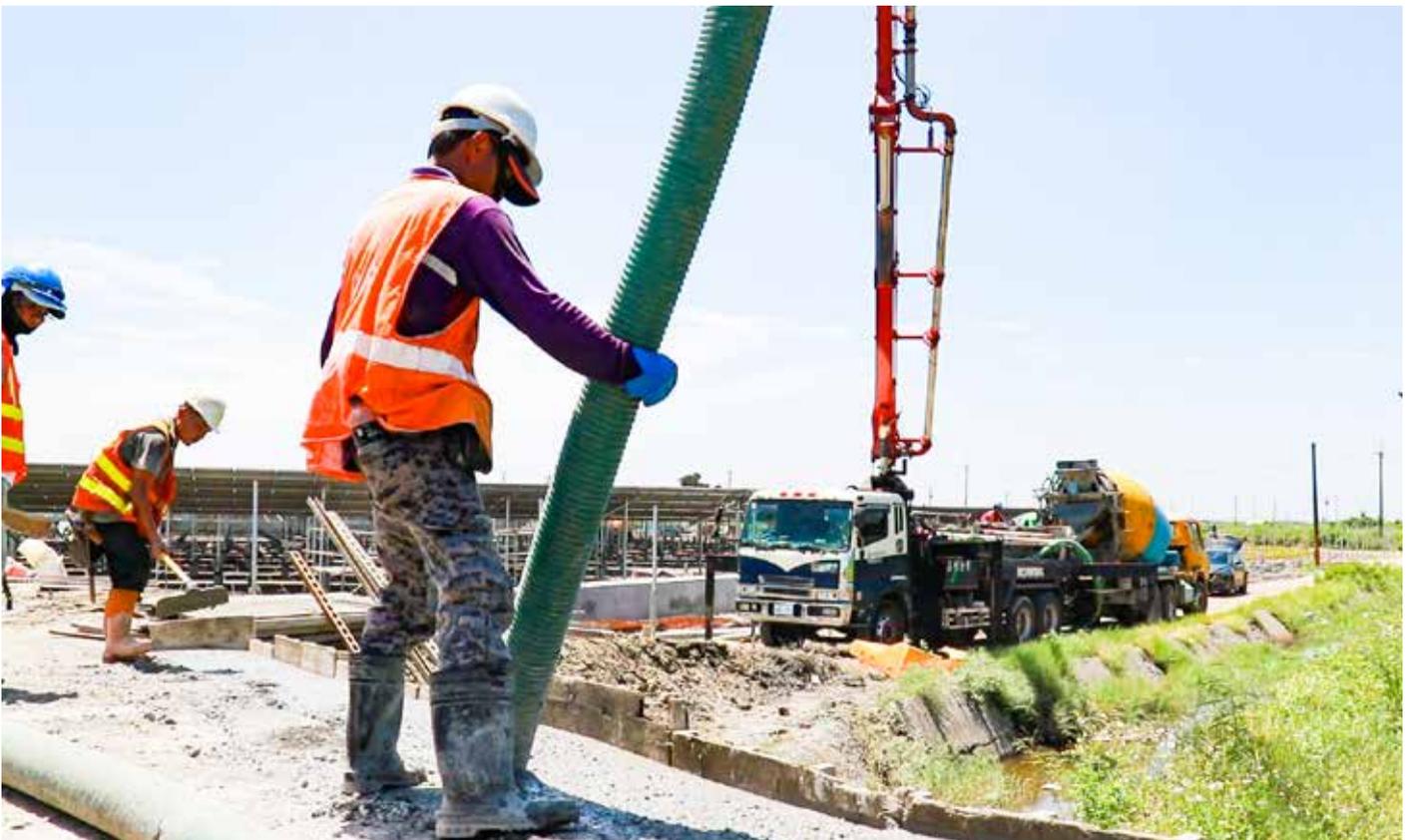
During the construction phase of the project, Vena Energy restored the existing evaporation pools and worked to enhance some of the crystallisation ponds where the wild birds feed and breed. To do this, Vena Energy ensured that the amount of water in the ecological reserve area was maintained by installing a water gate to control the flow of water into the crystallisation and evaporation ponds. This was crucial in maintaining the natural habitat as high water levels would destroy suitable breeding grounds for the wild birds, whereas low water levels would diminish their food supply. This work included the construction of dikes that surrounded the east and south of the area to prevent the water from evaporating and drying up, and a water pump that regulated the water levels.

Another key aspect of environmental and biodiversity preservation was the construction of fences around the Ecological Conservation Area to prevent pedestrians and vehicles from interfering with the feeding and breeding of the wild birds. Construction of the solar panels was also initiated in the southern and northern sections of the salt plain to avoid any impact to the wild birds in the Ecological Conservation Area, particularly during the migratory season.

Vena Energy issued guidelines to the local workforce and third-party contractors about the ecologically sensitive areas of the project site and instructed them on how to preserve animal habitats during the construction activities. Preventive procedures and protocols were also put in place in the event of any accidental injuries to animals, with immediate notification to professional wildlife care groups to then proceed with emergency and rehabilitative care.

In addition, Vena Energy and our contractors devised low-noise construction methods and adaptations to existing machinery to avoid alarming or disturbing wildlife from returning to the Ecological Conservation Area. Roads adjacent to the project site were also sprinkled with water to reduce dust pollution in the air which may have a detrimental effect on the wildlife and the ecosystem.

Together with the additional precautions and mitigation measures carried out by Vena Energy and our contractors, the Mingus Solar Project and the Ecological Conservation Area were completed in less than a year and were fully commissioned in July 2019. Further plans were developed in partnership with the NGOs and the Chiayi County government to construct an education centre dedicated to the public education on the Mingus Solar Project, renewable energy and preservation of biodiversity around the site.



**Conclusion**

During the construction of the Mingus Solar Project, the median for the wild birds from January to April in 2019 was 204. Since the completion of the project, the median for wild birds in the Ecological Conservation area rose to 385 in early 2020,

representing approximately a 90% increase. The Chinese Wild Birds Federation has reported that the number of birds has stabilised, indicating that they have become more comfortable in making the Ecological Conservation Area a permanent home to breed and feed.



# SOCIAL



# 3. SOCIAL

## 3.1. SOCIAL – INTERNAL

### Our People

Vena Energy's most valuable assets are our people. Our staff comprises of more than 500 employees across 9 jurisdictions, representing one of the most comprehensive teams in the Asia-Pacific region that is fully specialised in renewable energy activities.

Vena Energy plays an active role in the wide-ranging action against climate change and for the protection of the environment, and offers our employees the opportunity to be an integral part of the overall solution to one of the biggest challenges of our time.

The virtuous relationship with our external stakeholders allows our team to feel welcome in the communities that host our operations and projects. Many of Vena Energy's employees were born or raised locally where our projects are located, hence further providing them with a vested interest in protecting and adding value to their home communities.

### Our Capabilities

Vena Energy has internalised all the relevant activities for the development, construction, operation and management of renewable energy assets. Our team is comprised of solar and wind industry leaders, engineers, project developers, investment professionals and well-regarded experts in environmental science, local regulations, land development, permitting, interconnection & transmission, construction management and operations.

We have local teams residing in close proximity to our projects in each jurisdiction we operate in. These teams take care of the specific aspects of the projects to ensure full compliance with local rules and regulations, as well as maintaining a continuous relationship with our local stakeholders throughout the life of the projects.

Additionally, we pool our specialised resources and deploy the most relevant experts across our jurisdictions to supplement our local capabilities. The scale and wide geographical reach of Vena Energy allows us to provide among the best integrated services in the sector while maintaining our cost competitiveness.

Some examples of our in-house functions and collaboration among different business units within Vena Energy are listed below:

- Resource assessment: Coordination between engineering teams to ensure resource assessments are consistently and accurately undertaken, using the latest technology to maximise resource and site conditions within the existing project specifications.

- Plant design and construction: Our engineering experts in various jurisdictions collaborate with each other to deliver consistent standards and best practices in plant design, construction processes and quality control across all assets.
- Centralised procurement: Our team of supply chain experts maximises economies of scale and leverages buying power and relationships through the consolidation of group purchasing.
- Project financing: Our investment team has built close business relationships with local and international lenders as well as multilateral development financial institutions, allowing Vena Energy to arrange and secure optimal financing solutions for projects across all of our markets.
- Centralised asset monitoring and data assessment: Our asset management team actively monitors our operational assets 24/7 from Vena Energy's Control and Diagnostic Centre, allowing prompt notification and action to rectify any operational issues in a timely manner and ensure the continuous generation and maximum output of our assets.
- Knowledge sharing: One of Vena Energy's competitive strengths lies in sharing resources and intellectual capital among jurisdictions to bridge the gap in local talent as renewable energy is still an emerging sector in Asia-Pacific.



### 3.1.1. Diversity, Equity and Inclusion

Vena Energy promotes diversity, equity and inclusion, which are our key corporate values and an integral part of our success.

We value, embrace and respect the identity, autonomy and legitimacy of all our team members, and our objective is to achieve 100% success in ensuring that we are all given equitable opportunities and feel we belong in our working environment.

Vena Energy’s continuous emphasis on these core values has also enabled a more virtuous workplace, and we have experienced an increasing sense of confidence and engagement throughout the company. This trend has already produced visible results in terms of

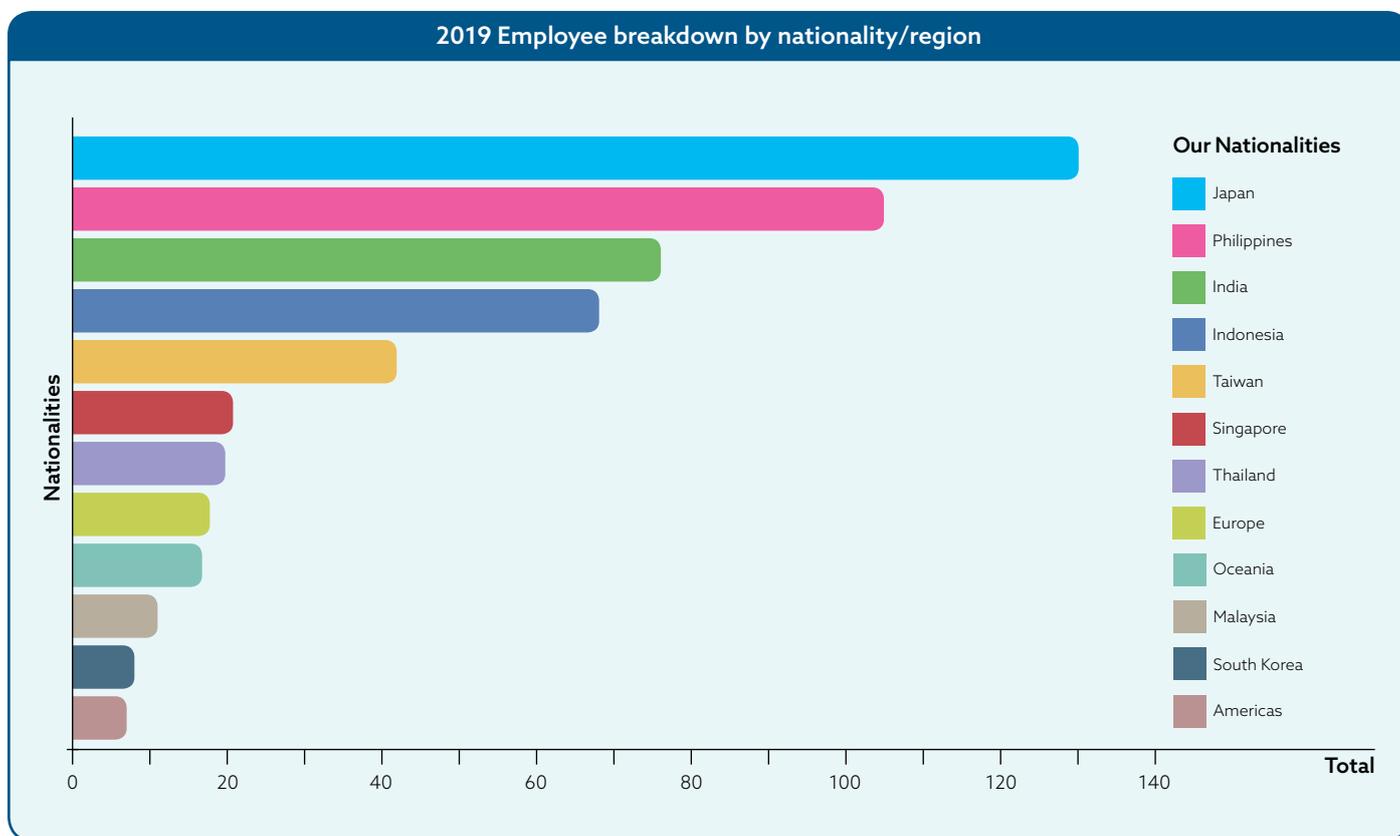
increased productivity, innovation and creativity, as well as attracting talent and increasing our onboarding and retention rates of high-calibre professionals. A greater variety of backgrounds, talents and experiences empowers Vena Energy to have greater adaptability to changing market conditions.

#### Diversity

Vena Energy fully complies with the fair employment practices and rules of all jurisdictions in which we operate. Our Code of Conduct and Human Resources Policy prohibits any form of discrimination, including those based on gender, sexual orientation, race, religion, age, ethnicity, citizenship, marital status and physical or mental disability. Our policies also prohibit

any form of bullying and harassment and we have made available an independent whistle-blower hotline to all employees to report any related form of grievance anonymously.

We actively promote cultural diversity as one of our core values, and we do not tolerate any bias or discrimination in our recruitment process. As a result, our team is very well-diversified, with 21 nationalities and a combination of ethnicities, religions, ages, abilities and languages. We believe our cultural diversity is also one of our key competitive advantages and the main driver of our innovation and creative problem-solving.



We believe it is the duty of every responsible employer to strive for diversity in their own workplace and combat any potential identity biases. In order to achieve the desired diversity in our team, we often need to find ways to overcome the difficulties of systemic underrepresentation of certain identities in the current renewable energy job market. For instance, a significant portion of jobs in our industry usually requires a STEM (Science, Technology, Engineering

and Mathematics) background. Several indices show that women are currently underrepresented in these fields, particularly across the Asia-Pacific region. It is estimated that, in the labour market, only approximately a quarter of women are in STEM fields and only 15% are in the engineering industry<sup>18</sup>. The current gender gap makes it difficult to readily recruit a balanced number of women and men with renewable energy experience in the job market.

Vena Energy’s females-to-males ratio is 0.4x as of the end of 2019 and closing this gender gap is our next objective. We are working towards change by promoting requalification programmes and structuring career paths for talented and ambitious women, shaping an accelerated pathway to become experienced renewable energy professionals and the leaders of tomorrow.

<sup>18</sup> World Economic Forum Global Gender Gap Report 2020, pg 37.

## 2019 Employee breakdown by gender

Jurisdiction	2019 Total Employees		
	Male	Female	Total
Australia	10	5	15
India	57	12	69
Indonesia	50	19	69
Japan	127	35	162
Philippines	70	29	99
Singapore	23	22	45
South Korea	4	1	5
Taiwan	29	15	44
Thailand	10	5	15
<b>Total</b>	<b>380</b>	<b>143</b>	<b>523</b>

As we continue to place an emphasis on diversity in our recruitment process across all our jurisdictions, we have chosen to cast a spotlight on our female team members in STEM-related roles. To commemorate International Women's Day in 2020, we have launched the "Women in Power" campaign via social media. This year-long campaign aims to provide prospective jobseekers and students with an insight into Vena Energy's successful female team members, including their personal development within the renewable energy sector and their contributions to the company.

We believe our plan will allow us to significantly close this gender gap by 2025, and completely by 2030. Vena Energy has prepared similar tangible and actionable solutions to achieve all our other social targets.

### Flexible and Inclusive Workplace

With a team of over 500 people, we expect that some of our

team members may face different challenges from time to time, requiring more flexibility in their job responsibilities. Vena Energy seeks to provide all employees with solutions to address such needs, be they temporary or permanent. We provide market-competitive benefit packages and accommodate flexible working arrangements in most of our offices. We arrange several townhalls and off-site events each year to encourage communication among different functions within the company, including interactions between senior and junior members of the team.

Leveraging on our cross-geographical platform and our regional resource pool, we enable transfers to other jurisdictions and departments that provide further career experiences and opportunities, including valuable job rotations to learn new functions or new markets, which are aligned with personal development goals and business needs.



## 3.1.2. Development and Retention



Vena Energy invests considerable resources in acquiring, developing and nurturing talent in our team. We represent one of the largest and most comprehensive teams in the renewable energy sector, with capabilities across development, engineering, construction, operations and asset management and a deep knowledge of several key markets within the Asia Pacific region. This is Vena Energy's greatest asset, which we strive to retain and build upon.

Vena Energy has set out targets and objectives that guide the hiring, development and retention initiatives across the company:

- Be an employer that our people are proud of
- Empower employees by fostering a productive and enjoyable workplace
- Help all Vena Energy employees maximise their potential
- Prioritise grooming from within over external hires
- Develop a progressively larger pool of talents across our functions and markets

### Leadership Development

Vena Energy intends to provide everyone with the tools to be a leader, and all team members are progressively coached to undertake bigger roles. Our employees usually work in cross-functional and cross-jurisdictional project teams, which are empowered for relevant decision making, while senior managers and functional experts provide them with appropriate guidance.

Vena Energy has established formal executive education programmes as well as coaching and mentoring systems, with the purpose of facilitating succession planning and ensuring we always have the right resources with the right skillsets in the right roles.

### Training and Knowledge Sharing

Vena Energy promotes a culture where our employees are motivated to continuously acquire new skills and broaden their scope of knowledge. Our in-house industry and functional experts conduct internal trainings and knowledge sharing sessions through dedicated initiatives. Knowledge sharing also transpires through daily interactions amongst project teams.

An example is Vena Energy Academy, a bi-weekly knowledge sharing and training event led by functional experts within the organization, which provides our employees with an opportunity to self-develop and learn new skills in different fields.

Vena Energy believes that responsible employers should dedicate resources and invest in the development of their teams. A portion of our budget, in the order of 2% of our payroll cost, is dedicated to learning and development initiatives for our employees.

Apart from job-specific training, we place a huge emphasis on cross-functional training. Vena Energy aims to nurture all-rounded talents and build an integrated platform where cross-functional teams collaborate effectively together. Every team member is given the chance to understand and appreciate the other functions and we promote opportunities for switching careers among different functions and locations.

Finally, each employee is provided with mandatory training on corporate-wide matters such as Crisis Management Awareness, Risk Management, Business Continuity and Anti-Corruption.

### Rewarding performance

Vena Energy aims to attract, recruit and retain the best people and talent in the renewable energy sector across the Asia Pacific region. We promote long-term career development by recognizing and rewarding performance. A new Performance Review Framework was implemented in 2019 to manage objective performance through goalsetting among team members and their direct managers. Annual performance reviews also offer an opportunity to discuss career progression, training needs and other development initiatives.

In 2019, Vena Energy underwent a thorough review and benchmarking of our organization design and job sizing against the renewable energy industry at large. We utilised a third-party HR scale modelling tool to identify and perform these adjustments.

### 3.1.3. Ensuring Occupational Health and Safety

Vena Energy embraces a family-approach culture and a Zero Accident Vision, where no one should be injured at work. Our workforce comprises more than 500 full time employees and 3,540 on-site construction workers, all of whom are an integral part of the Vena Energy family. Human capital is our most important asset and the health and safety of our people is our number one priority. Vena Energy has adopted strict Health & Safety (H&S) policies and procedures, as well as initiatives for education, awareness, training and regulatory measures.

#### Our H&S Mission

- To train employees to embrace H&S policies, procedures and practices
- To be recognized as a leader in H&S performance in the renewable energy sector
- To anticipate, identify, assess, control and review H&S risks across the asset portfolio
- To ensure all contractors and stakeholder activities are carried out according to our H&S policies, standards and procedures

#### Our Commitments

Vena Energy is committed to a Zero Accident Vision, which we intend to achieve through the development of a robust safety culture across all our employees, contractors and visitors throughout the organization, and which encompasses:

- Zero Fatalities
- Zero tolerance towards Health and Safety related incidents
- Minimal Lost Time Injuries, Recordable Injuries, First Aid Cases
- Comprehensive identification of risks and mitigations to minimum possible level of residual risk
- Adequate H&S training, equipment and supervision provided for all activities

#### Our Health & Safety Framework

Vena Energy's H&S Policy defines a common Health & Safety Framework, which involves the identification, assessment and control of workplace hazards and which manages, eliminates or mitigates H&S-related risks. The policy and the framework are reviewed every

time new equipment is purchased, an injury occurs, or in any case at least once a year. All changes are promptly communicated to all employees. Similar to our environmental policies, our contractors and suppliers are also required to meet Vena Energy's H&S standards in order to conduct business with us.

The Vena Energy Board sets out the objectives of the H&S policy and is responsible for implementing the H&S policy.

#### The 8 Golden Rules of H&S

1. Demonstrate leadership – lead by example
2. Identify hazards – control risks
3. Define targets – develop programmes
4. Actively manage contractors – comprehensive coverage
5. Ensure a safe and healthy system - be well organised
6. Safe and healthy work environment - safe plants; safe machinery and equipment; safe work practices
7. Improve qualification and training – develop competence
8. Invest in people – motivate by participation

#### Training and Education

We invest in specialised H&S training for all our staff, providing them with the required knowledge and competence to conduct their work safely. For safety critical roles within the organisation, Vena Energy requires our team members to have appropriate qualifications and continuous trainings, in line with the company's standards or local regulatory and legal requirements, whichever is more stringent.

Regular toolbox talks and in-group tutoring are constantly conducted to cultivate a culture of safety. In 2019, our employees collectively underwent over 10,000 hours of H&S related trainings.

To ensure the quality and timeliness of our training efforts, we document H&S competency assessments and procedures at regional level, covering the following areas:

- The content of the H&S induction trainings and the methods of assessment
- The process to conduct on the job training
- Refresher training requirements, including:
  - Induction and practical training topics
  - New H&S requirements effective since the last training
  - Lessons learned from past events



Lastly, all Vena Energy personnel conducting safety critical work are trained under specific programmes that include, as a minimum, the following areas:

- Basic operational skills
- Specific job task training - specific H&S risks and procedures and safe work practices applicable to the task
- Emergency response and control procedures - training covers safe and prompt shutdown of facilities, accounting for personnel, first-aid assistance, notification of affected parties, coordination with the site and local emergency response groups, and notification of regulatory agencies and firefighting organisations

### Risk Assessment and Control

Vena Energy conducts detailed H&S risk analysis of all activities executed throughout the lifecycle of our projects, spanning development, construction, operations and decommissioning. This analysis is used to identify H&S risks and the most effective processes to manage them.

Hazard identification (HAZID) studies are used to detect and reduce any threats that could cause injuries to our employees, environmental damages, property loss, reduction of power generation or other liabilities. HAZID is a general risk analysis tool designed to alert our responsible teams of threats and hazards as early in the process as possible. The studies also provide a qualitative analysis of a worksite to determine its safety risk level.

A hazard and operability study (HAZOP) is a structured and systematic examination of a complex planned or existing process

or operation, to identify and evaluate problems that may represent risks to personnel or equipment. It is used to identify anomalies in the working environment and pinpoint their root causes. It deals with complex workplace operations, which in case of a major accident could potentially lead to significant injury or loss of life.

HAZID and HAZOP studies are performed for all projects during the development stage and before construction. We also complete a Take-5 safety checklist to identify health and safety hazards in the early development stages.

Changes to the construction or operational activities can potentially invalidate prior risk assessments and therefore require a risk re-assessment, which shall be conducted with the same rigorous approach that is applied to new processes and activities.

Vena Energy has adopted a unified approach to identifying, assessing and evaluating risks throughout the organisation which is contained within the Vena Energy Risk Management Procedure. To ensure comprehensive H&S management across all our activities, external EPC and O&M Contractors are obliged to follow Vena Energy's risk management processes.

### Supervision and Inspection

Vena Energy has established an organisational structure that provides a tiered approach to management and supervision, supporting the effective communication and decision-making processes throughout the organisation. Each functional level of leadership has been authorised to make decisions in accordance with the risk thresholds and

approval authorities. Specific H&S roles and responsibilities have been outlined throughout all our plans and procedures.

Our sphere of control extends beyond our full-time employees to ensure H&S guidelines and procedures are applied to all our activities. The management of contractors is therefore a critical requirement for Vena Energy. All our leaders actively engage with contractors and are expected to apply the same duty of care to them like they do for our own employees.

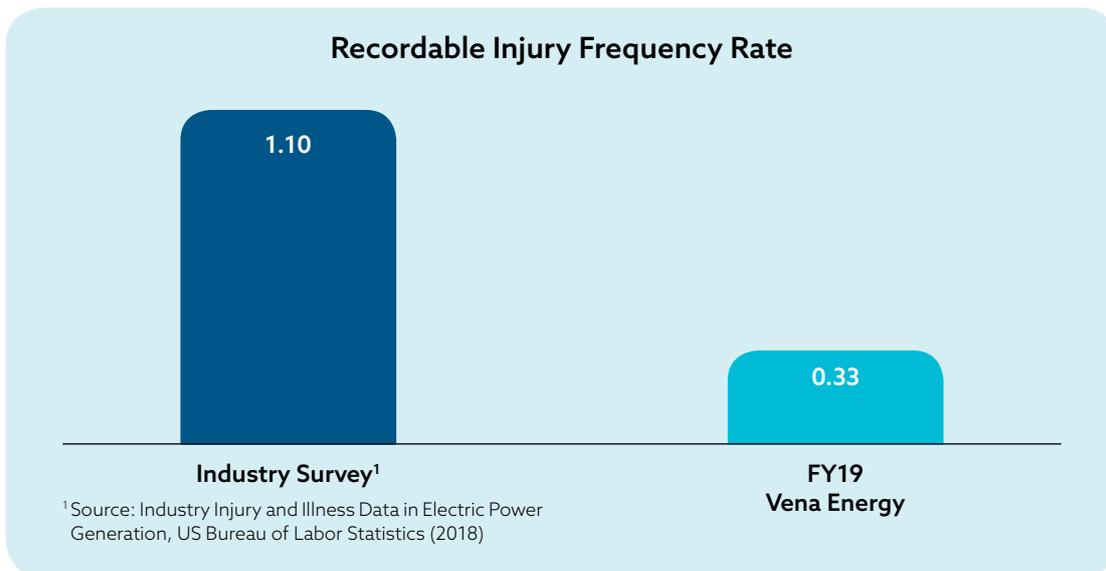
Contractors are obliged to submit weekly and monthly reports to Vena Energy and to measure H&S performance together with event statistics. Site inspections are conducted at least on a weekly basis, which ensures that the site condition, H&S equipment, Personal Protective Equipment (PPE) and all other equipment are functional and safe for use. A documented record of these inspections is maintained as an auditable record.

An audit schedule is developed and maintained to enable inspections and audit activities at our sites. Corporate, regional and project level H&S performance is monitored and reported to evaluate compliance and performance. Verifications by third parties are conducted to validate the accuracy of the data in accordance with the audit schedule. In addition to third-party audits performed under regulatory requirements, a total of 887 H&S internal audits were conducted in 2019 through safety inspections, carried out at least once a month on unmanned sites and once a week on manned sites. Daily safety walks are carried out on construction sites.

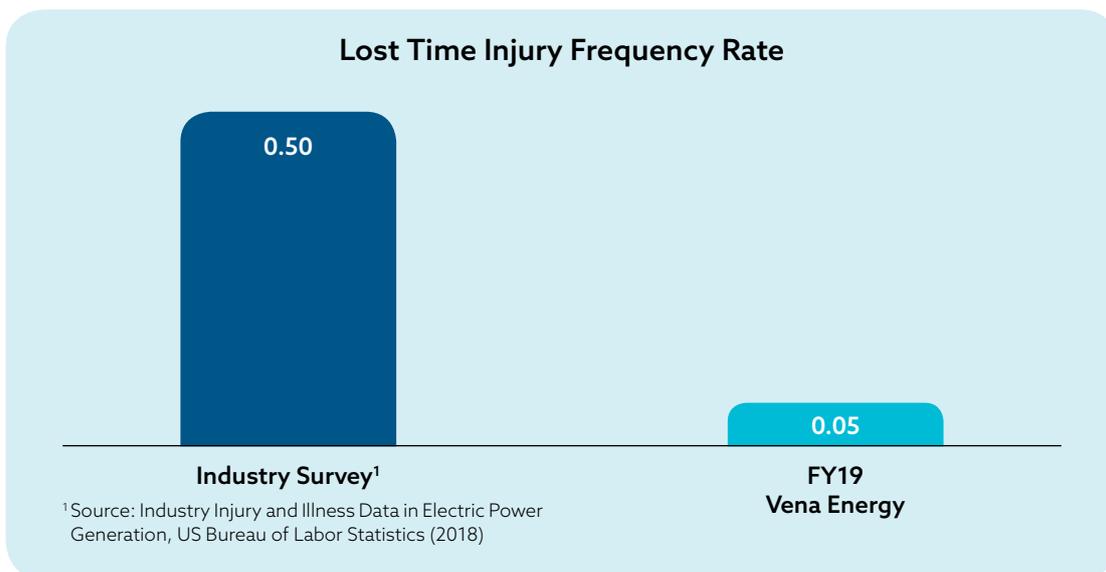
### Safety Performance for FY2019

Hours Worked	4,214,864
No. Of First Aid Cases	23
First Aid Cases Rate	1.10
No. of Recordable Cases	7
Recordable Rate	0.33
No. of Lost Time Cases	1
Total Lost Time (days)	7
Lost Time Injury Rate	0.05

In 2019, there were no fatal workplace accidents that occurred at Vena Energy. The rate of recordable cases of work-related injuries and illnesses (beyond first aid) was 0.33 per 100 equivalent fulltime workers. The rate of lost time cases was 0.05 per 100 equivalent fulltime workers.



**Recordable Injury Frequency Rate.** Number of work-related accidents and illnesses per 200,000 worked hours, which approximately equals to the number of hours worked by 100 people in one year. (It includes injuries that occur during work-related travel that result in lost time or no lost time and/or that lead to medical treatment, restricted work, or work at a substitute workstation).



**Lost Time Injury Frequency Rate.** Measures work-related accidents resulting in lost time per 200,000 worked hours, which approximately equals to the number of hours worked by 100 people in one year.

Vena Energy has a prescribed Incident Reporting and Investigation Procedure embedded within our Code of Conduct which defines roles and methods employed to guarantee prompt communication of incidents and execution of impact assessment, root cause analysis and corrective action plans, as well as their monitoring. We seek to act immediately to reduce risks of injury incidents and fatalities, identify root causes of any potential accidents and take all necessary measures to prevent comparable cases in the future.

## 3.2. SOCIAL – EXTERNAL

Vena Energy firmly believes in engaging with our host communities throughout the lifecycle of our projects, with the objective of enabling sustainable social and economic development locally.

We support local employment by creating job opportunities for the members of our communities. Our projects are often located in rural areas and offer an exciting opportunity to the younger generations to build their careers and be gainfully employed in their birthplaces. This allows them to remain closer to their families and it helps to prevent rural-urban migration with the consequent deterioration of local economies.

We support local procurement policies and work with local suppliers wherever possible to help the development of the local industrial sector.

We also commit to making community contributions to support a range of cultural, educational, environmental and social initiatives within our host communities and our jurisdictions. We aim to operate our business in a socially sustainable manner and employ clear and transparent standards of corporate governance in the selection, execution and management of Corporate Social Responsibility (CSR) programmes. Our Sustainability Committee provides oversight of our CSR activities in coordination with our local country teams and ensures that our CSR initiatives are aligned with Vena Energy's corporate values.

### 3.2.1. Labour and Preserving Human Rights

In line with the United Nations Global Compact (UNGC) principles on human rights, we firmly believe that every individual should be treated with equality and dignity. Vena Energy is committed to upholding human rights and eliminating forced labour, child labour and discrimination from any business processes and activities that are conducted in relation to our business. These principles are clearly outlined in our Environmental Social & Governance ("ESG") Policy, which prohibits any direct or indirect involvement of any type in any activities involving exploitative, forced or child labour and human rights violations. As part of our due diligence process, we take appropriate measures to ensure that our local counterparts, suppliers and contractors comply with the United Nations Universal Declaration of Human Rights and the United Nations International Labour Standards ("UN ILO").

Vena Energy instils the Human Rights principles on the Code of Conduct and related policies in our employees through our regular trainings, both in-person and online. We have made available an independent whistle-blower hotline to all employees to anonymously report any related form of grievance, and any reported incidents are immediately escalated to Vena Energy's Audit and Risk Committee. The compliance team is responsible for maintaining the records of any reported breaches or incidents, managing them appropriately and monitoring their redressal.

In 2019, Vena Energy did not identify any risk of human rights abuses, child labour, forced labour or discrimination, and we continue to strengthen these principles by exercising management and monitoring processes over our business practices.



## 3.2.2. Empowering Communities

Our aim is to support our host communities through strategic social investments and thoughtful involvement. We support local employment through the creation of job opportunities, with a total of 3,540 local jobs created in 2019 across our

construction projects in Australia, India, Indonesia, Japan and Taiwan. For the projects completed in 2019 we integrated a part of this staff into the projects' full-time operational teams, creating full-time local employment.

### Local Job Opportunities in 2019

Location	Project	Peak Number of On-Site Workers During Construction in 2019
Australia	Tailem Bend Solar Project	251
India	Amreli Wind Project	85
Indonesia	Tolo Wind Project	760
	Minut Solar Project	362
	Lombok Solar Project	92
	Lombok 2 Solar Project	66
	Lombok 3 Solar Project	99
Japan	NEJ Solar Project	162
	Towada Solar Project	146
	Hitachiomiya Solar Project	320
	Ono Solar Project	270
	Shichinohe 9 Solar Project	46
	Wakuya	40
	Kawakami Solar Project	24
	Kawakami 2 Solar Project	25
	Aomori 2 Solar Project	3
	Shichinohe 6 Ext Solar Project	65
	Shichinohe 8 Ext Solar Project	72
Taiwan	Coltrane Solar Project	130
	Mingus Solar Project	522
<b>Total</b>		<b>3,540</b>

Our local teams work closely with municipalities, state governments and our host communities to identify ways in which we can contribute and bring about sustainable benefits to them. Our CSR initiatives are created in collaboration with our local stakeholders and focus on the following areas to drive sustainable development:

- **Education:** Provision of scholarships, internships and other education-related support, such as donating new classrooms, supplies and IT equipment to schools.
- **Healthcare:** Access to basic and preventive healthcare is a key priority for communities located near some of Vena Energy's rural asset sites. Vena Energy has provided both healthcare and healthcare-related services tailored to meet the material needs of these communities.

- **Infrastructure:** Our CSR infrastructure projects aim to improve access to basic sanitation facilities and potable water, and to improve road infrastructure near project sites. Vena Energy also provides support for the repair of local schools, hospitals and community buildings.

- **Access to affordable clean energy:** Vena Energy educates local communities on the ways affordable clean power can support economic and social development.

In 2019, Vena Energy's CSR expenditure was close to \$400,000 and our employees contributed 3,436 volunteer hours to over 60 CSR initiatives, reaching more than 35,000 beneficiaries from Australia, India, Indonesia, Japan, the Philippines, Singapore, Taiwan and Thailand.

## 3.3. CORPORATE SOCIAL RESPONSIBILITY HIGHLIGHTS

### 3.3.1. Australia



#### Overview

In 2019, Vena Energy completed the 127 MW Tailem Bend Solar Project ("TBSP"), and over the course of its construction created approximately 250 job opportunities within our host community. The workforce consisted of 40% locals and 10% identified as Aboriginal or Torres Strait Islander descent. Vena Energy is also currently developing a 100MW Battery Energy Storage System (BESS) in Wandoan South in Queensland.

Our operational portfolio in Australia can produce 207,284 MWh yearly, which can supply 34,632 Australian households with clean, renewable energy yearly. In comparison to thermal-power generation, our portfolio can reduce approximately 210,348 tonnes of GHG emissions, while saving 195 million litres of water annually.

#### Community Initiatives

##### Local Government

The South Australian Local Government Building Surveyor hosted by Coorong District Council (Local Government authority applicable to the TBSP) was

facilitated by Vena Energy. All attendees were practicing building surveyors currently employed by the Local Government and across several Local Government Areas (Councils). The opportunity represented a successful example of a grid scale solar facility, encouraged and supported by local council, within a rural district.

In addition, the South Australian Local Government Professionals Network is a network of local government professionals taking part in a Leadership Programme. The attendees utilised the site tour as an opportunity to include TBSP as a case study in their completion of the Programme. TBSP was highlighted as a significant development in a rural community that encourages economic and social positives for the community.

##### Local Industry

Vena Energy also hosted and facilitated a site tour to an industry body that were using the opportunity as an investigation into solar. As the industry partners are implementing a roll-out of solar assets across their properties, TBSP provided an

exchange of information to help prepare their development teams for the roll out.

##### Education

Vena Energy facilitated and sponsored the Inaugural Renewables Road Show, which included funds for accommodation and travel. The tour was for students of Tension Woods College in South Australia, of the Tailem Bend Solar Farm to demonstrate the physical components and scale of a grid sized facility.

About 40 students were undertaking a Technical and Further Education ("TAFE") qualification as part of their studies, Certificate in Electro Technology, which included a local project on campus installing a 65 kW system. This was compared to TBSP at 95 MW to give the students perspective on the potential of solar. The school used the opportunity to demonstrate the significance of the wider renewables picture in South Australia as well as the range of potential careers available within the industry.

## 3.3.2. India

### Overview

Vena Energy currently operates and maintains 15 solar and wind projects in India, with a total capacity of 679 MW, and is currently constructing a 97 MW wind project which is expected to be commissioned in Q4 2020.

Our operational and construction portfolio in India produces up to 1,617,649 MWh yearly, which can supply 1,675,945 Indian households with clean, renewable energy yearly. In comparison to thermal-power generation, our portfolio reduces approximately 1,441,422 tonnes of GHG emissions, while saving up to 1,530 million litres of water annually.

### Community Initiatives

In 2019, Vena Energy has spent over 112 man-hours participating in community initiatives that have benefited more than 9,000 beneficiaries in terms of healthcare, education and social initiatives amongst our host communities.

### Healthcare

Vena Energy has been actively participating

in the provision of medical treatment via a mobile clinic in the villages of Dewas and Ujjain districts in India since 2017. Working in partnership with local NGO HelpAge and the Siemens Gamesa (India) Foundation, the mobile clinic continues to provide curative and preventive medical advice and treatment to more than 15,000 villagers every week in 2019.

In addition, we partnered with the Akshaya Patra Foundation to provide meals to pregnant women and young children. Many of these children and women come from disadvantaged backgrounds in and around the Sangareddy village in the state of Telangana, and often cannot afford food daily. The initiative aims to give back to the host communities living near our 130MW TS Solar Project and to sustain the health of mothers and their children.

### Education

Through the Juwi Spandana Trust, we installed recycled solar panels and other installation materials to provide reliable and renewable energy to the Gandhi Grameen Gurukul school in the state of Karnataka,

where our 135MW KN Solar Project is located. The school was established in the 80s, modelled around Gandhian values. It is a non-profit residential school that houses 240 students who are taught vocational skills alongside education curriculum. The initiative addressed the critical issue of intermittent power outages that have disrupted the school's operation and is aimed at the continuation of essential education amongst the young in the villages.

### Social

In response to community requests, we contributed to a "Sustainable Livelihood for Women" for seven villages within the Patan district. The initiative was aimed at providing training and income generation channels such as tailoring and handicraft design, to facilitate alternative or additional revenue streams for women who live in poverty and without a formal training or basic education.



### 3.3.3. Indonesia



#### Overview

Vena Energy is the largest renewable energy IPP in Indonesia, as we commissioned the Minut and Lombok Solar Projects totalling 42 MW and the 72 MW Tolo Wind Project. During the construction of these projects, Vena Energy created an estimated 1,379 job opportunities amongst our host communities in Jeneponto, Likupang and Lombok in Indonesia.

Our operational portfolio in Indonesia is capable of producing up to 308,787 MWh yearly, which supplies up to 235,188 Indonesian households with clean, renewable energy yearly. In comparison to thermal-power generation, our portfolio reduces approximately 261,340 tonnes of GHG emissions, while saving up to 292 million litres of water annually.

#### Community Initiatives

Vena Energy has established close relationships with our host communities since 2015. In 2019, the team has participated in and contributed to

community initiatives that have helped more than 3,200 beneficiaries in terms of education, healthcare, and social activities, amongst others.

#### Healthcare

Vena Energy partnered with global healthcare NGO LearntoLive to provide free dental and medical services to 481 villagers in the town of Wineru, near our Minut (pictured above) Solar Project in South Sulawesi.

#### Education

In partnership with ING, Vena Energy donated critical school supplies and conducted general improvements to the Peduli Anak Foundation, a non-profit organization dedicated to providing care, education, in-home family care, medical and legal support for thousands of underprivileged, neglected or abused children who had been placed in the care of Indonesian child social services.

Over the course of three days, employees from both Vena Energy and ING donated stationery, furniture, laptop computers, washing machines, fridges and medical equipment to a local school, while also spending time with the children, engaging them in activities such as refurbishing their library together, and the cultivation of an organic farm within the school's premises.

#### Social

Vena Energy also conducted a forum for women in the local communities on empowerment and entrepreneurship, aimed at creating opportunities to improve family welfare and encourage alternative revenue streams. Through this forum, a Women's Business Group was formed and plans to cultivate bananas which are indigenous to the area and then produce banana chips. The group will go on to support the production by providing facilities, as well as assisting in the food certification needed for mainstream sale and promotion.

### 3.3.4. Japan

#### Overview

At the end of 2019, Vena Energy operates and maintains 19 operational renewable energy projects in Japan totalling 350 MW, including two projects that were commissioned in the same year. Over the course of construction, the two solar projects created an estimated 308 job opportunities amongst our host communities in Japan.

Our operational, construction and shovel ready portfolio in Japan is capable of producing 1,157,286 MWh yearly, which can supply 230,507 Japanese households with clean, renewable energy yearly. In comparison to thermal-power generation, our portfolio can reduce approximately 688,753 tonnes of GHG emissions, while saving 1,091 million litres of water annually.

#### Community Initiatives

In 2019, Vena Energy participated in community initiatives that have benefitted more than 300 beneficiaries and many others in terms of education and social initiatives amongst our host communities.

#### Education

In 2019, Vena Energy donated towards the provision of Internet access to the Shichinohe Junior High School. The aim of the initiative was to enhance the IT-related education to the approximately 161 students. We also donated to the Kami-machi Scholarship, to encourage students within Kami-machi to become future leaders of the community and contribute to community development.

#### Social

We donated towards a disaster recovery fund for the host communities within the Hyōgo, Miyagi, Tochigi and Ibaraki prefectures when Japan was hit by two severe typhoons, which caused widespread damages. In addition, we also donated to Place to Grow, an NGO that supports, connects and inspires the next rising generation of community leaders, as well as contributing to the recovery of the disaster-stricken Tohoku communities. Vena Energy employees also volunteered at the annual Christmas event for the children of the communities.



### 3.3.5. Philippines

#### Overview

Vena Energy operates and maintains five solar and wind projects totalling 248 MW in capacity. Capable of producing 386,127 MWh yearly, our renewable energy portfolio in the Philippines can supply 368,766 Filipino households with clean, renewable energy yearly. In comparison to thermal-power generation, our projects in the Philippines can reduce approximately 320,777 tonnes of GHG emissions, while saving 364 million litres of water annually.

#### Community Initiatives

Vena Energy has built a strong relationship with our host communities and local and federal regulators in the Philippines since 2014. In 2019, Vena Energy spent approximately 500 man-hours across education, healthcare and social initiatives that have helped more than 16,000 beneficiaries amongst the host communities where our projects are located.

#### Education

Vena Energy initiated a scholarship for two university freshmen of the Mariano Marcos

State University. The scholarship provides financial support to the students who come from less fortunate families, and Vena Energy has committed to support two additional new scholars amongst the incoming freshmen per school year.

As part of the School Maintenance Week initiative by the Department of Education, Vena Energy donated assorted painting and cleaning supplies. In addition, employee volunteers refurbished the Labuagon Elementary School.

#### Healthcare

Vena Energy continues to contribute to the Zero Hunger Feeding Programme, which aims to bring down the number of malnourished children in our host communities through a yearlong feeding programme of Mingo, a nutritious instant powder mix (of Moringa, Munggo and Rice) that turns into rice porridge when mixed with water. The Mingo feeding programme ensures that children get the nutrients they need for optimal growth and development.

Vena Energy also supported the Rizal Provincial Health Office through the donation of medicine to support the medical mission of RPG. The medical mission aims to provide medical attention and services to the poor and far flung barangays of the Province of Rizal.

#### Social

The 54MW Pililla Wind Project in the Rizal Province continues to draw tourism to the region, with more than 718,000 tourists in 2019 visiting the project. The local Visitor Centre serves as both a venue for tourists to learn about renewable energy and as an opportunity for local residents to sell their arts and crafts.

Vena Energy has also continued our yearly Christmas Shoe Drive, in which we purchase shoes for underprivileged elementary school children during the Christmas season.



### 3.3.6. Taiwan



#### Overview

Vena Energy commissioned the 10 MW Coltrane Solar Project and the 70 MW Mingus Solar Project in 2019, increasing our operational portfolio in Taiwan to 90 MW. During the construction of both projects, we hired 652 local workers among the host communities in the Chiayi and Yunlin counties.

Our operational and shovel ready portfolio in Taiwan is capable of producing 144,440 MWh yearly, which can supply 26,795 Taiwanese households with clean, renewable energy yearly. In comparison to thermal-power generation, our portfolio reduces approximately 71,254 tonnes of GHG emissions, while saving 136 million litres of water annually.

#### Community Initiatives

Vena Energy regularly consults with the local village leaders, city and county government officials to identify the needs of the host communities around our renewable energy projects. In the past year, the team has focused on

education, environmental conservation, infrastructure and social initiatives that have helped more than 4,500 beneficiaries.

#### Education

To encourage students in the neighbouring villages in the Beinan Township, Vena Energy provided a scholarship and support for athletic classes to the Zhiben primary and junior high school.

#### Environment

In partnership with the Taiwan Bird Association and Kun Shan University, Vena Energy conducted an extensive study on the habitat, movements and behaviour of local and migratory birds within the vicinity of the Mingus Solar Project. The study also monitored the substances in the water and mud throughout the year and the adjacent ecological preservation area built by Vena Energy as part of the project. These partnerships have enabled large numbers of local wildlife as well as the endangered Black-Faced Spoonbills to return to the area to breed and feed during the winter months.

#### Infrastructure

We donated NTD\$4.5 million to the Chiayi County Government, for the purpose of refurbishing the road near the 70 MW Mingus Solar Project in Taiwan. The road adjacent to the project is the main artery that leads towards the Budai Township, and large cracks have made it difficult for vehicles to travel safely, which hindered the transportation of goods and economic growth of the county. The donation was received by the mayor of Chiayi County, Mr. Weng Zhangliang (翁章梁), at a ceremony that commemorated the donation, as a contribution back to our host community for their support during the journey of construction and operation of the solar project.

#### Social

Vena Energy collaborates with local community leaders and governments to actively support local festivities and events, in addition to providing meals to villagers living under the poverty line.

### 3.3.7. Thailand



#### Overview

In Thailand, Vena Energy currently operates and maintains 10 solar projects with a total capacity of 92 MW, and our operational portfolio produces around 138,611 MWh yearly, which supplies 58,887 Thai households with clean, renewable energy yearly. In comparison to thermal-power generation, our projects in Thailand reduce approximately 78,908 tonnes of GHG emissions, while saving 131 million litres of water annually.

#### Community Initiatives

As one of our earliest markets since 2012, Vena Energy has built a strong

and long-standing relationship with the communities that host our renewable energy projects. In the past year, Vena Energy has spent over 168 man-hours participating in community initiatives that have helped more than 1,450 beneficiaries through education and social initiatives.

#### Education

Schools in rural Thailand often lack resources compared to the urban areas. Working in partnership with the provincial authorities, Vena Energy donated bicycles, sports equipment and stationeries to the Ban Bak School in the Waring Chamrab District and to the Child Development

Centre in Thamkrataihong and Had Siew sub-districts.

#### Social

The province of Ubon Ratchathani was battered by floods caused by tropical storms Podul and Kajiki in 2019 causing the worst flooding in the last 17 years, which affected the livelihood and safety of around 32,306 families. Vena Energy activated our employees to provide assistance to the flood victims by supplying essentials, cleaning supplies and equipment.

### 3.3.8. South Korea



#### Overview

In March 2019 Vena Energy opened a permanent office in Korea and started our journey to deliver sustainable energy solutions to our 9th business jurisdiction across the Asia-Pacific region. Our team has already initiated 459 MW of onshore and offshore wind development since then. Vena Energy is also exploring new technologies, including battery and green hydrogen energy storage systems.

#### Community Initiatives

A focus area for Vena Energy is offshore wind development which requires strong support from both local government and our host communities. Vena Energy acquired a 384 MW offshore wind business permit in the nearshore of Tongyoung city, southern ocean of the peninsula, and we are collaborating with our strategic offtake partner Korea Midland Power in launching a community support programme for local fisheries associations and residents living in the islands around the project site. The programme aims to conserve and protect marine resources and sustain the livelihood of the local fisheries.



### 3.3.9. Singapore

#### Overview

As the corporate headquarters of Vena Energy, the Singapore office oversees the development, construction and operation of more than 11 GW of renewable assets across nine jurisdictions in the Asia Pacific region. Corporate sustainability frameworks and policies are also established at the headquarters, which drives the initiatives and activities across local offices.

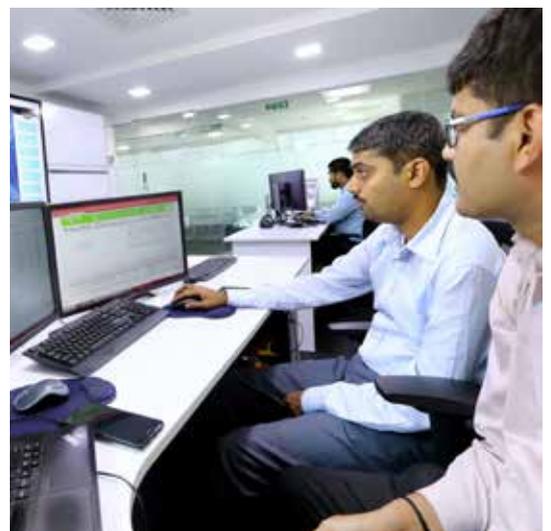
#### Community Initiatives

In the past year, Vena Energy helped to raise employee and public awareness on the impact of improper waste disposal along the coastlines of Singapore. Employees embarked on a coastal clean-up initiative and collected more than 80-kilograms of trash that was washed up on-shore and along the common areas frequented by visitors. We also participated in the Gifts of Joy initiative, where monetary donations and presents were given to children with special needs.



Coastal clean-up group photo

# GOVERNANCE



# 4. GOVERNANCE

## 4.1. BOARD OF DIRECTORS AND MANAGEMENT TEAM

Vena Energy is committed to the highest standards of business ethics and integrity.

Our Board of Directors has extensive experience in operating and investing in sustainable infrastructure and has established a robust corporate governance framework throughout the entire business. Our senior management team, led by Vena Energy's CEO, has extensive qualifications and a proven performance track record with an average of approximately 21 years of relevant working experience.

We are committed to implementing a robust corporate governance framework through clear investment strategies and detailed due diligence and approval procedures. Our corporate governance structure is overseen by several committees. In addition to the Sustainability Committee, the Board has established three committees to ensure robust, independent and effective oversight of our business:

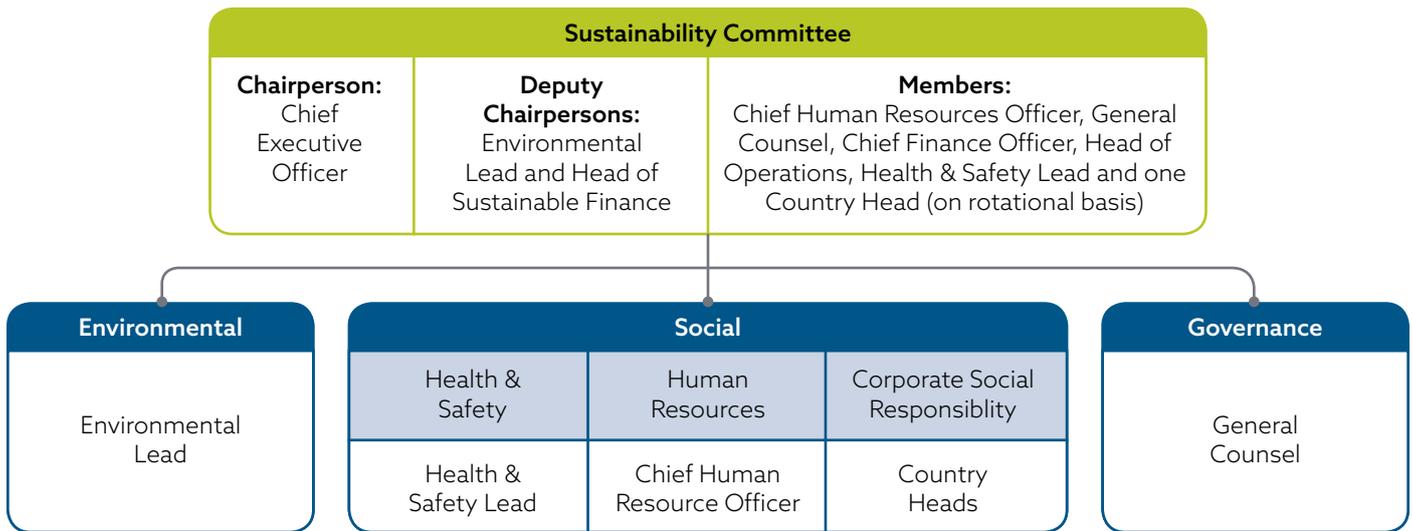
BOARD COMMITTEE	COMMITTEE MANDATE
Investment committee	The Investment Committee oversees the investment, divestment and development activities of Vena Energy, including the alignment of investment decisions with our corporate strategy and evaluating the effectiveness of our investment policy.
Audit and Risk Committee	The Audit and Risk Committee, whose members are independent of executive management, provides independent oversight and monitoring of Vena Energy's audit, compliance, internal controls and risk related functions and processes. The committee meets at least every quarter to assess and monitor Vena Energy's risk management practices relating to operational, reputational and financial risks, regulatory compliance, financial reporting practices and the enforcement of business ethics and internal controls.
Remuneration Committee	The Remuneration Committee, whose members are independent of executive management, assists the Board in relation to remuneration, succession planning and related matters.



## 4.2. SUSTAINABILITY COMMITTEE

Vena Energy's Board sets our sustainability strategic direction and provides rigorous oversight through the Sustainability Committee, which drives the promotion, implementation and monitoring of our sustainable business practices. In particular, the Sustainability Committee oversees Vena Energy's sustainable investment matters including the oversight of environmental and social risk management, corporate responsibility and investment initiatives and implementation of Vena Energy's Green Financing Framework, which includes the allocation of green financing proceeds towards Eligible Green Projects. The Sustainability Committee further monitors the positive impact of Vena Energy's business activities, ensuring we are meeting our ambitions.

While the responsibility for implementing our ESG Policy lies with all our employees, the Sustainability Committee oversees the implementation of Vena Energy's sustainability mandate through direct reporting from key individuals across our business as identified below:



## 4.3. MANAGEMENT FRAMEWORK

Our decision-making and investment processes are guided by our Management Framework encompassing all our business activities. This framework is central to our sustainable business model and is developed in accordance with international standards and industry best practices. Vena Energy continuously seeks to improve and apply relevant international best practice standards to this framework.



## 4.4. VENA ENERGY GOVERNANCE POLICIES

We operate our business in accordance with comprehensive policies and procedures, the foundation of which is our Code of Conduct. Vena Energy's Code of Conduct sets out our core values and is designed to help our staff and third parties understand and incorporate our ethical and professional principles into their practices, including:

- Integrity
- Business Ethics
- Nurturing of People & Teamwork
- Corporate Governance
- Compliance Culture
- No Harassment or Conflicts
- Transparency and Fair Dealings
- Corporate Social Responsibility

By upholding the values articulated in the Code of Conduct, Vena Energy aspires to go beyond conducting business in accordance with applicable laws and regulations and to demonstrate an exemplary model of integrity, business ethics and transparency. We believe a high standard of personal and professional conduct is a fundamental building block to establish a sustainable and socially responsible business. We expect all internal and external stakeholders including directors, employees, contractors and consultants to uphold the Code of Conduct principles in their everyday dealings to further Vena Energy's sustainability agenda and establish a collaborative, nurturing and positive work culture.

Vena Energy's Anti-Corruption Policy prohibits all forms of bribery and corruption and provides a framework for the identification and mitigation of risks relating to corruption by requiring thorough due diligence of potential business partners and intermediaries, incorporation of our values and standards into the activities of these third parties and regular education and training for all staff. Our Anti-Corruption Policy and practices are benchmarked against international standards, incorporating practices recommended by, among others, the US Department of Justice, the UK SFO and other governmental authorities. All employees receive training on our Anti-Corruption Policy and certify their compliance with it on a regular basis. Our Compliance function monitors the policy's effectiveness and regularly assesses its implementation, suitability and adequacy. The systems and processes underpinning our internal controls are subject to regular audits to ensure that they are effective in addressing bribery and corruption.

We place the highest expectations on our third party vendors, who are evaluated based on several criteria, including our policies and procedures. We do not conduct business with vendors who cannot satisfy the highest standards of reliability and integrity and meet our requirements on, among other things, environmental, labour and health and safety matters.

The effectiveness of our policies and procedures depends on transparency in communications throughout the organisation, including reporting of concerns by staff and third parties, whether regarding safety, malpractice, bribery, fraud or misconduct. Where employees wish to report concerns anonymously, we have established a dedicated whistle blower channel where these concerns can be reported anonymously.

## 4.5. OVERVIEW OF ESG POLICY

Vena Energy's ESG Policy is central to upholding our sustainable business model and values. Vena Energy has implemented an ESG Policy across all our activities in accordance with local and international standards that encompass:

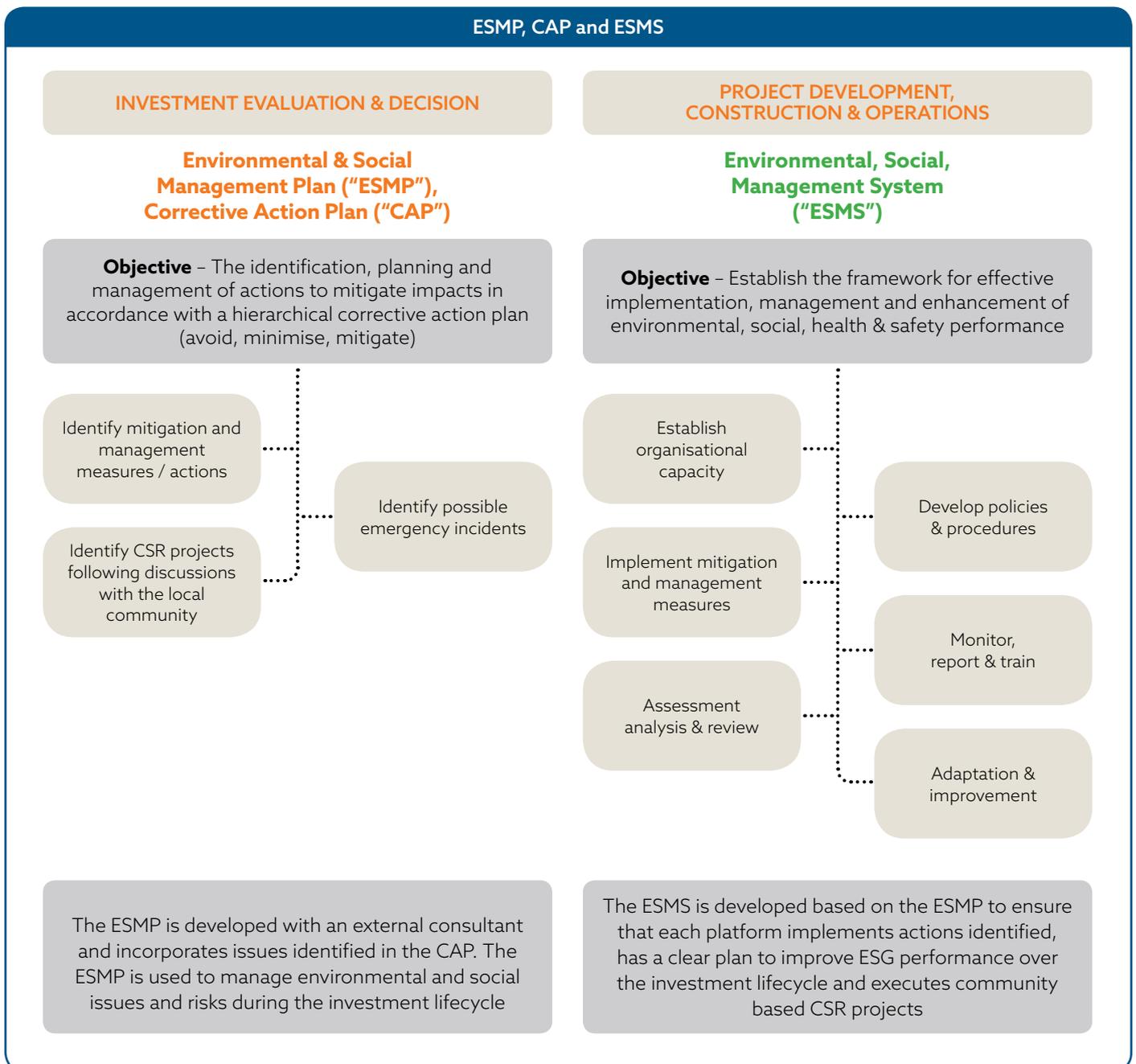
- Local environment, health and safety laws and regulations
- IFC Performance Standards
- World Bank Group Environmental, Health and Safety Guidelines
- International Labour Organisation Declaration on Fundamental Principles and Rights at Work
- UN Guiding Principles on Business and Human Rights

The ESG Policy provides guidelines on key ESG-related areas including the selection of investments and the implementation of appropriate stakeholder engagement processes at each of our projects. Introducing ESG considerations into our decision making is important to ensuring value creation for our stakeholders and the long-term success of our business.

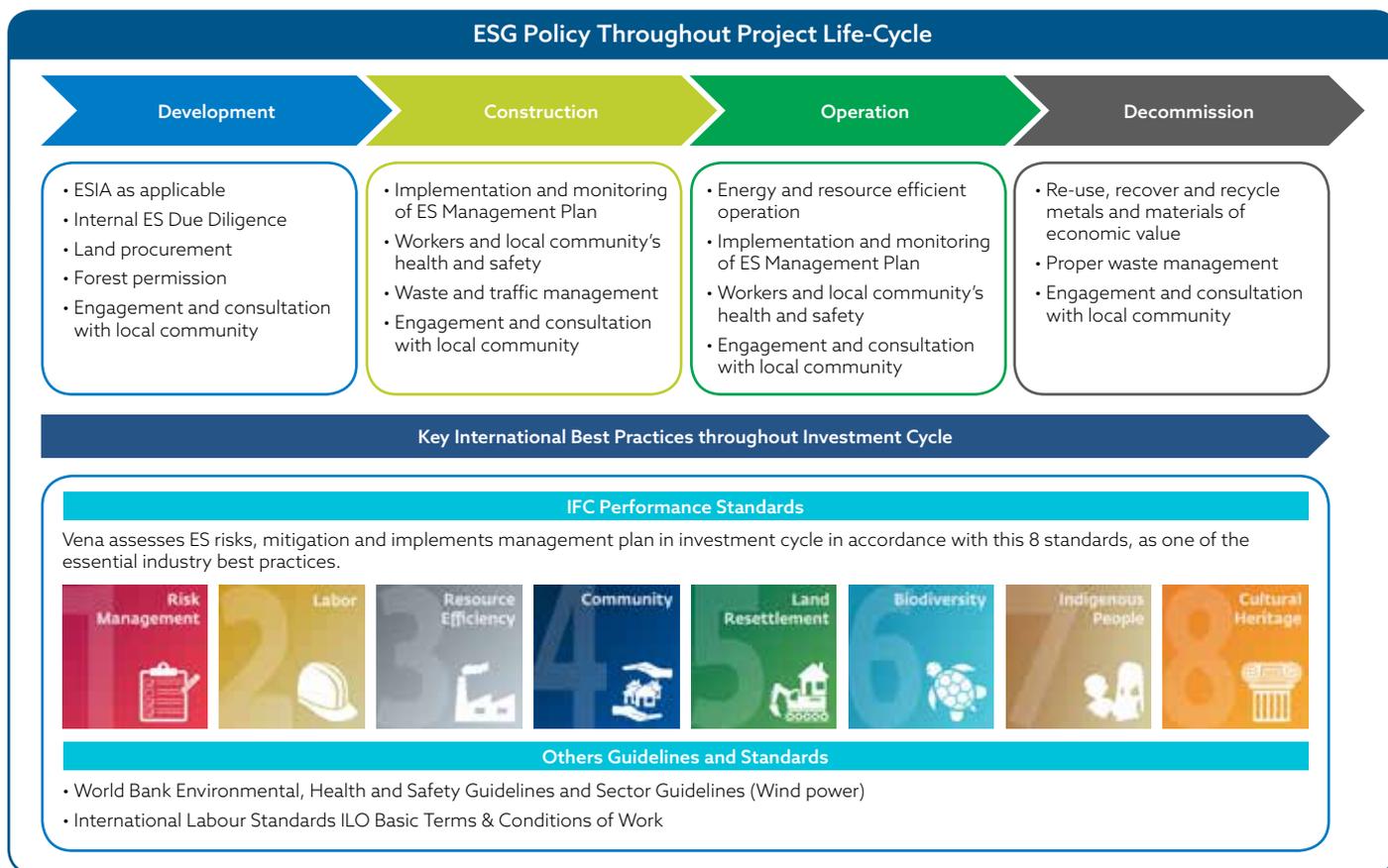
**Our ESG objectives include:**

<b>Environment</b>	<ul style="list-style-type: none"> <li>- Making a positive impact on the environment;</li> <li>- Encouraging efficient use of natural resources and protecting the environment;</li> <li>- Minimising the footprint of our operations by adopting industry best practices; and</li> <li>- Providing guidance and setting expectations for upholding Vena Energy’s commitment to sustainability.</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>- Treating our employees and contractors fairly, without discrimination and continuously respecting their dignity, well-being and diversity;</li> <li>- Safeguarding the health and safety of everyone who comes in contact with our business activities; and</li> <li>- Ensuring objectivity, consistency and fairness with all stakeholders of Vena Energy’s business and in the local communities where assets are located, through effective engagement and collaboration.</li> </ul>
<b>Governance</b>	<ul style="list-style-type: none"> <li>- Ensuring that Vena Energy and all related entities exhibit honesty, integrity, fairness, diligence and respect in all business dealings, in compliance with legal requirements</li> </ul>

Vena Energy has developed a robust ESG evaluation system to guide our investment decision-making process. Even when projects do not require full Environmental Social Impact Assessment, we develop an Environmental & Social Management Plan (“ESMP”) and Corrective Action Plan (“CAP”) with the help of external consultants to identify, plan and manage ESG related risks. Based on the ESMP and CAP, a comprehensive Environmental, Social, Management System (“ESMS”) is prepared to provide the framework and guidelines for the effective implementation and management of the sustainability performance of a given project.



The application of the framework prescribes a dedicated plan during each stage of the project lifecycle:



54MW TGP 1 Wind Project in India

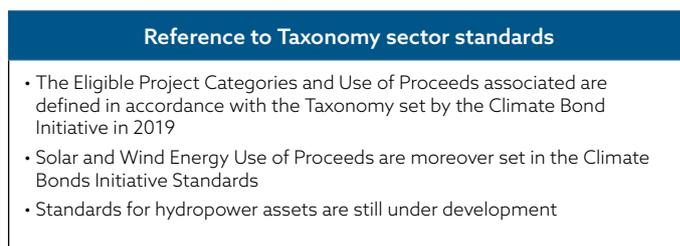
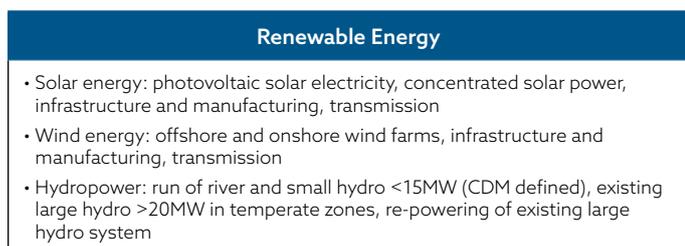
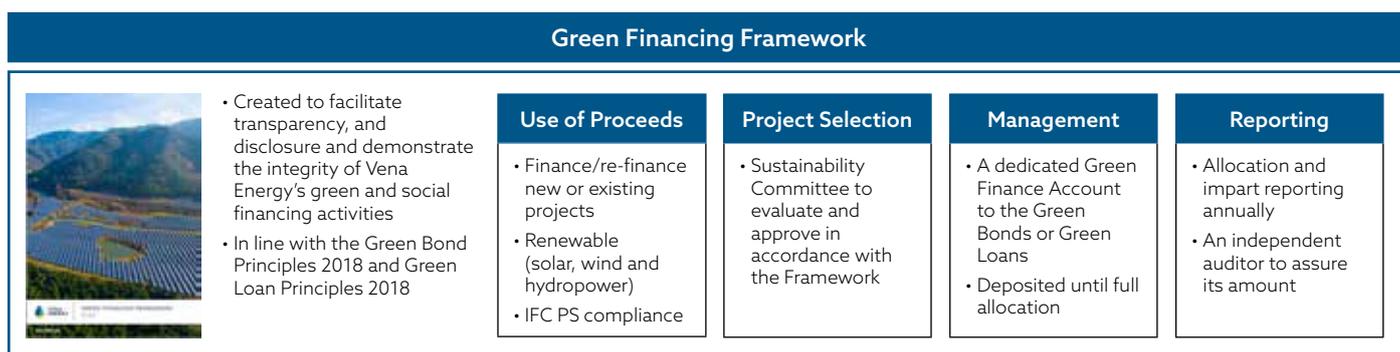
## 4.6. GREEN FINANCING FRAMEWORK

Core to our sustainable business model is our Green Financing Framework which was first introduced in 2018 and further revised in 2019. The purpose of this framework is to specify the use of proceeds funded by green bonds or loans to projects that have environmental benefits and provide transparency and accountability on our green and social financing activities to all our stakeholders.

The Green Financing Framework has been independently evaluated by Vigeo Eiris and Japan Credit Rating Agency and it is structured to be in line with the following guidelines:

- The Green Bond Principles published by the International Capital Markets Association ("ICMA") in 2018
- The Green Loan Principles published by Loan Market Association ("LMA"), Asia Pacific Loan Market Association and Loan Syndications and Trading Association ("LSTA") in 2018

The chart below outlines the approach of our Framework:



### Two second opinion agencies confirmed the alignment with two principles and gave the high rating on the Green Financing Framework

- **Vigeo Eiris** assessed Vena Energy's sustainability strategy and coherency between sustainability commitments, its potential contribution to sustainability and its alignment with the four components of the Green Bond Principles and Green Loan Principles
- We obtained **their highest level of assurance on commitments and contribution**



- **Japan Credit Rating Agency** evaluated **greenness of use of proceeds and management, operation and transparency and rated the highest for both elements.**



More details about our Green Financing Framework and Second Party Opinions can be found on our corporate website.

# FINANCIALS



# 5. FINANCIALS

## 5.1. INTRODUCTION

In 2019, Vena Energy achieved another consecutive year of double digit growth in Revenue and EBITDA, with 10 solar and wind projects (373 MW) commissioned during the course of the year. The new assets include Project Mingus, Taiwan's largest utility scale solar plant, two Japanese solar assets and our first operating projects in Indonesia and Australia, which added diversity to our 2019 financial performance.

In 2019, we obtained a new EPC license and expanded our O&M team across the region, further enhancing the reach and integration of our construction and operating functions. In addition to the 10 projects successfully commissioned during 2019, 8 projects totalling 315 MW were under construction and new projects were added to our shovel ready pipeline, which now totals 18 projects expected to begin construction in the near future. Development activities continued on a healthy trajectory in 2019 with meaningful competitive awards including our first energy storage project in Australia (100 MW), a 96 MW wind auction in India and a 45MW solar auction in Japan. Our team also continued to grow, with 55 additional team members bringing the total number of employees to 523 as of the end of 2019.

We also launched a new business activity by successfully placing our first renewable energy fund. Vena Energy now acts as sponsor and general partner of a portfolio of select renewable

energy assets, investing in and managing the fund on behalf of several leading institutional partners. We also provide asset management, operations and maintenance services to the portfolio, leveraging on our strong operational expertise and integrated platform to deliver best-in-class performance and ESG standards.

Several treasury initiatives were undertaken during the year to provide the liquidity needed to support our growth activities while maintaining a disciplined approach to leverage and capital management.

In November 2019, we also established a US\$1,000,000,000 guaranteed EMTN programme. Our inaugural bond was successfully issued and listed on SGX in February 2020 in compliance with the ICMA Green Bond Principles, and it became the first ever corporate USD Green Bond issuance by a Singapore-headquartered company.

Prior to the bond issuance, Vena Energy also obtained investment grade ratings from two credit rating agencies: Standard and Poor's and the Japan Credit Rating Agency (JCR). We also published an updated Green Financing Framework, which was independently evaluated by Vigeo Eiris and JCR, receiving the highest level of assurance from both agencies.

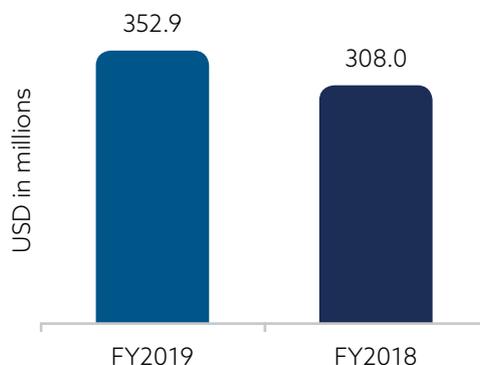


127MW Tailern Bend Solar Project in Australia

## 5.2. FINANCIAL HIGHLIGHTS

### Revenue

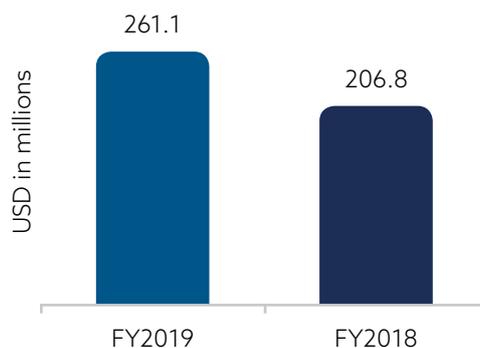
**\$352.9** million  **15%** Y-o-Y



Revenue for 2019 was \$353 million, an increase of \$45 million or 15% from 2018. The increase was mainly due to \$65 million of contributions from 10 new projects (373 MW) commissioned during the year and projects placed into service in 2018 which generated a full year of results in 2019, \$16 million reduction from the transfer of TK interests and \$4m reduction from operational factors and one-off income.

### EBITDA

**\$261.1** million  **26%** Y-o-Y



EBITDA for 2019 was US\$261 million, an increase of \$54 million or 26% from 2018. The increase was mainly due to \$47 million of contributions from 10 new projects (373 MW) commissioned during the year and other projects placed into service which generated a full year of results in 2019 and \$12 million reduction from the transfer of TK interests. Further, following a refinement in capitalisation policy in 2019, shared service costs directly attributable to development or construction activities of \$16 million (2018: nil) were capitalised during the year.

## 5.3. FINANCIAL RESULTS

### Operating Performance & Capitalisation

USD in millions except margin data

For the financial year ended	Proportionate <sup>18</sup>	
	31 Dec 2019	31 Dec 2018
<b>Total revenue</b>	<b>352.9</b>	<b>308.0</b>
Operating expenses	(91.9)	(101.2)
<b>EBITDA</b>	<b>261.0</b>	<b>206.8</b>
Depreciation and amortisation	(147.8)	(124.6)
<b>EBIT</b>	<b>113.2</b>	<b>82.2</b>
Net interest costs	(118.4)	(107.7)
Other finance gain (charge)	50.5	(6.8)
Other income (expense)	59.8	(2.1)
Development expense	(4.5)	(3.3)
Tax	(10.5)	(1.7)
<b>Net income (loss)</b>	<b>90.1</b>	<b>(39.4)</b>
EBITDA margin (%)	74%	67%
Corporate term loan and RCF	617.3	700.9
Project finance debt	1,286.4	1,571.7
Bank overdrafts	8.9	4.2
<b>Total bank borrowings</b>	<b>1,912.6</b>	<b>2,276.8</b>
Equity	3,354.1	3,266.1
<b>Total capitalisation</b>	<b>5,266.7</b>	<b>5,542.9</b>

### Other Financial Data

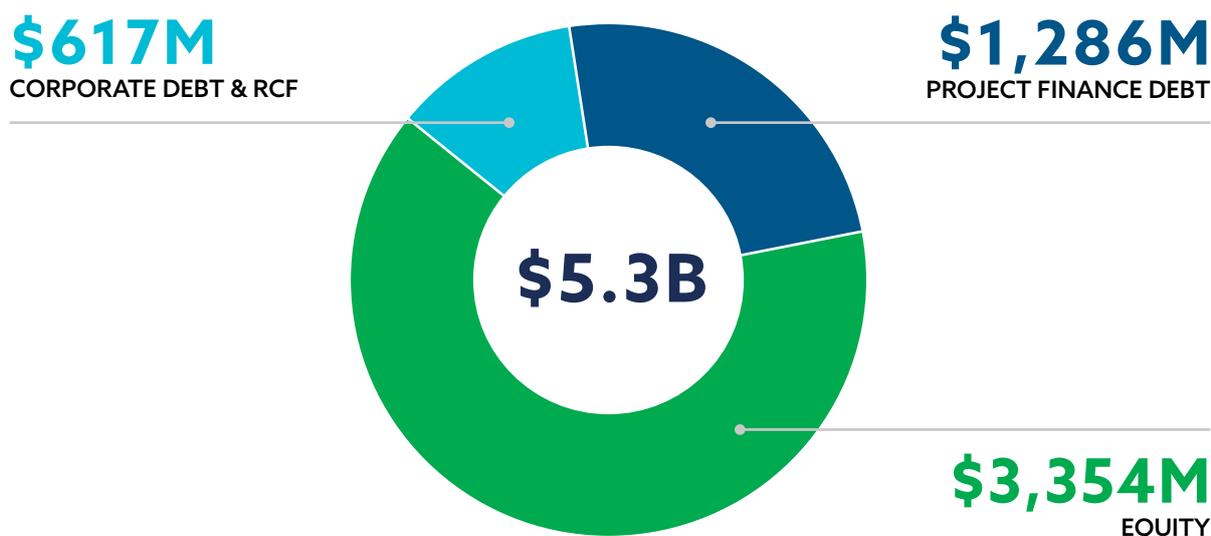
Funds from Operational Assets <sup>19</sup>	162.7	155.5
Capital expenditures	401.7	437.3

<sup>18</sup> Financial results prepared based on the proportionate accounting method where like items of assets, liabilities, income and expenses of subsidiaries and equity-accounted investees are proportionally aggregated based on Vena Energy's economic share and adjusted to remove the accounting effects of International Financial Reporting Interpretations Committee 12 - Service Concession Arrangements. Reconciliation of key items between the Pro Forma Consolidated Financial Information and Proportionate financial results are included in Appendix A.

<sup>19</sup> Refer to Appendix A the definition of Funds from Operational Assets ("FFOA") and breakdown of FFOA by country.

## 5.4. CAPITAL MANAGEMENT

CAPITAL STRUCTURE - 31 DEC 2019



Vena Energy's corporate debt and revolving credit facility (RCF) do not have any material short-term maturities.

Debt at each project is financed through non-recourse project finance debt, and generally amortise over time with long-term maturities and repayment profiles sculpted on the basis of the projects' long-term contracted cashflows. In 2019, we raised approximately \$200 million project finance debt across various projects in our portfolio and reduced approximately \$500 million of project finance debt in conjunction with the transfer of TK agreements.

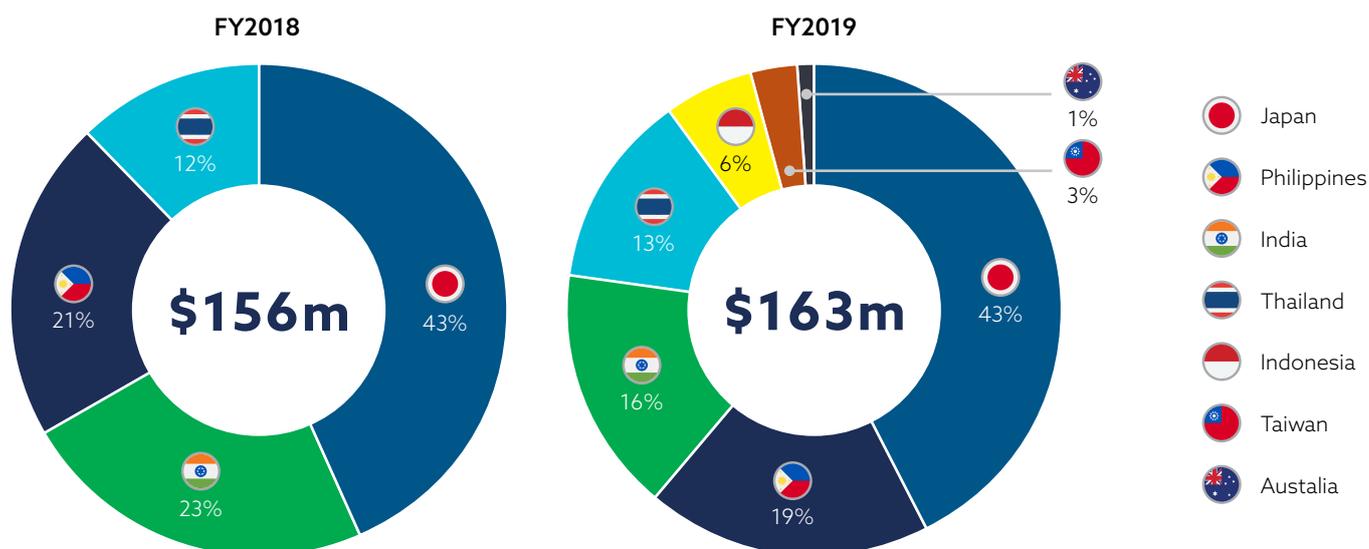
The transfer of TK agreements, mostly related to our new activity of renewable energy fund management, generated a gain of \$72 million and cash proceeds of \$467 million. Most of this cash has been retained on balance, mainly to fund the upcoming growth related to the construction of new projects.

### Leverage Ratio

<i>(USD in millions except margin data)</i>	2019	2018
<b>Funds from Operational Assets ("FFOA")</b>	162.7	155.5
Corporate Term Loan	471.0	622.5
Corporate RCF	146.3	78.4
<b>Corporate Gross Debt</b>	<b>617.3</b>	<b>700.9</b>
Less: Corporate's Cash & Cash Equivalents	(348.2)	(178.6)
<b>Corporate Net Debt</b>	<b>269.1</b>	<b>522.3</b>
<b>Net Debt to FFOA</b>	1.65x	3.36x

In 2019, we continued to grow and diversify our operational cashflows, with 10 new projects (373 MW) across four jurisdictions (Australia, Indonesia, Japan and Taiwan) commissioned during the year. These included Project Mingus, Taiwan's largest utility scale solar plant, and our first operating projects in Indonesia and Australia.

## Diversified & Stable FFOA



We target to mitigate our exposure to foreign exchange volatility in our FFOA, as we adopt a disciplined hedging strategy for certain currencies in our portfolio.

## Liquidity Position

<i>(USD in millions)</i>	<b>As at 31 Dec 2019</b>	<b>As at 31 Dec 2018</b>
Available Corporate RCF	155.9	71.6
Corporate's Cash & Cash Equivalents	348.2	178.6
<b>Liquidity</b>	<b>504.1</b>	<b>250.2</b>

During the course of the year, we further bolstered our liquidity position by expanding our committed corporate RCF facility from \$150 million to approximately \$300 million. As of 31 Dec 2019, our liquidity position remains robust, with over \$500 million of total available liquidity.

## 5.5. SIGNIFICANT EVENTS POST DECEMBER 2019

### 5.5.1. Green Bond Issuance and Allocation Summary

On 11 February 2020, Vena Energy announced the mandate and roadshow for an intermediate-tenor USD Green Bond offering under our US\$1,000,000,000 guaranteed EMTN programme, established in November 2019. ING Bank, Crédit Agricole CIB, DBS Bank Ltd and MUFG served as Joint Global Coordinators and Joint Lead Managers. ABN AMRO, Banca IMI, BNP Paribas and SMBC Nikko served as Joint Lead Managers.

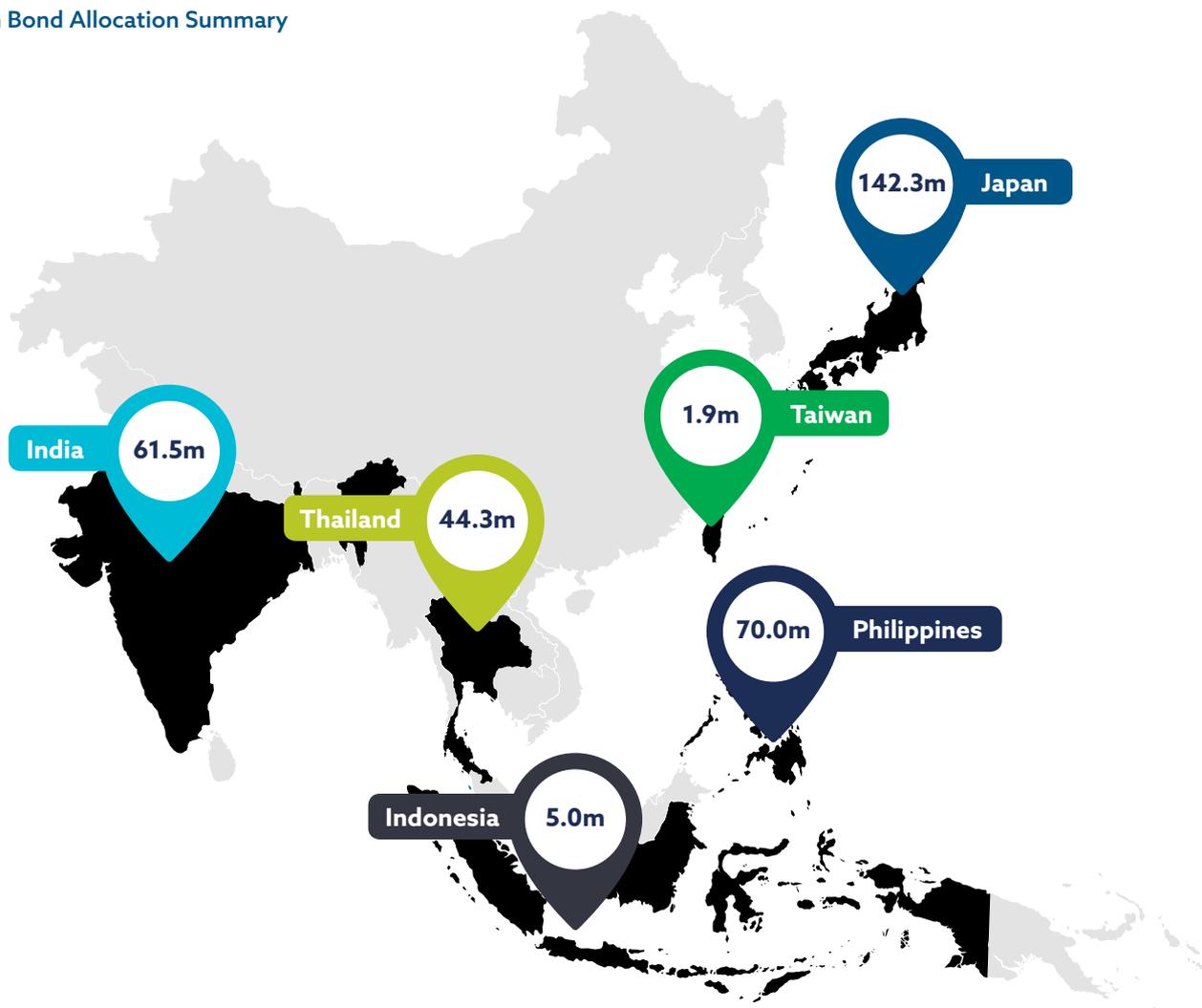
Through the issuance of our inaugural corporate bond listed on SGX, Vena Energy contributed to the development of the Asia-Pacific green financing market, becoming the first ever Singapore-headquartered issuer of a corporate USD green bond.

Several Health & Safety best practices and guidelines on infection prevention and control with regards to the COVID-19 outbreak were integrated in a comprehensive investor marketing strategy.

Physical meetings and travels were reduced to the strict minimum and most of the investor presentations were held remotely through conference calls and videocalls. This investor marketing strategy allowed Vena Energy's management to successfully deliver our messages while maintaining social distancing and complying with internal and external Health & Safety policies and guidelines.

On 26 February 2020, Vena Energy successfully issued our inaugural benchmark US\$325 million 5-year Green, Senior Unsecured Bond under Regulation S. The green bond proceeds were used to refinance existing corporate loans for the development, construction and operation of Eligible Green Projects in accordance with Vena Energy's Green Financing Framework, and were fully allocated to the jurisdictions illustrated below:

#### Green Bond Allocation Summary



### 5.5.2. Material transactions post year-end

In Q1 2020, we successfully closed new project finance debt for two projects commissioned in 2019. These projects were originally fully funded with equity to bring them to service. The

project finance debt for the two projects generated financing proceeds of \$132 million and these proceeds were returned to shareholders in March 2020.

# 6. ADDITIONAL INFORMATION

## 6.1. INDEPENDENT LIMITED ASSURANCE REPORT



### **Independent Limited Assurance Report to Vena Energy Pte. Ltd. (“the Company”) on the Green Bond Proceeds Allocation and Sustainability Impact Metrics**

We were engaged by Vena Energy Pte. Ltd. (“the Company”) to provide independent limited assurance on Vena Energy Capital Pte. Ltd.’s green bond proceeds allocation and the corresponding sustainability impact metrics (collectively referred to as “the subject matter information”) in the accompanying Sustainability Report (“the Report”) for the year ended 31 December 2019.

Based on the evidence we obtained from the procedures performed as described in the Auditors’ Responsibilities section of our report, nothing has come to our attention that causes us to believe that:

- (a) The allocation of the green bond proceeds is not in compliance with the Company’s Green Financing Framework (“the Framework”) in the following aspects:
- Use of Proceeds;
  - Process for Project Evaluation and Selection<sup>1</sup>;
  - Management of Proceeds; and
  - Reporting

<sup>1</sup> While the Framework identifies the Company’s Sustainability Committee as the highest corporate body governing the responsibilities of sustainable investment matters, approval for the use of the green bond proceeds to re-finance existing corporate loans for the development, construction, and operation of eligible green projects as described in the Report had been overseen by the Company’s Board of Directors.

- (b) In all material aspects, the sustainability impact metrics as identified below, have not been derived from supporting evidence underlying the impact metrics, or have not been computed in accordance with the basis of preparation adopted by the Company:

	Actual energy generation in 2019 from operational assets	Estimated annual energy generation from construction and shovel-ready assets
Annual Generation	2,603,785 MWh	1,356,398 MWh

According to the Company's basis of preparation as described in the footnotes of the Report, the actual and estimated energy generation could collectively:

- Power 2,630,721 households;
- Save 3,739 megalitres of water;
- Reduce 3,072,801 tonnes CO<sub>2</sub> of GHG emissions, which could be the equivalent of:
  - i) 663,672 passenger cars taken off the road; or
  - ii) 51,213,349 trees planted.

## Responsibilities of Management

The management of the Company is responsible for preparing the subject matter information that is free from material misstatement in accordance with Vena Energy's Green Financing Framework ("the Framework") and for the information contained therein.

This responsibility includes: designing, implementing and maintaining internal controls relevant to the preparation and presentation of the subject matter information that is free from material misstatement, whether due to fraud or error. It also includes implementing and effectively operating controls to achieve the stated control objectives; selecting and applying policies; making judgments and estimates that are reasonable in the circumstances; and maintaining adequate records in relation to the subject matter information.

Management is also responsible for preventing and detecting fraud and for identifying and ensuring that the Company complies with laws and regulations applicable to its activities. Management is responsible for ensuring that responsible parties and staff involved with the preparation of the subject matter information are properly trained, systems are properly updated and that any changes in reporting encompass all significant operational sites.

## Auditors' Responsibilities

Our responsibility is to examine the subject matter information prepared by the Company and to report thereon in the form of an independent limited assurance conclusion based on the evidence obtained. We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements Other Than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. That standard requires that we plan and perform our procedures to obtain a meaningful level of assurance about whether the subject matter information is fairly stated, in all material respects, as the basis for our limited assurance conclusion.

The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the subject matter information, and applying analytical and other evidence gathering procedures, as appropriate.

These procedures included:

- Inquiries of management to obtain an understanding of the Company's processes and internal controls;
- Interviews with senior management and relevant staff at the corporate level responsible for the preparation and reporting of the subject matter information;
- Inquiries of the design and implementation of the systems and methods used to collect and report on the subject matter information;
- Agreeing to supporting bank documents, the amount of green bond proceeds received and allocated to the re-financing of a corporate loan, which was originally raised for the acquisition of Eligible Green Projects in accordance with the Framework;
- Agreeing, on a sample basis, the reported amounts of actual and estimated energy generation arising from the Company's assets as at 31 December 2019 to the underlying supporting documents; and
- Validation of the reported sustainability impact metrics to the source data and computation in accordance with the basis of preparation adopted by the Company and as described in the footnotes of the Report.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Due to the inherent limitations of any internal control structure it is possible that errors or irregularities in the subject matter information may occur and not be detected. Our engagement is not designed to detect all weaknesses in the internal controls over the preparation and presentation of the subject matter information, as the engagement has not been performed continuously throughout the period and the procedures performed were undertaken on a test basis.

### Restriction on use

Our report has been prepared for the Company for the purpose of providing an assurance conclusion on the subject matter information and may not be suitable for another purpose. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than the Company for our work, for this independent limited assurance report, or for the conclusions we have reached.

  
**KPMG LLP**  
*Public Accountants and  
Chartered Accountants*

**Singapore**

10 June 2020

## 6.2. COMMITMENT TO THE UN GLOBAL COMPACT

Vena Energy is committed to upholding the 10 principles of the United Nations Global Compact. Our commitment includes reporting annually on our progress in implementing the ten principles (Communication on Progress or COP). The table below specifies which sections of the report address which principles.

	Cross-Reference in this report	Guidelines and policies
<p><u>Human Rights</u></p> <p><b>Principle 1:</b> Support and respect internationally proclaimed human rights</p> <p><b>Principle 2:</b> Eliminate any participation in human rights abuses</p>	<ul style="list-style-type: none"> <li>• Labour and Preserving Human Rights</li> <li>• Vena Energy Governance Policies</li> <li>• Sustainable Procurement</li> </ul>	<ul style="list-style-type: none"> <li>• Code of Conduct</li> <li>• Environmental Social &amp; Governance Policy</li> </ul>
<p><u>Labour</u></p> <p><b>Principle 4:</b> Eliminate all forms of forced and compulsory labour</p> <p><b>Principle 5:</b> Eliminate child labour</p> <p><b>Principle 6:</b> Eliminate discrimination in respect of employment and occupation</p>	<ul style="list-style-type: none"> <li>• Labour and Preserving Human Rights</li> <li>• Vena Energy Governance Policies</li> <li>• Sustainable Procurement</li> <li>• Diversity, Equity and Inclusion</li> </ul>	<ul style="list-style-type: none"> <li>• Code of Conduct</li> <li>• Human Resources Policy</li> <li>• Procurement Policy</li> <li>• Environmental Social &amp; Governance Policy</li> <li>• International Labour Organisation Declaration on Fundamental Principles and Rights at Work</li> </ul>
<p><u>Environment</u></p> <p><b>Principle 7:</b> Support a precautionary approach to environmental challenges</p> <p><b>Principle 8:</b> Undertake initiatives to promote greater environmental responsibility</p> <p><b>Principle 9:</b> Encourage the development and diffusion of environmentally friendly technologies</p>	<ul style="list-style-type: none"> <li>• Our Commitment to Climate Change</li> <li>• Our Environmental Considerations</li> <li>• Our Environmental Strategies</li> <li>• Environmental Management System</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Social &amp; Governance Policy</li> </ul>
<p><u>Anti-Corruption</u></p> <p><b>Principle 10:</b> Work against corruption in all its forms, including extortion and bribery</p>	<ul style="list-style-type: none"> <li>• Vena Energy Governance Policies</li> </ul>	<ul style="list-style-type: none"> <li>• Code of Conduct</li> <li>• Anti-corruption Policy</li> <li>• Procurement Policy</li> </ul>

## 6.3. LEGAL STATEMENTS

This report does not constitute or form part of and should not be construed as, an offer to sell or issue or the solicitation of an offer to buy or acquire securities of Vena Energy Capital Pte. Ltd., Vena Energy Holdings Ltd., Vena Energy (Taiwan) Holdings Ltd., Zenith Japan Holdings Ltd. (together, "**Vena Energy**") or any of their respective subsidiaries or affiliates in any jurisdiction or an inducement to enter into investment activity. Any decision to purchase securities in the context of a proposed offering to be undertaken in the future by Vena Energy, if any, should be made on the basis of information contained in the offering document published in relation to such an offering. No part of this document, nor the fact of its distribution, should form the basis of, or be relied on in connection with, any contract or commitment or investment decision whatsoever. No representation, warranty or undertaking, express or implied, is made as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of the information or the opinions contained herein. None of Vena Energy or any of their affiliates, advisers or representatives shall have any liability whatsoever (in negligence or otherwise) for any loss howsoever arising from any use of this document or its contents or otherwise arising in connection with the document.

This report contains "forward-looking statements", which include all statements other than statements of historical facts, including, without limitation, any statements preceded by, followed by or that include forward-looking terms such as "targets", "believes", "expects", "plans", "intends", "anticipates", "projects", "aims", "seeks", "may", "will", "would", "should", "could" or similar expressions or the negative thereof. However, these words are not exclusive means of identifying forward-looking statements. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors beyond Vena Energy's control that could cause the actual results, performance or achievements of Vena Energy to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements, including, among others, financial forecasts, profit projections, the achievement of anticipated levels of profitability, growth, cost and synergy of recent acquisitions, the impact of competitive pricing, the ability to obtain necessary regulatory approvals and licenses, the impact of developments in the economic, political and legal environment of Singapore and other jurisdictions in which Vena Energy operates, volatility in stock markets or in the price of Vena Energy's securities, financial risk management and the impact of general business and global economic conditions. You are cautioned not to place any reliance on these forward-looking statements.

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