B.GRIMM POWER

SET AWARD 2025

Sustainability Excellence

11 September 2025

"EMPOWERING

THE WORLD COMPASSIONATELY"

Presenters

Mr. Saroche Arunpairojkul

Executive Vice President

Industrial Customer Relations and Operation Management

Mr. Pakorn Thepparat

Co-Head of B.Grimm Digital and Energy Solutions

B.Grimm Digital and Energy Solutions

Mr. Anurak Bannasak

Head of Innovation Studio

Innovation Studio

Mrs. Solaya Na Songkhla

Head of Corporate Sustainability

Corporate Sustainability

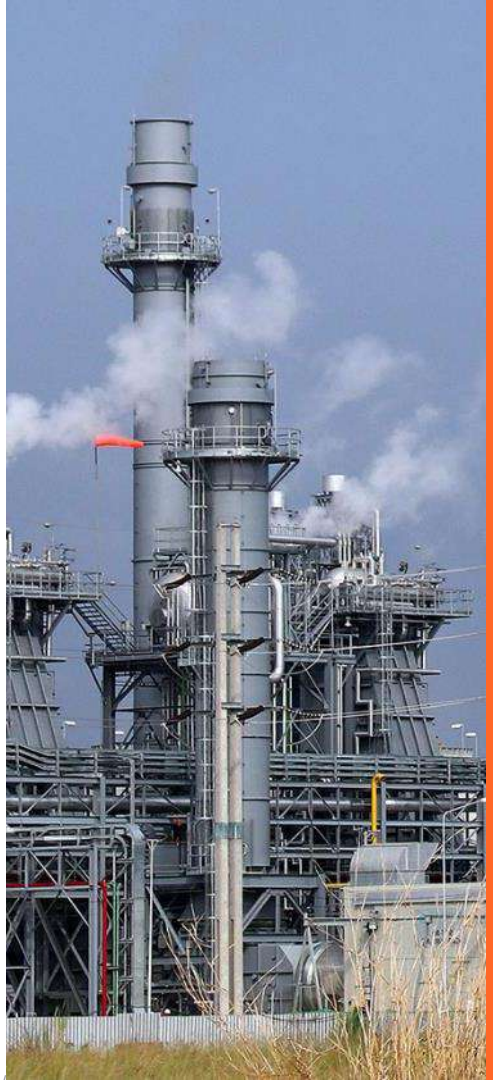
Ms. Varaporn Osatanon

Head of Sustainability and Climate Management

Sustainability and Climate Management

Agenda

- Economic and Strategy
- Technology and Digital Transformation
- Climate Management
- Social and Community Development



OUR VISION

EMPOWERING

Build **human capabilities**, power industries, businesses and communities

THE WORLD

Find **trusted partners and great opportunities i**n attractive countries
Grow our footprint all over the world

COMPASSIONATELY

Cultivate a culture of **mindfulness and compassion** among everyone at B.Grimm

B.Grimm: More than 147 years of Doing Business with Compassion

Vision: "Empowering the World Compassionately"

Values: ***Positivity, Partnership, Professionalism and Pioneering Spirit***

- Longest established infrastructure, industrial, and healthcare group in Thailand since **1878**
- Concessionaire and contractor of the largest infrastructure system in Thailand and Southeast Asia of the **1890s**: Rangsit irrigation canals
- Introducing leading engineering technologies into Thailand since the **1880s** until today with Krupp, Siemens, Carl Zeiss, Merck, Voith and United Technologies

Opened Siam Dispensary (1st manufacturing in Thailand)

1878

Built Rangsit canal (the largest cannel) together with Snidvongse family

1890

Installed the first telephone line between Germany and Thailand

1931

Supplied turnkey systems and services with Siemens for BTS sky train

1994

Awarded 1st Small Power Producer (SPP) contract for Amata B.Grimm Power 1

1996

Consortium leader for Airport Rail Link

2010

B.Grimm Power **reached 4,155 MW installed capacity**

Aug 2025

GreenLeap Strategy

GREENLEAP STRATEGY for long-term value creation

Supply | **Generation** | **Distribution**

3 Sustainable Fuels

- **Manage market risks**, e.g. LNG pricing.
- **Position for the future** sustainable fuel industry through strategic market selection for our Independent Power Producer strategic pillar.

2 Independent Power Producer

- Grow in **Renewable Energies**
- **Diversify portfolio** across markets and technology to **increase cash flow resiliency**.
- **Maximize risk-return profile** through tailored market entry modes.

- **Continue highest operational efficiency in class**

1 Industrial Solutions

- **Increase Sales** through **new industrial solutions**
- **Enable the energy transition** through investment in **digital infrastructure**.
- **Digital Infrastructure-as-a-Service (DIaaS)**

Challenges

Global & Macro Risks

Global slowdown, US tariffs, weaker exports reduce demand across Thai industries.

Policy risk

Fuel tariff (Ft) reductions misaligned with actual energy costs.

Geopolitical Volatility

Geopolitical tensions typically lead to LNG price volatility.

Margin & Demand

Volatile gas prices and tariff misalignment squeeze industrial-user margins; demand further pressured by global and macro risks.

Opportunities

Clean Energy Transition

Global demand for **renewables**; Expanding into merchant markets to **hedge against gas price volatility** and reduce Ft-Gas exposure.

Digital Economy Growth

From automobiles to AI: IU **portfolio transforming** as digital & AI-driven demand rises from 4% to 35%.

Digital Infrastructure as a service (Diaas)

Providing integrated solutions from **data centers**, energy platform-as-a-service, and industrial digital services to capture growth from the digital economy.

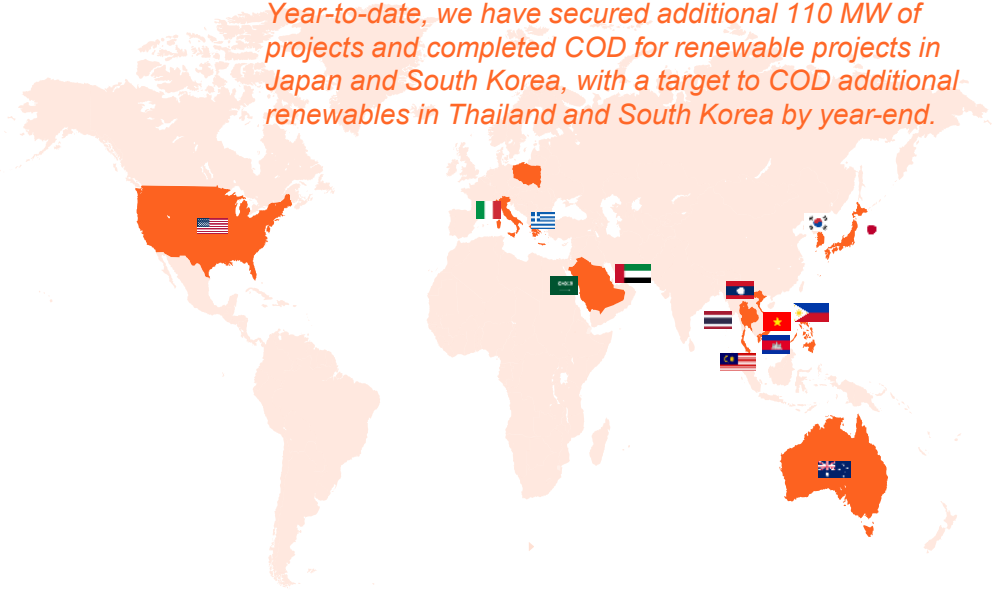
Strategic Flexibility

LNG imports, gas trading, and **New Formula Contracts** improve cost pass-through and resilience.

B.GRIMM POWER: Powering the Future

Southeast Asia	Americas	Europe	Middle East	East Asia	Australia
Thailand	United States	Greece	United Arab Emirates	South Korea	Australia
Vietnam		Italy	Saudi Arabia	Japan	
Malaysia					
Cambodia					
Laos					
Philippines					

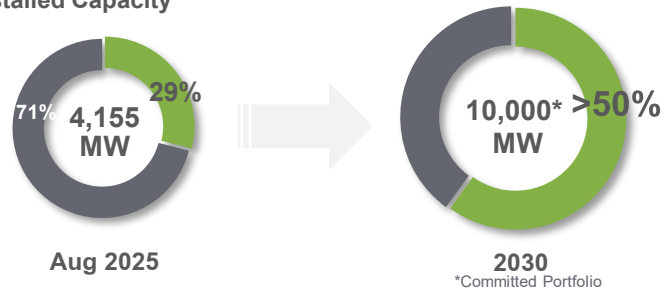
Year-to-date, we have secured additional 110 MW of projects and completed COD for renewable projects in Japan and South Korea, with a target to COD additional renewables in Thailand and South Korea by year-end.



Gas · Solar · Wind · Hydro · Solar Rooftop · LNG · Hybrid · BESS · Transmission and Distribution System (T&D)

In operation · Under Development

Total Installed Capacity

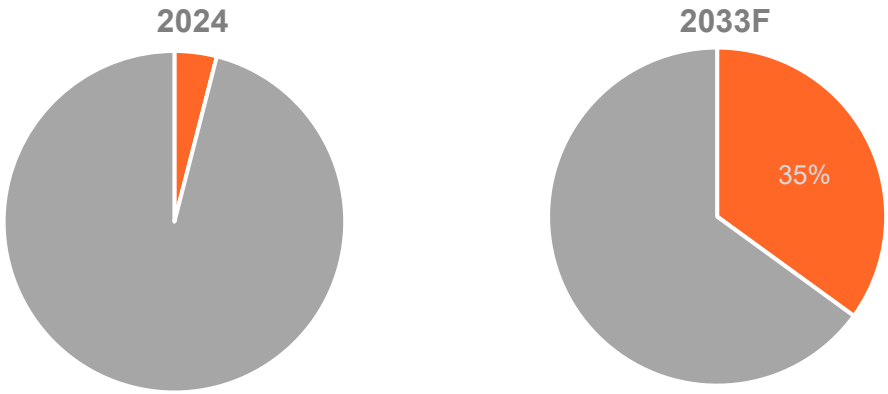


Renewable Energy · Conventional Energy

Towards the Largest Offshore Windfarm in South Korea: Nakwol 1 (365 MW)

Progress > 60%

Shifting IU Portfolio Towards Digital & AI-driven Demand

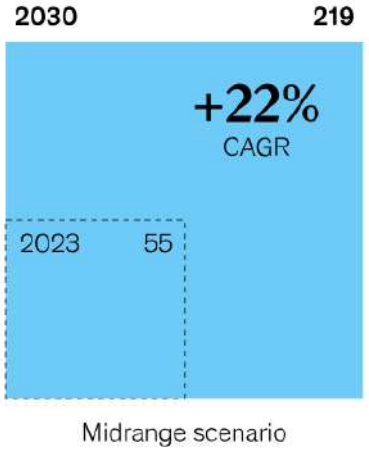


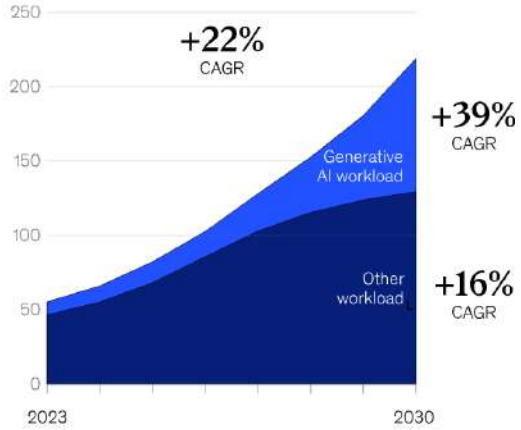
Digital & AI-driven contribution (data centre and electronics component) to rise from 4% in 2024 to 35% by 2033F.

This year, we are adding 40-50MW IU synchronization (from data centre, electronics and metal) with more than 300 MW of data centre pipeline.

Global Demand for data center capacity could more than triple by 2030

Estimated demand for data center capacity, gigawatts





Source: McKinsey & Company

DIGITAL INFRASTRUCTURE-as-a-Service (DIaaS)

Where core components of the digital infrastructure are bundled and delivered as an integrated service to niche customers

Global data center developer and operator with integrated solutions

Data Center

Algorithm-based forecasting to enhance energy efficiency via smart energy management system and support TPA readiness

Energy Platform-as-a-Service

Technology-enabled services for enhancement of industrial operation

Industrial Digital Services

B.Grimm Power & Digital Edge
Break Ground on First EEC Data Center

จากคลองรังสิตสู่คลังสมองกล AI ประตูสู่ยุคใหม่ของไทย และปฐมบทของ B.Grimm? | Exclusive Interview EP.37

Watch ›

Project Overview

Type:	Hyperscaler
Model:	Build-to-Suit (BTS)
Capacity:	48 MW for 1st phase with target up to 96 MW
Target COD:	Q4'2026

Market Position

- Strategic location in EEC area
- Digital Edge, a leading APAC data center platform, delivering deep expertise tailored, end-to-end solutions
- B.Grimm Power's local partnership, local expertise

TIMELINE

JV agreement signed — April — May — BOI approval — June — July — Construction start — Aug — Q1'2026 — COD phase 1 — Q4'2026 — 2028

Strategic Flexibility

LNG imports, gas trading, and New Formula Contracts improve cost pass-through and resilience.

Key Levers

LNG Imports – diversify fuel sources (up to 5 shipments to be imported to the pool gas system in 2025).

Gas Trading – optimize procurement and capture arbitrage opportunities.

New Formula Contracts – align IU tariffs with gas costs, stabilizing margins.

Benefits

- ✓ More flexibility in gas price management.
- ✓ Stabilize margins in cogeneration business.
- ✓ Enables competitive pricing
- ✓ Captures new revenue streams

Technology and Digital Transformation

Innovation Culture

Top down

Digital Transformation Committee

Objective

oversight, guidance, and strategic direction on the Company's digital transformation initiatives

Target

To ensure digital initiatives align with the company's long-term strategic goals and vision.

Strategy and Governance

- Review and Recommend
- Monitor and evaluate the progress
- Assess and mitigate risks

People and Culture

- Oversee programs to enhance digital literacy and upskilling
- Promote a company-wide culture
- Ensure that stakeholder interests and expectations

Business and Innovation

- Identify opportunities to leverage technology
- Monitor emerging digital trends
- Provide recommendations on adopting innovative technologies

Board of Directors

Member of Digital Transformation Committee

Dr. Thaweesak Koanantakool

- Developed AI usage guidelines and ethical AI principles for NSTDA-funded R&D projects.

Mrs. April Srivikorn

- Google Cloud Thailand's Country Manager
- Advised executives and government leaders on leveraging data, AI, and cloud infrastructure.

Supporting Technology & AI Culture

Townhall: Expert Insights

Featuring external partners such as Microsoft to share perspectives on technology and AI.

Mini Townhall: Internal Best Practices

Knowledge sharing from B.Grimm Digital and Energy Solutions teams.

B.Grimm AI Community Club

A dedicated platform for continuous learning and knowledge sharing among employees.

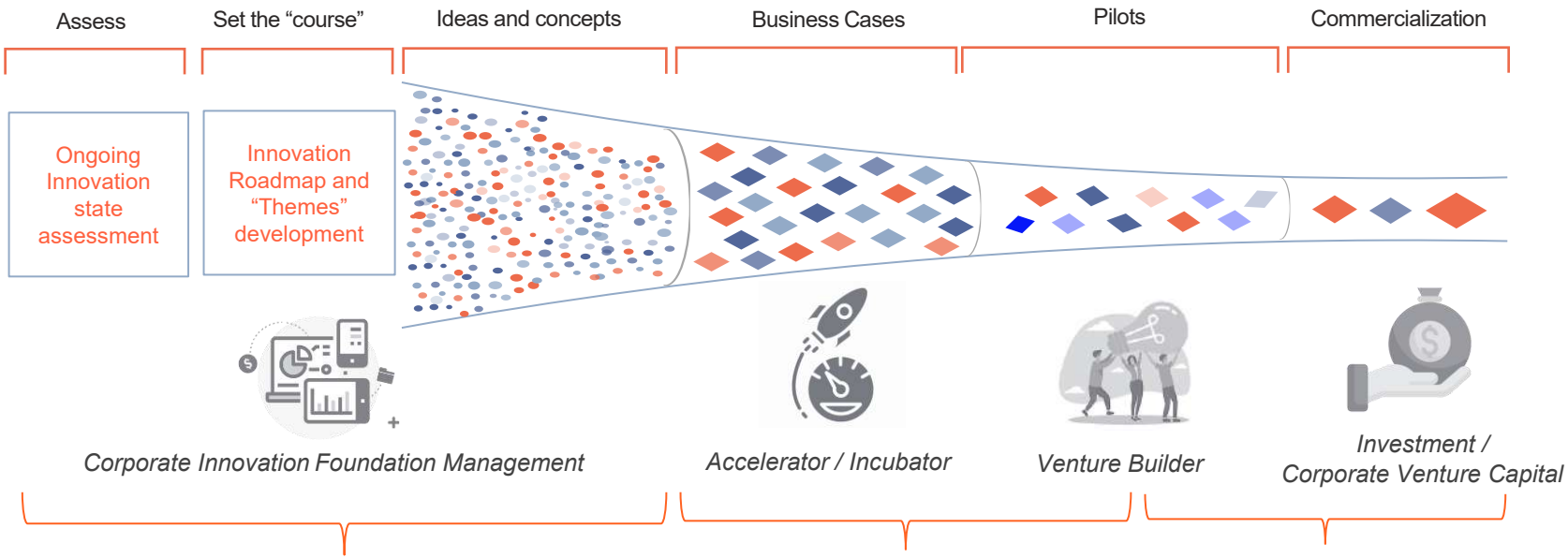
AI Champion at Power Plants

Developing “AI Super Engineers” through specialised knowledge-sharing sessions.

B.Grimm Executive Partnership Program

Collaboration with Sasin to enhance executive skillsets in AI and technology.

Innovation Studio Operating Model



Innovation Foundation

- ❑ Innovation Culture and capability building
- ❑ Ideation Programs
- ❑ Idea Tank Platform
- ❑ Trend foresight

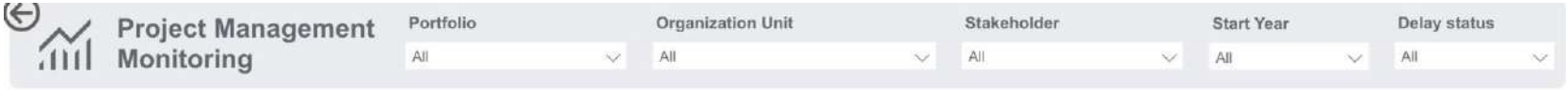
Project Acceleration & Portfolio Management

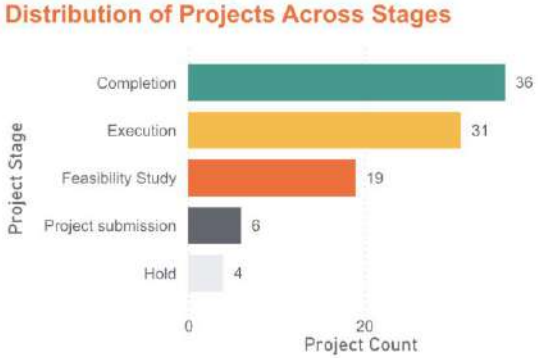
- ❑ Innovation system framework with RACI
- ❑ Hackathon/ Acceleration programs
- ❑ Incubator and Venture builder team

Investment & commercialization

- ❑ Investment decision in potential projects
- ❑ Spin-off/ Startups/ JV

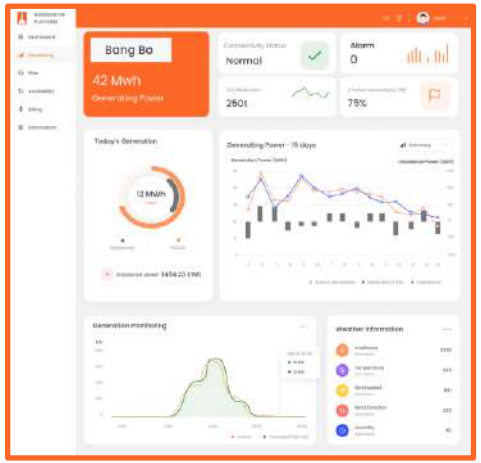
One Page Summary of Projects





Portfolio	Score	Digital Strategies	Status	Project Stage	Key Objective
⊟ Energy					
EGAT Digital Workflow	4.50	2.Operational efficiency	Done	Completion	To digitize invoicing and billing process for better operational efficiency and accuarcy.
Tax Platform	4.50	2.Operational efficiency	Not start	Project submission	To enable data visibility and data driven initiative to tax process.
Budget Online	4.35	4.Data-Driven Decision Making	Not start	Project submission	To digitalize over budget request process where currently rely on paper base
Zoho CRM Platform	4.35	2.Operational efficiency	Done	Completion	To fully digitalize and streamline the sales and Sales adminsitration process to ensure seamless data synchronization and automation of business workflow.
Data Platform - CEMs	4.30	4.Data-Driven Decision Making	Done	Completion	To enable real-time analytics, enhance efficiency, and support data-driven decision-making across all functions.
Procument Analytics Dashbaord	4.30	2.Operational efficiency	Done	Completion	To enable real-time analytics, enhance efficiency, and support data-driven decision-making across all functions.
BGP HRIS Phase1 Vietnam onboarding	4.30	2.Operational efficiency	Inprogress	Feasibility Study	To automate tasks to improve efficiency, reduce errors, enhance productivity, lower operational costs, accelerate workflows and optimize resource utilization.
Data Platform - eLog Sheet	4.25	2.Operational efficiency	Done	Feasibility Study	To enable real-time analytics, enhance efficiency, and support data-driven decision-making across all functions.
Procurement Analytics Phase 3	4.25	4.Data-Driven Decision Making	Done	Completion	

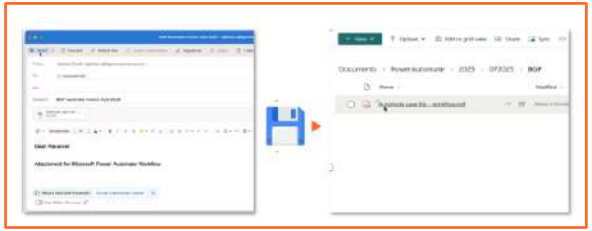
AI Use Case

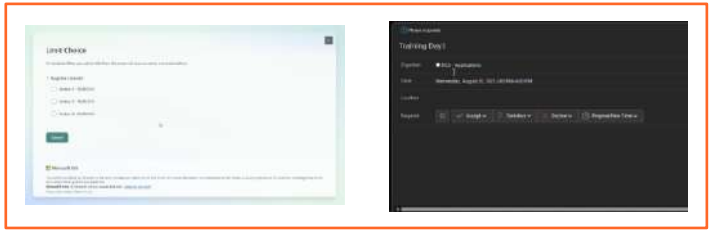


Solar Forecast

for future business opportunities

- **Third-Party Access**
- **Energy Management System**
- **Smart Grid**





Use of AI Awareness

use case for Automate Workflow

- **Auto Attachment Extraction**
- **Auto Event Invitation once Form Submitted**

Bottom up

AI Machine Health Monitoring:

From Operational Impact to Strategic Partnership Value

Project Objectives

1. To align with our business strategy by integrating innovation and digital technologies to strengthen our operations while advancing systems and infrastructure to align with digital era.
2. To enhance operational management by develop a real-time machinery health monitoring system which can reduce downtime and maintenance cost
3. To provide collaboration opportunities and knowledge exchanging between Energy and Industrial Solution businesses.

AI Machine Health Monitoring

From Operational Impact to Strategic Partnership Value

Output

68%

Unplanned machinery downtime

432M THB

Average maintenance cost/machine[1]

4 units

Unplanned machine failures avoided (pilot 2024)

Outcome

- **Enhance Predictive Maintenance** – boost efficiency, cut gas use
- **Improve Plant Reliability** – stable ops, less downtime
- **Strengthen Team Capability** – skilled, future-ready
- **Deploy Scalable Systems** – expand, standardise

Partner Benefit

- **Expand Use Cases –** showcase solutions for wider energy sector
- **Improve Platform** – co-develop with real-world feedback
- **Enhance Systems** – build superuser & integration capacity
- **Align with Goals** – support digital & sustainability leadership

[1]Reference from avoidance of core engine swap cost from 4 units, excluding business losses.

Driving O&M Excellence

In collaboration with **Hitachi**, these initiatives enhance resilience, boost asset reliability, and secure sustainable, stable power supply.

Switching between substations

HITACHI

- Improved reliability of electrical system.
- Switch power supply between 2 bus systems quickly & safely.
- Prevent abnormal conditions or overcurrent during the transfer.

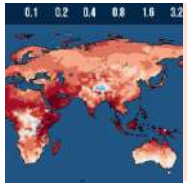
Power transformer: Condition assessment

HITACHI

- Early Detection of Issues
- Improved Maintenance Planning
- Extended Asset Life

Climate Management

Climate Risk and Opportunity



Global Level Challenges

- The **Paris Agreement** sets a limit on temperature rise to **well below 2°C**, with efforts to cap it at **1.5°C above pre-industrial levels**.
- Countries worldwide have pledged **Net Zero greenhouse gas emissions by 2050 or earlier**, reshaping global energy, trade, and investment systems.

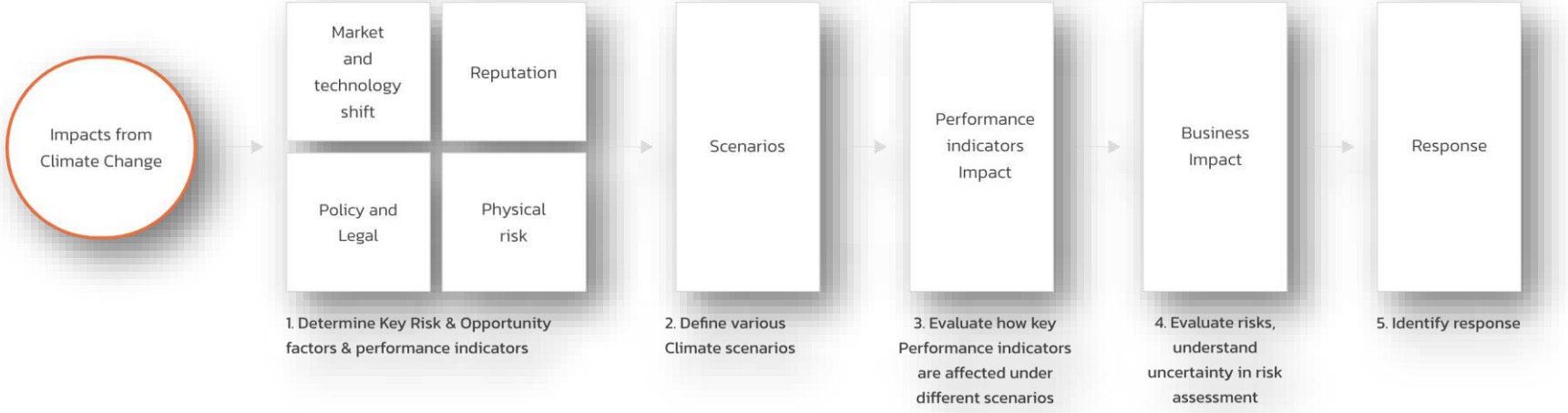
National Level Challenges (Thailand)

- The Thai government has announced ambitious climate goals:
  - **Carbon Neutrality by 2050 (B.E. 2593)**
  - **Net Zero Emissions by 2065 (B.E. 2608)**
- New **policy instruments** are being introduced, such as **Thailand Taxonomy Phase 1, carbon tax measures, climate-related legislation**

Industry & Corporate Level Challenges (Power Generation Sector)

- The power sector faces **systemic disruption** as fossil fuel–based business models become increasingly exposed to climate and regulatory risks.
  - **Physical risks** — such as water scarcity, floods, and extreme weather events — threaten operational resilience and energy security.
  - **Transition risks** — stricter compliance costs, volatile fuel prices, and the rising cost of carbon under emerging pricing mechanisms.

Climate-related risks & opportunities management



Key Climate-related risk & opportunity items

Physical risks

Acute	Chronic
Medium-Long term time horizon	Medium-Long term time horizon
P1 Flooding	P3 Rising Sea Levels
P2 Typhoons	P4 Extreme Heat
	P5 Water Stress

Transitional risks

Policy and Legal	Technology
Medium-Long term time horizon	Medium-Long term time horizon
T1 Carbon Cost (tax/allowance)	T3 Costs to transition to lower emissions technology
T2 Regulations that affect electricity trading from fossil fuels and stricter greenhouse gas reports.	
Market	**Reputation**
Medium-Long term time horizon	Medium-Long term time horizon
T4 Increased costs of raw materials (Natural gas/LNG)	T6 Change in reputation amongst investors and stakeholders
T5 Changing customer behavior towards net zero	

Opportunities

Resource Efficiency	Energy Source
All time horizon	Medium-Long term time horizon
O1 Increased Energy Efficiency	O2 Shift towards decentralized energy generation
	O3 Revenue from selling renewable energy (LREC (PJ))
Product and Services	**Markets**
Medium-Long term time horizon	Medium-Long term time horizon
O4 Expand Business to low emission products	O5 Access to new markets

Risk Management

Key performance indicators of climate risks and opportunities

Item	Rationale	Performance indicators
P5. Water stress or water shortage	Water shortage may reduce B.Grimm Power's operating performance (Baht per year) due to reduced production of electricity and steam from combined cycle co-generation power plants that consume water as major raw materials.	• The number of days that steam turbines stop operating (days per year) • Loss of revenue (Baht per year)
T1. Carbon price risk	Operating costs increase from tax resulting from identification of carbon price and carbon emission rights for businesses in Thailand. However, the power purchase agreement currently does not cover such costs.	• Carbon price (Baht per tonne of carbon dioxide equivalent)
O3. Opportunities in selling green products and services such as electricity generation credit from renewable energy (I-REC (E))	Revenue from electricity generation credit trading from renewable sources (I-REC (E)) to customers requiring electricity from renewable energy.	• Electricity generation credit from renewable energy (I-REC (E)) (Baht per credit)

Target and Strategy

B.Grimm Power is committed to becoming

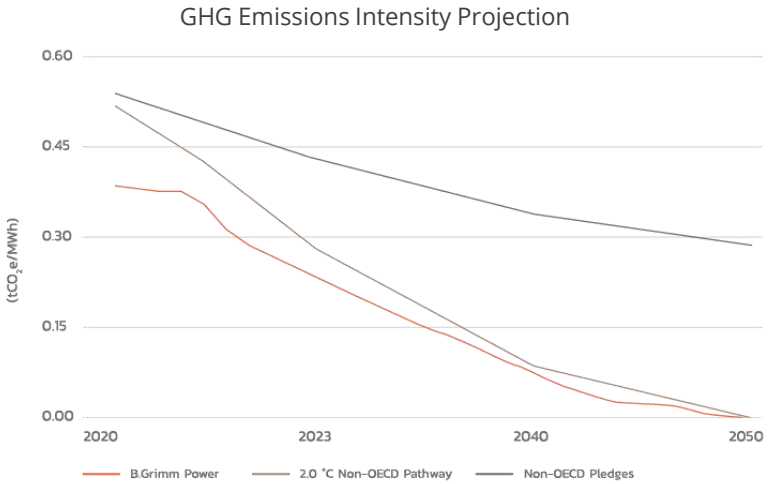
a Net Zero Carbon Emission

organisation by 2050

We are committed to contributing to global climate goals in line with the Paris Agreement, while ensuring a stable electricity supply for our industrial customers through co-generation power plants and by increasing the share of clean energy in our portfolio. Our transition strategy aligns with the 2.0°C pathway for non-OECD countries, as outlined by the International Energy Agency (IEA). Our **GHG reduction strategy prioritises responsibility**, alongside **maintaining energy security and enhancing industrial competitiveness**. We are firmly committed to achieving Net Zero Carbon Emissions by 2050, in alignment with international frameworks.

Target

B.Grimm Power's Pathway to Net Zero



Target and Performance

B.Grimm Power is firmly committed to achieving Net Zero Carbon Emissions by 2050, in alignment with the Paris Agreement. Our transition strategy is aligned with the International Energy Agency's (IEA) 2.0°C pathway for non-OECD countries, while supporting global efforts to limit temperature rise to well below 2°C. While driving decarbonization, we continue to ensure a stable and reliable electricity supply, particularly through our cogeneration power plants, and are actively increasing the share of clean energy in our portfolio. Our strategy reflects a balanced approach that integrates climate responsibility, energy security, and industrial competitiveness.

	2024 Performance	2030 Target
Renewable energy installed[1] (percentage of total installed capacity)	28%	≥50%[2]
Scope 1&2 GHG emissions intensity	0.376	≤0.280[2]

[1] Based on all power plants operating at year-end
[2] Or reduce by no less than 27 percent from a 2021 baseline
[3] Gas 48%, Solar 32%, Wind 20%, Hydro 5%, back up (non-operation diesel power plant) and waste <1%

Strategy

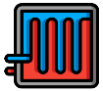
No Coal Policy	Cogeneration Efficiency Optimization	Expanding Renewable Energy	Technology Transition Roadmap	Alternative Solutions – I-REC	Ecosystem Decarbonisation
• We are firmly committed to a **No Coal Policy**, reinforcing our pledge to transition towards cleaner and more sustainable energy sources.	• Continuous improvements in our cogeneration plants help **optimize efficiency and reduce greenhouse gas emissions per unit of production**.	• We are actively investing in **solar, wind, and hydro power**, scaling up the share of green energy in our portfolio.	• A **clear technology transition roadmap** guides our investments into low-carbon and next-generation solutions, including **hydrogen co-firing and energy storage systems**.	• Through **International Renewable Energy Certificates (I-REC)** and carbon credit solutions, we enable customers to access certified clean energy and achieve their sustainability goals.	• Beyond our own operations, we actively **drive ecosystem-wide transformation** through initiatives such as the **Industrial Estate Decarbonisation Roadmap**, which accelerates emission reduction across value chains, local communities, and industrial clusters.

Expanding Renewable Energy






Electricity Generation Technologies Utilised for B.Grimm Power Net Zero Road Map

			GHG Emission	No Carbon Tax	Carbon Tax, TPA	Partial Liberalized Market	Full Liberalized Market
				2025 Towards 2050			
1	Solar & Wind & Energy Storage		No GHG	Increase			
2	Hydrogen (H_2) Blending		Reduction	Preparation	Pilot Project	Implementation	
3	Pure Hydrogen (H_2) or Ammonia (NH_3)		No GHG	Preparation	Pilot Project	Implementation	
4	Hydrogen Fuel Cell		No GHG	Under Study	Cost-effective Technology Monitoring Pilot Consideration		
5	Carbon Capture		Reduction	Under Study	R&D and Global Trend Monitoring Assess Site-Specific Feasibility		

Net Zero Roadmap and Strategy for Industrial Estates (in collaboration with GIZ)

The study's scope has been broadened to include comprehensive decarbonisation planning and strategies for the entire industrial estates and Industrial Park. To support this, GIZ has appointed ERM as the project consultant, with six defined work packages and deliverables to ensure systematic progress and impactful outcomes.

Project Pilot Sites

1 **Laem Chabang Industrial Estate** I-EA-T

Location: Chonburi
Operator: Industrial Estate Authority of Thailand (IEAT)
Main Industries: Diverse manufacturing including automotive to electronic as well as two refineries


Location of BPLC 1&2 Power Plant

2 **Bangkadi Industrial Park (BIP)** BIP

Location: Pathum Thani
Operator: Bangkadi Industrial Park Co., Ltd.
Main Industries: Electronics and electrical appliances manufacturing, automotive parts, and R&D facilities


Location of BIP 1&2 Power Plant

Expected Outcomes for B.Grimm Power

Strategic Benefits

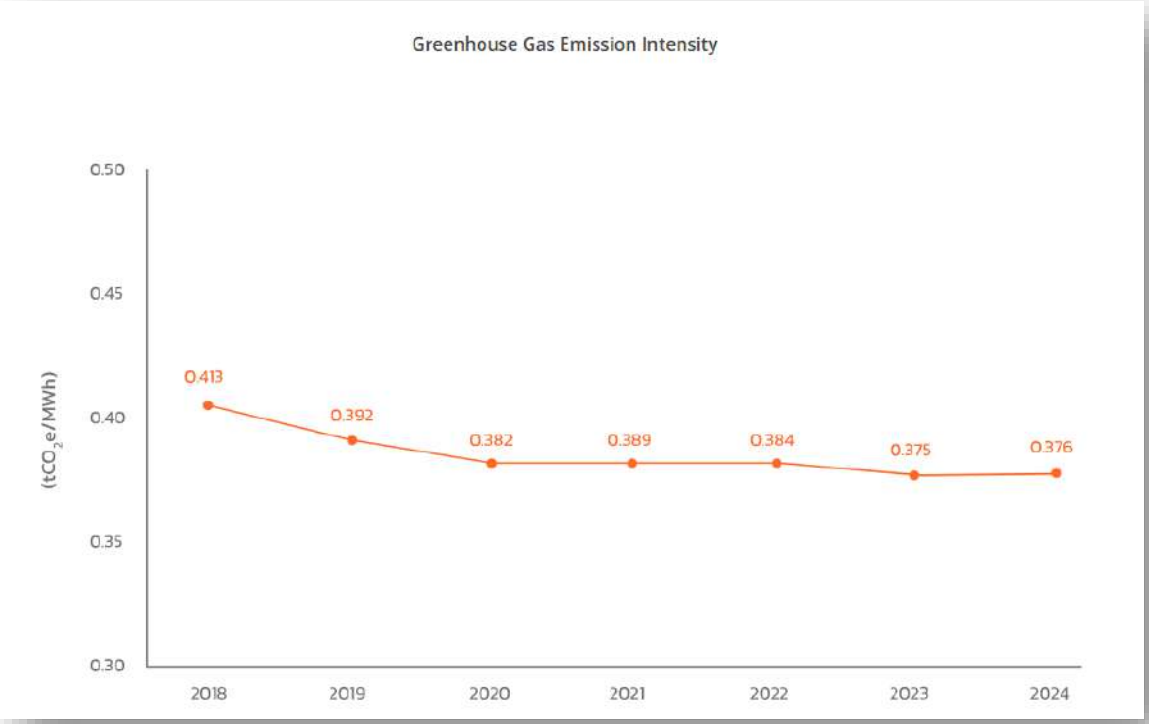
1. Tailored Decarbonization Plan
2. Strengthened Stakeholder Collaboration
3. Broader Industry Insights
4. Financial Support

Organisational Impact

1. Reinforced Climate Leadership
2. Customer-Centric Utility Insights
3. New Business Opportunities
4. Scalable Pilot Model

Stakeholder	Organisation
Project Implementer	• GIZ
Key Partner	• B.Grimm Power, BIP, IEAT
Project Consultant	• ERM

Performance



In 2024, B.Grimm Power's GHG intensity for scope 1 and 2 was 0.376 tonnes of carbon dioxide equivalent per megawatt-hour (tCO2e/MWh), representing 9 percent reduction from 2018. The key achievements in 2024 include:

- Continuous Expansion of Renewable Energy
- Energy Efficiency Enhancements
- Waste Reduction and Resource Optimisation Across the Supply Chain
- Digital Innovation for Smart Energy Management

Building a Sustainable Future

Achieving Net Zero Together

Optimizing Efficiency

Upgrading equipment for lower fuel consumption and higher efficiency.

Cleaner Technology

Integrating new technology to reduce emissions in existing plants.

Expanding Renewables

Investing in solar, wind, and other clean energy sources.

Promoting Sustainability Solutions

Enhancing grid security and offering I-RECs (renewable energy certificates).

Social and Community Development

Strategic Focuses for social and community development

"We're committed to a philosophy of 'Compassionate Business for Harmony with Nature' to improve community and society's quality of life."

Strategy	Business Driver	UN SDGs
Foster STEM* education at all levels to prosperity support economic and future growth	Developing labour with skills and talents requires for both current and future business & gain social license to operate	
Create positive contributions, promote wellbeing and engagement to the communities	Receiving a 'Social license to operate' with reduced complaints and disputes from local communities	
Support Thailand's sports, health, and arts practitioners towards world-class performance	Receiving support from society, boosting corporate image and reputation, both domestically and internationally	

**STEM stands for Science, Technology, Engineering, and Mathematics.*

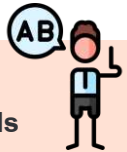
Foster STEM education at all levels

STEM education is not only essential for individuals but also at global levels.

Benefit to People

- Economic impacts and Enhance country's competitiveness
- Addressing global challenges i.e. climate change
- STEM careers opportunities, offering high paying jobs and thus improve wellbeing
- STEM teaches critical thinking, innovation, teamwork

Our Key Projects



Kindergarten and primary levels

- The Little Scientists' House of Thailand

University and vocational levels

- Dual vocational program
- Internship program for students in STEM

2024 Performance & Targets

Kindergarten and primary levels

Unit: Student

	Performance 2024	Target 2030
Kindergarten & primary students (accumulated since 2011)	196,322	400,000
University and vocational level students (accumulated since 2011)	199	300

2022 Performance Highlights

135 Schools

and 196,322 students have benefited from it since the project was launched

326 Teachers

who participated in training within the project

2023 to 2030 Expansion

For 2024, For expand into primary level at the schools in the current coverage (3 locations)

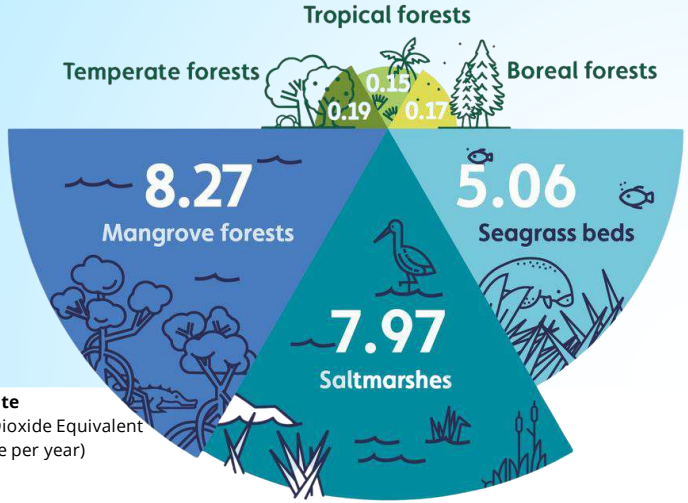
From 2025 onwards, added local network from new locations and engage with the local schools near power plants, focusing on pre-school levels, and expand to primary level from 2027 onwards.

Blue Carbon: Mangrove Project at Bangbo

ESG Activity: Protecting the Earth with Blue Carbon: Mangrove Reforestation Activity on 29 July 2025 at Bangbo Solar Farm

What is BLUE CARBON?

Carbon stored in coastal and marine ecosystems, especially in mangrove forests, is very important for absorbing carbon dioxide from the atmosphere. Carbon storage occurs in plants, roots, and submerged soils rich in organic matter. In the soil, it can be sequestered for several hundred to a thousand years, as it decomposes very slowly.



Carbon Burial Rate
(Tons of Carbon Dioxide Equivalent buried per hectare per year)

Background Introduction

Striving for ISO 14001 underscores a **key pain point** for power plants: large energy footprints require strong environmental commitments. While solar farms provide clean energy, their vast land use often reduces green space and ecology. Developing a mangrove forest directly addresses this gap, transforming a liability into an asset for **environmental stewardship**.

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Blue Carbon: Mangrove Project at Bangbo

Carbon absorption capacity of 100 mangrove trees

37.5

kg of carbon per tree

A 10-year-old mangrove tree stores about 30 kg of carbon above ground, plus an additional 25% below ground

13.76

Ton CO2e

Multiplied by 3.67 to convert to Equivalent to CO_2

650

Forest Trees

Planting 100 mangrove trees captures the same CO_2 as 650 ordinary trees in just one year.

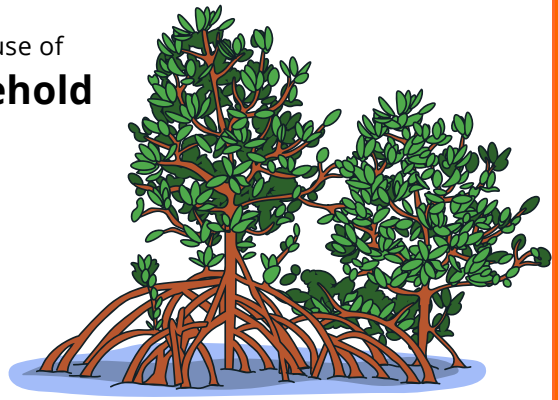
Equivalent to driving **~ 68,000** kilometers

Equivalent to flying **~ 55,000** kilometers

Equivalent to electricity use of **a 4-person household** for nearly 2 years

NEXT

- Explore potential sites for implementing the Mangrove Project.
- Collect data on carbon sequestration capacity.
- Future plan: calculate possible carbon offset and assess potential for carbon credits.

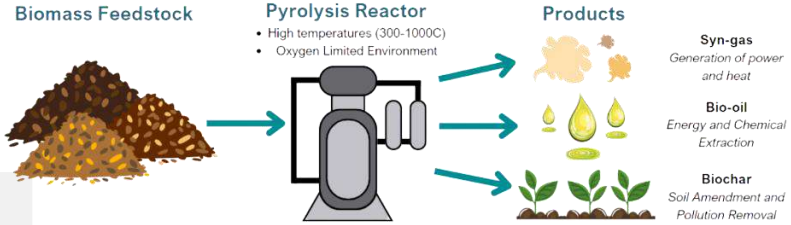


Biochar Pathway: Exploring Circular Solutions

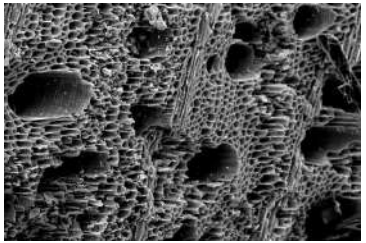
Background Introduction & Objectives aligned with ESG Framework

ESG Commitment - Driving Circular Economy & Creating New Gains

Power plants face challenges in managing **large volumes of sludge from water treatment.**
Traditional disposal impacts **costs and environment.**
Biochar can be a solution used to improve the traditional methods.



Biochar is a stable carbonaceous material produced by heating organic waste or biomass in an oxygen-free environment through pyrolysis technology. Biochar looks similar to charcoal but it has **higher carbon stability**.

Creating Shared Value (CSV) in Action

Environment

- Promote **sustainable waste management** by transforming sludge into Biochar.
- Reduce **carbon footprint & environmental impact** from traditional disposal methods.
- Support **soil improvement** and long-term ecosystem health.

Social

- Create **shared value** with communities through Biochar utilization in agriculture.
- Generate local economic opportunities and **green** jobs.
- Strengthen **partnerships** with stakeholders by addressing community needs.

Governance

- Align with national **sustainability policies** and circular economy roadmap.
- Contribute to **carbon reduction targets** and climate commitments.
- Demonstrate industry **leadership in ESG compliance** and innovation.

Impact: Lower costs, greener environment, stronger communities.

Biochar Pathway: Exploring Circular Solutions

Planned Project Scope

Strategic Collaboration

Partner: Chiang Mai University
Course: Sustainability Beyond Net Zero Program (Beyond Z)

A groundbreaking education aimed at **building a new generation of green thinkers and climate leaders across society.**

Feasibility Study

For designing and installing small- to medium-scale biochar systems at power plant or communities.

POWERING THE FUTURE WITH BIOCHAR & COMMUNITY COLLABORATION

Field Trials

Action: Test biochar in local agriculture
Partners: Farmer groups & community
Outcome: Improve soil health & crop yield

Knowledge Co-Creation with Community

Biochar education for communities, schools, and municipalities.

Average Annual Sludge Volume

1,200

tons/year

for 8 plants

Site visit on Aug 13–15, 2025, at Chiang Mai University, Energy Research and Development Institute Nakornping, Biomass Management Centre, and community farming areas.

Biochar Pathway: Exploring Circular Solutions

Expected Outcomes

Carbon Offset / Carbon Credit

Position company as circular economy & climate action innovator; achieve carbon offset & carbon credit revenues.

1.9-2.7
tCO2e/ton

Stakeholder Engagement

Strengthen ties with regulators, authorities, and communities; build trust & social license to operate.

Community Value

Create alternative income for communities and farmers via waste-to-fuel; improve soil and reduce PM2.5.

Policy & Regulation Support

Align with Thailand's BCG model; support carbon reduction compliance and future regulations.

Carbon Sequestration / GHG Reduction

Enable long-term carbon storage in biochar; cut landfill use & methane from sludge disposal.

Knowledge Sharing / Technology & Innovation

Develop new know-how & pilot model for scaling to other plants.

NEXT

- Awaiting the proposal for sending sludge feedstock to test biochar production and conduct quality analysis.
- Beginning the study on the design of pyrolysis kiln for biochar production.

B.Grimm Corporate Citizenship in Korea

Creating Shared Value with Communities & Society

Offshore wind project in South Korea

B.Grimm Corporate Citizenship in Korea

Creating Shared Value with Communities & Society

“Ultimately, we want to be an integral part of society, rather than being a foreigner who profits and takes it home... A few years from now, when people in Korea hear about B.Grimm, we hope they’ll see it as a Korean company. And that applies to every country we operate in.”

Dr. Harald Link

2024: Harald Link, the first foreigner in 70 years in the history of South Korea to receive an award for his outstanding contributions to equestrian sports in Korea

Opportunities & Risks

Balancing Growth and Responsibility

Opportunities

- **Social License to Operate:** Must secure approval from 1,000+ households in project area
- **Cultural & social trust-building:** Our commitment demonstrated through long-term support in music and sports
- **National-level partnerships**: Collaboration with government agencies and key institutions to advance shared goals

Challenges

- **Strict local consent:** Even 1 household disagreement can halt project
- **Regulatory Complexity:** > 20 permits & licenses required before COD
- **Protest Culture:** Korea ranks among the highest in Asia for local demonstrations reputational & project delay risks

Engaging Communities, Partnering with Government, Inspiring Society

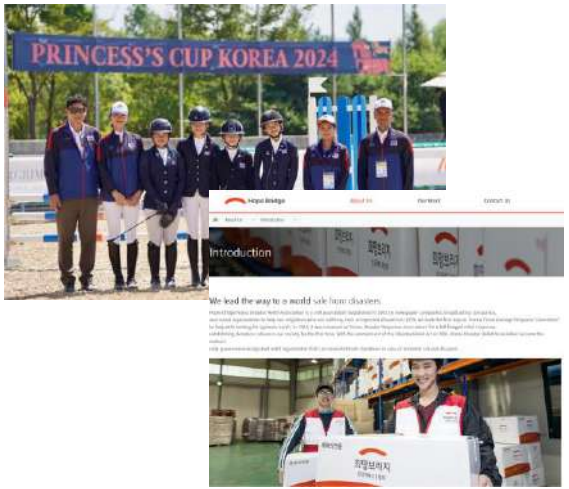
B.Grimm's Approach to Corporate Citizenship

Local Partnerships

Trusted Korean partners

Community Engagement

Public hearings, fair compensation, contracts with all households



Cultural Diplomacy

Public hearings, fair compensation, contracts with all households

Turning Commitments into Tangible Outcomes

1. Community & Local Impact

- 500+ coastal households engaged and compensated through direct agreements
- Surplus profit mechanism: 130% profit vs 100% target ⟶ **30%** surplus allocated to public welfare (in company by-laws, applied with government/partners)
- Ad-hoc allocation ensures resources go to pressing local/national needs each year

2. Culture & Social Value

- Seoul Philharmonic Park Concert 20,000+ attendees, first outdoor concert post-COVID
- Happy Concert 13 disabled youth musicians trained & performed with SPO professionals
- Sawasdee Seoul Thai Festival strengthened Thai–Korean cultural ties (10th anniversary in 2025)

3. Trust & Recognition

- No community protests despite Korea's strong protest culture (rare achievement)
- Excellent Award from Korean Sport & Olympic Committee – first foreigner in 70 years (Dr Harald Link)
- National recognition through Princess Cup Korea 2024 (Thai–Korean equestrian friendship)

Sustainability Strategy 2023-2030

Our corporate **vision** is the north star…
Empowering The World Compassionately

…for our 3 sustainability **strategic directions**…

…which focus on **sustainable** economic, societal, and environmental **value creation**...

…built on robust **sustainability-focused foundations**…

…towards realizing long-term **sustainability targets**…

…in line with **strategically prioritized** UN **SDGs**…

…while also contributing to other SDGs along our value chain

Driving cleaner & sustainable growth
For greener economies

- Low GHG portfolio management
- Innovation & digitalization
- Operational efficiency and customer satisfaction

Keeping society at the heart
For better living

- Corporate citizenship
- People development
- Occupational health & safety

In harmony with nature
For a greener future

- Environmental management
- Biodiversity

Foundations

- Stakeholder engagement
- Governance
- Cybersecurity & data privacy
- Respect to human rights
- Sustainable supply chain

Targets

- Increase RE output share substantially by 2030 in line with 2.0°C pathway
- Increase RE to > 50% of installed capacity by 2030
- Achieve Scope 1 and 2 net emissions intensity of less than 0.28 tCO2e/MWh by 2030
- Foster internal and external innovation for energy transition
- Maintain energy efficiency rate of > 50% annually
- 27% wind power capacity factor and 15% solar power capacity factor by 2030
- Achieve over 95% of satisfied customers annually
- Support Thailand's sports, health, and arts practitioners towards world-class performance
- 400,000 STEM student beneficiaries by 2030
- 100% of employees equipped with key relevant skills by 2030
- Enhance employee engagement score to 85% by 2030
- Zero Lost Time Injuries and Zero Fatalities
- Commit to increase recycled waste to 88% by 2030
- Contribute to solar panel waste circularity by 2040
- 100% compliance to wastewater discharge regulations
- 100% compliance to air emission regulations
- Net Positive Impact on Biodiversity
- No Net Deforestation

WHO WE ARE

B.GRIMM POWER AT A GLANCE

4,155
Megawatt
Installed Capacity*

15.1
Billion Thai Baht
Q2'2025 Revenue
(6M'2025 Revenue was THB 28.8 billion)

17.3
Years
Avg. Remaining PPA for EGAT

70.4
% of the operating capacity
Natural Gas Powered*

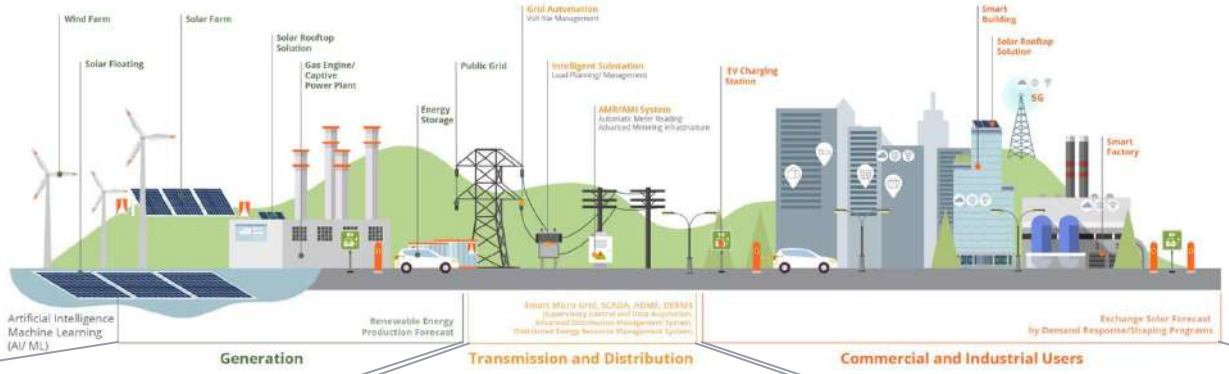
72.3
% of Q2'2025 revenue
State-Owned Off-taker
(72.0% of 6M'2025 revenue with State-Owned Off-taker)

7.5
Years
Avg. Remaining PPA for IUs
(Up to 15-year tenor with track record of extensions)

** Information as of August 2025*

We are a top-tier energy utility, providing **reliable** and **affordable** energy, from natural gas and renewable energy, to **single-buyer markets** and industrial customers in our **region**.

Eco-System – Smart Utilities Project



1. Power Generation & Green Energy		2. Transmission & Distribution		3. Commercial & Industrial Users	
Solar Rooftop	Floating Solar	Smart grid and Smart Meter	Automatic Demand-side Management System	Sustainable & Intelligent Data Center	Integrated EV Charging Solution*
Battery Energy Storage System	Renewable Energy Certificate	TPA Energy Trading		Smart Energy Management Service	Energy Optimization Solution*
Green Tariff	Virtual Power plant and off site PPA			Integrated Operation Center	Smart & Healthy Building Solution*
				District Utilities System	

*Operate under B.Grimm Technology