

INNOVATION THAT'S REAL

CHEMICALS BUSINESS FOR SUSTAINABILITY

Version: October 2022





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Message from CEO and President

SCG Chemicals Public Company Limited or SCGC operates business in accordance with sustainable development guidelines and goals, aiming to become "Chemicals Business for Sustainability". To achieve this goal, SCGC fosters business growth while also conducts business in line with ESG (Environmental, Social, and Governance) to address global megatrends, response to climate change, and reduce environmental impacts. SCG Chemicals Public Company Limited or SCGC operates business in accordance with sustainable development guidelines and goals, aiming to become "Chemicals Business for Sustainability". To achieve this goal, SCGC fosters business growth while also conducts business in line with ESG (Environmental, Social, and Governance) to address global megatrends, response to climate change, and reduce environmental impacts.

As the world, including Thailand, is constantly facing new challenges, particularly the COVID-19 pandemic and climate change, SCGC has incorporated resilience and handled the situation with agility and speed. Business Continuity Management (BCM) has been implemented to manage and mitigate various risk factors. Additionally, digital technologies have been developed and adopted in business management to boost its competitiveness and sustain its leadership in ASEAN.

SCGC adheres to and practices its four core values: Adherence to Fairness, Dedication to Excellence, Belief in the Value of the Individual, and Statement and aspiration for Social Responsibility. SCGC seeks to generate sustainable growth for ASEAN and the countries where it operates to create value for all stakeholders, encompassing customers, business partners, employees, communities, and other stakeholders, by managing our business based on international standards, embracing strong corporate governance principles, and adopting uncompromising safety standards. SCGC seeks to contribute to the well-being of people by providing quality products and services through operational excellence, technology advancement, and innovation under the concept "INNOVATION THAT'S REAL".

> With success of nearly 40 years in Thailand, we are ready to advance our business growth to cement our position as ASEAN chemicals leader for sustainability, particularly in Vietnam and Indonesia. SCGC looks forward to collaborating with all sectors to develop chemical innovations that will benefit people and the planet and open up a world of endless possibilities while nurturing society and the environment to flourish sustainably together.

Tanawong Areeratchakul CEO and President SCG Chemicals or SCGC





SCG Chemicals Public Company Limited, or SCGC, a pioneer in Thailand's petrochemical industry, has been operating and growing continuously for nearly 40 years. **With SCGC's continuous expansion in Thailand and ASEAN, the Company has become ASEAN's leading chemicals producer, emphasizing on both business growth and sustainability.**

One of SCGC's key competitive strengths is strong operational footprint in Thailand, Vietnam, and Indonesia, the three largest economies in ASEAN. Thailand serves as the primary production base, while in Indonesia, the Company has a 30.57% stake in PT Chandra Asri Petrochemical Tbk (CAP). In Vietnam, the Company is the first company who inverted in the integrated petrochemical complex, and its flagship Long Son Petrochemicals (LSP) complex is under construction. **These three markets represent two-thirds of the total population in ASEAN with growing purchasing power.** Having production bases in all three countries will enable SCGC to respond to market demands promptly. Furthermore, digital technology is being implemented throughout the value chain to take operational excellence to the next level.

SCGC focuses on developing High Value Added Products & Services (HVA) to address five global megatrends: urbanization-driven infrastructure improvements, transition to electric vehicles and renewable energy, medical and wellbeing, and the development of green innovation, such as green polymer and low carbon footprint solutions.



SCGC is ASEAN's leading chemicals producer that drives forward business growth sustainably.





scgc 3

SCGC

Brand Reflects Innovation and Sustainability

SCGC has rebranded in accordance with its business direction, reflecting "innovation" and "sustainability". It has unveiled a new logo "SCGC" with a graphical hexagonal shape of a leaf embedded with the letters "SCGC". This demonstrates its long-upheld ideal of four sustainable business practices and its determination to innovate for the planet and society in pursuit of sustainable growth in ASEAN.

DARK BLUE

Innovative & Reliable

Development of innovations that propel the economy and industry, and improve people's quality of life.

GREEN

Sustainable

Commitment to sustainable development and advancement of ESG to create a sustainable business and world.

YELLOW

Proactive & Growth

Continuous learning and selfchallenge for better results, drive business growth, and care for employees, business partners, communities, and stakeholders.



Heritage

Adherence to the SCG's longestablished 4 core values.

Chemical Innovations

for Enhanced Quality of Life

SCGC's chemical innovations not only address lifestyle needs but also improve people's quality of life, drive the economy, and generate endless possibilities. This is due to versatile qualities of plastics or polymer that are used as raw materials to create products for everyday life.

For this reason, SCGC places a significant emphasis on developing technology and innovations to produce **High Value Added Products & Services (HVA)**, focusing on five industries that have continuous growth and address megatrends: **consumer packaging**, **medical and well-being**, **automotive**, **infrastructure and energy solutions**. In addition, SCGC rigorously develops innovative green polymer solutions under the SCGC GREEN POLYMER[™] brand to achieve the objectives of resource maximization and greenhouse gas emissions reduction. This allows the Company to produce raw materials for environmentallyfriendly packaging that satisfy the needs of leading global brand owners and environmentallyconscious consumers.







SCGC at a Glance

2021 Operating Results



Sales of products and services in

countries around the world



Revenue from sales

238,390 million baht



Number of employees

8,325

Net profit⁽²⁾

27,068

million baht



Number of patents 473

EBITDA

million baht

46,681





% R&D spending⁽¹⁾ of revenue from sales

0.7%



% of HVA Products & Services of total revenue from sales

35.8%

million cubic meters

ESG Index



⁽¹⁾ R&D spending is calculated from the sum of R&D-related spending and investments in the relevant year/period. ⁽²⁾ Net profit attributable to owners of the parent

SCGC's 3 core businesses

Olefins Chain in Thailand

• Upstream olefins products | ethylene and propylene

Downstream polyolefin products | HDPE, LLDPE, LDPE, PP





Vinyl Chain

- PVC resins and PVC compound
- PVC finished products such as pipes and fittings, door and window profiles





of total revenue from sales *

Other businesses

• Overseas olefins chain | LSP, CAP



• Recycling businesses | Cirplas, Sirplaste



- solution businesses
- * The percentage of revenues from sales of each business segment in 2021 were before intersegment elimination, which accounted for 4.2% of revenue from sales.

SCGC's Performance

2019-2021



⁽¹⁾ R&D spending is calculated from the sum of R&D-related spending and investments in the relevant year/ period.

Operating results





150k

100k

50k







SCGC's Success Stories

SCGC seeks to **develop chemical innovations** to propel ASEAN's economy and improve people's quality of life based on ESG and circular economy principles.



⁽¹⁾ R&D spending is calculated from the sum of R&D-related spending and investments in the relevant year/ perior ⁽²⁾ Net profit attributable to owners of the parent

SCGC is a leading integrated chemicals producer in ASEAN, with strategic bases in Vietnam, Indonesia, and Thailand.

SCGC is committed to develop High Value-Added products and services (HVA), encompassing infrastructure, consumer packaging, automotive, medical and well-being, and energy solutions.

Driving Forward Research and Development

while Responding to Megatrends

Our in-house R&D centers, long-standing relationships with leading global industry players through joint ventures, and our open innovation network with leading institutions around the world

 International partners

 BILLGMEINDA GATES foundation
 Image: Constant of the second Research and Development Team 560*

> Number of Patents 473*

*Information as of December 31, 2021

Digital team

170+*

Accelerate Adoption of Digital Technology

across the Value Chain



Precise and rapid predictions with Real-time Optimization



Enhanced energy efficiency with Artificial Intelligence (AI) and automation



Fulfill customers' needs in real-time

OUR PARTNERS



Information as of December 31, 2021

Growth-Oriented **Business Model**







The largest polyolefins and **PVC producer in ASEAN** with a capacity by percent equity of 19%*.

*Information from NexantECA as of December 31, 2021



* The percentage of revenue from sales of each business segment in 2021 were before intersegment elimination, which accounted for 4.2% of revenue from sales.

*South Asia⁽¹⁾, China, South East Asia⁽²⁾, East Asia⁽³⁾ and other regions⁽⁴⁾

- ⁽¹⁾ Including India, Bangladesh, Pakistan, Sri Lanka, Maldives
- ⁽²⁾ Excluding Thailand, Vietnam, Indonesia
- ⁽³⁾ Excluding China
- ⁽⁴⁾ Mainly including Oceania, Africa, Middle East, Europe, North America, South America
- ⁽⁵⁾ Net profit attributable to owners of the parent

5 Key Strategies, Moving toward the Chemicals Business for Sustainability

5 Key Strategies,

Moving toward the Chemicals Business for Sustainability

1

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SCGC focuses on investments in Thailand and ASEAN, particularly in Vietnam and Indonesia.

ASEAN Chemicals Leader

SCGC responses to the tremendous potential of the chemical industry growth in ASEAN, such as Vietnam and Indonesia. The construction of Long Son Petrochemicals Complex, the first integrated petrochemical complex with capabilities to produce ethylene, propylene, polyethylene, polypropylene and steam cracking capabilities in Vietnam, is operated by Long Son Petrochemicals Company Limited (LSP), a wholly-owned subsidiary of SCGC. The commercial operation is expected to commence in the first half of 2023. Moreover, SCGC holds a 30.57% equity interest in PT Chandra Asri Petrochemical Tbk (CAP), making it the second largest shareholder of CAP, the only integrated petrochemical plant in Indonesia.

Fully Integrated Vinyl Player

2

SCGC aims to enhance the integration of the vinyl business to strengthen profitability, with the intention to expand the business of PVC resins and PVC finished products to increase growth prospects in high-growing markets in ASEAN. SCGC also seeks to expand upstream businesses in Thailand, Vietnam, and Indonesia, as well as increase cost competitiveness and strengthen profitability across the value chain.



3 Global Leader in Sustainability

SCGC is striving to become a leader in sustainable business, with ambitions to achieve 1 million tonnes per year of the total sales volume of green polymer portfolio by 2030 and reduce carbon dioxide emissions from the production process with goal to reach carbon neutral by 2050.



4 Strong Portfolio of HVA Grades

SCGC accelerates its growth of the portfolio of differentiated and competitive High Value Added Products and Services (HVA) which is differentiated and creates competitive advantages to drive higher growth opportunities by focusing on five key industries with strong growth potential: consumer packaging, medical and well-being, automotive, infrastructure, and energy solutions, by leveraging on research and development efforts from in-house experts as well as domestic and international research and development partners.



Leading Operator

5

SCGC strengthens leadership on operational excellence by adopting digital technology and data analytics across the value chain to increase competitiveness with more rapid and precise response to consumer needs.

13

SCGC GROWTH JOURNEY



complex (100% stake)

TECHNOLOGY Initiated in-house SMX™ Technology for eco-friendly products

SMX



SCGC is on Track to Become ASEAN's Frontrunner,



Expanding Production Bases in Vietnam and Indonesia

With more than 20 years of on-the-ground experience in Vietnam, SCGC has amassed in-depth industry knowledge and long-term relationships with local customers. SCGC has established Long Son Petrochemicals Company Limited (LSP), the first integrated petrochemical complex with capabilities to produce ethylene, propylene, PE, PP in Vietnam, with expected commercial operation in the first half of 2023.

According to NexantECA, the LSP project is believed to be one of Vietnam's most technologically advanced plants, responding to the continuous market growth. SCGC also intends to produce High Value Added Products and Services (HVA). Currently, the Company is conducting a feasibility study on a second integrated petrochemical complex, or LSP 2 project, which will employ a low carbon footprint design using innovative state-of-the-art technologies.

In Indonesia, SCGC made strategic investments through a 30.57% equity interest in PT Chandra Asri Petrochemical Tbk (CAP) in 2011. CAP is the largest integrated producer and a market leader of olefins, PE, and PP production in Indonesia.

To capture the demand of polymers in Indonesia, in 2021, SCGC has further invested in CAP's second petrochemical complex, or CAP 2, to maximize synergies and efficiencies. The CAP 2 is anticipated that it will start commercial operations by 2026.



Growth potential

- Vietnam and Indonesia are projected to have a GDP growth rate of 5-6% per year over the next ten years, nearly twice the average global GDP growth rate.
- The strategic production bases are located in Thailand, Indonesia, and Vietnam, ASEAN's largest economies. The total population of these countries is approximately 440 million, representing two-thirds of the total population in ASEAN.
- Currently, Vietnam imports approximately 75% of polymers, whereas Indonesia imports approximately 50% due to insufficient domestic production capacity.

ASEAN

SCGC, Fully Integrated Vinyl Player

SCGC is the largest PVC producer in ASEAN*, with a total PVC resin production capacity of 0.886 million tonnes per year and a total PVC finished product production capacity of 0.43 million tonnes per year. SCGC is also one of the few global players that is downward integrated to product value added PVC finished products.

SCGC's vinyl chain is divided into two categories

- 1) PVC resin and PVC compound businesses
- 2) PVC finished products such as PVC pipes, fittings, tubes, and other building materials used for windows, doors, and rain gutters.

SCGC seeks to expand its vinyl business to increase growth prospects in high-growing markets in ASEAN.

- Expand the production capacity of PVC resins to outpace the projected demand growth
- Backward integration to reduce cost and produce sufficient feedstock for existing and future operations
- Expand the production capacity of high value-added downstream PVC pipes, fittings, and profile to serve the growing infrastructure demand in ASEAN



SCGC is the largest PVC producer in ASEAN*, with a total PVC resin production capacity of 0.886 million tonnes per year.





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eduction

SCGC GREEN POLYMER[™] SCGC GREEN POLYMER[™]

SCGC targets to achieve the total sales volume of green polymer portfolio of 1,000,000 tonnes per year by 2030.

Encompassing four pillar solutions

REDUCE Enhance Material for Eco+Efficiency



RECYCLABLE Design for Recyclability

SCGC has developed the Recyclable Packaging Solution, creating flexible packaging with mono-material, PE or PP which can be recycled more efficiently.



The solution supports efficient recycling while maintaining functional end-product properties. SCGC has recently launched an innovative coating barrier technology, which helps prevent air permeability, to replace

multi-material structures, tested and certified by RecyClass international standards.

Our innovative SMX[™] Technology makes it possible to improve the strength of high-quality PE resins.

The technology helps reduce TECHNOLOGY material thickness while maintaining product performance and reducing material consumption. In addition, weight reduction helps reduce energy consumption during transportation and thus reduce GHG emissions.





RECYCLE Mechanical and Advanced Recycling

High Quality Post-Consumer Recycled Resin (PCR) from mechanical recycling process



With SCGC's exclusive formulations, SCGC uses mechanical recycling to turn household plastic waste into High Quality Post-Consumer Recycled Resin (PCR) grade of HDPE and PP with traceability standards compliant with the Global Recycled Standard (GRS). This method allows for 25-100% recycled content in product packaging, enabling

SCGC's partnerships with global brand owners, such as, Unilever with recycled HDPE gallon bottles for Sunlight products, Shell with green lubricant gallons using PCR HDPE, and Lion with packaging using High Quality Odorless PCR.

Sirplaste

In addition, SCGC has acquired 70% stake in Sirplaste, Portugal's leading plastic recycler, and is on track to

increase production capacity in Europe in response to growth of the recycled plastic industry.



Certified Circular Resins from advanced recycling process

Innovative technology enables conversion of hard-to-recycle plastics into recycled feedstock, which is then transformed into "Certified Circular Resins" with a quality equivalent to virgin plastic resins with ISCC PLUS certification for the entire supply chain. This innovative solution allows SCGC to meet



the ever-growing eco-friendly food packaging industry, and helps alleviate the country's waste challenges.



Bio-Compostable Compound Resin

SCGC has developed bio-compostable compound resins with unique properties to form films to produce bio-compostable bags for household and industrial applications. This innovation has been certified by the world's leading institution, DIN CERTCO, in Germany, as being industrially bio-compostable that does not leave any residue in the environmental.

Explore feasibility on the production of bioplastics from renewable resources



SCGC has partnered with Braskem, the world's leading bio-based polyethylene producer from Brazil, by entering into a memorandum of

understanding to jointly study approaches and feasibility of using agricultural products to produce bio-based ethylene to meet the ever-increasing demand for bioplastics in Asia and the global market. SCGC aims to create synergies by integrating Braskem's technology and bio-plastics know-how and SCGC's knowledge of the ASEAN market and expertise in PE production.



Megatrends & Product Portfolio

Megatrends with Opportunities for Growth

The continuous evolution of technology, COVID-19 pandemic, and impacts from climate change, are key drivers for rapidly changing customer demands and behaviors, shaping emerging megatrends. These present both challenges and opportunities for SCGC.

Megatrends

with Opportunities for Growth



The increase in packaging use is driven by the growth of e-commerce businesses, food delivery services and eco-friendly packaging trends. To make packaging more environmentally friendly, SCGC developed the Green Innovation under the SCGC GREEN POLYMER[™] brand to manufacture more eco-friendly packaging materials. This sustainably reduces environmental impacts, maximizes resource utilization, and lowers GHG emissions, which contribute to global warming.





Increasing focus on healthcare and the emergence of an aging society

Increasing health consciousness among consumers has resulted in the development of solutions that help contain the pandemic and improve people's well-being. In addition, the aging of the world's population has resulted in growing markets for product and services that meet needs of elders, particularly in areas of medical and well-being products.

SCGC uses its expertise in materials science and engineering design to develop plastic innovations for medical applications to fulfill the needs of healthcare professionals and patients, such as:

- Special grade PVC and PP for medical applications
- Mobile Isolation Unit for COVID-19 pervention
- Smart Transfer Wheelchair that offers better solutions

Expanding automotive industry

The automotive industry is transitioning toward energy efficiency and pollution reduction. Industry players are accelerating to develop electric vehicles, which are new and popular among customers.

Plastic remains an essential material for automotive parts due to its lightweight and durability, which saves energy and reduces GHG emissions.

SCGC has developed innovative plastic polymer to produce lightweight, easily-moldable automotive parts, resulting in thinner yet high performance products. This can conserve energy and reduce GHG emissions.





Urbanization and infrastructure

Urbanization has prompted the acceleration of infrastructure and utility construction in response to the expanding needs of citizens and their changing lifestyles. As a result, plastic innovations for infrastructure are widely used such as large water pipelines, gas pipelines, electrical wires and telecommunication cables. SCGC develops plastic innovations that improve the quality of life, provide energy, and connect the entire world.

- PE and PVC for insulation and jacket of electrical wires and telecommunication cables
- Flame-retardant cables developed to suit climate conditions
- PE112 for the manufacture of large water, gas, and mining pipelines

• Elixi spe loālīšoś by sccc

• Elixir, polymer material designed specifically for water tanks that keep water clean and prevent algae growth



The growth of renewable energy

The global awareness of sustainable business practices to better fulfill the economy, society, and environment has resulted in the widespread adoption of renewable energy, particularly solar energy, which can be produced year-round, particularly in Southeast Asia.

SCGC is the first company in Thailand which successfully invented and manufactured the floating pontoons for installation and assembly of a fully integrated floating solar farm. The Company has expanded its work plans to include the endto-end floating solar farm solutions, SCGC Floating Solar Solutions, to fulfill the ever-increasing need for renewable energy.



INNOVATION THAT'S REAL

SCGC is committed to develop chemical innovations for better lives, encompassing food packaging, automotive parts, medical equipment, infrastructure and energy solutions. The chemical innovations that surround us, not only propel the economy but also improve quality of life and create a sustainable world.

24

Collaborations to Advance Green Packaging from High-Quality PCR

Nowadays, consumers are environmentallyconscious and willing to collaborate in sorting garbage and used household plastic. At the same time, businesses are accelerating efforts to mitigate environmental impacts. Global brand owners are progressing toward using eco-friendly packaging produced from recycled plastic resins.

SCGC has collaborated with Unilever, the world's leading manufacturer and owner of consumer products goods brands, to develop and replace Unilever's HDPE packaging bottles with recycled HDPE bottles (rHDPE). This effort was the first time in Thailand that post-consumer - plastics were recycled through sorting, cleaning, and properties improvements processes using SCGC's proprietary formula to create High Quality Post-Consumer Recycled Resin (PCR) under the SCGC GREEN POLYMER[™] brand, suitable for production of new packaging bottles for Unilever. The pilot project started with gallon bottles of Sunlight dishwashing liquid.



At the start of this collaboration, both companies faced challenges due to the lack of high quality PCR in Thailand that could meet requirements of the global brand owners.

"Key properties required for developing Sunlight liquid dishwashing packaging were safety, odor, color, and rigidity. This collaborative effort between Unilever and SCGC was a success in that we developed Sunlight's gallon packaging for dishwashing liquid using High-Quality PCR that was certified by Global Recycled Standard (GRS). It marked the beginning of the partnership between the two organizations. Moreover, we will continue to co-develop more solutions for other Unilever products, including home care and personal care packaging." said **Vivekanand Sistla, Regional R&D Director SEAA & Site Leader at Unilever**.



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At the start of this collaboration, both companies faced challenges due to the lack of high quality PCR in Thailand that could meet requirements of the global brand owners.







Plastic Innovations

for Improved Health and Wellness

Due to the COVID-19 pandemic, coupled with the transition to an aging society, SCGC has placed a significant priority on developing plastic innovations for medical and well-being applications, which will assist healthcare workers and medical professionals in working more conveniently and efficiently.

In response to the abrupt demand posted by the COVID-19 pandemic, SCGC's experts closely collaborated with medical team to invent and develop **innovations for COVID-19 prevention**. With swift actions, SCGC delivered the Mobile Isolation Unit to help ensure smooth and safe operation of healthcare workers, especially for hospitals in remote areas. Examples of innovations include the Negative Pressure Isolation Room and Negative/ Positive Pressure Isolation Chamber. In addition, SCGC is committed to developing **medical grade plastic resins, SCGC[™] PP Medical**, specifically for medical and pharmaceutical applications which comply with international standards and compatible with various sterilization methods. Another example of the medical grade resin is PVC resins for medical devices which can be easily molded and are safe for contact with food and water.

SCGC's expertise in materials science and engineering design has enabled it to continuously create and develop innovations to meet medical needs and enhance the quality of life such as Smart Transfer Wheelchair and 3D highperformance face mask under the VAROGARD brand.



SCGC's experts closely collaborated with medical team to invent and develop **innovations for COVID-19 prevention**. With swift action, SCGC delivered the Mobile Isolation Unit to help ensure smooth and safe operation of healthcare workers.



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VAROGARD

Plastic Innovations for Lightweight

Automotive Parts, Ensuring Safety and Energy-Efficiency

When the automotive industry strives for lightweight materials, plastic is an ideal solution to develop the sustainable vehicles for the industry. **This requires plastic materials with high impact resistance** and stiffness that meet vehicle safety standards. In automotive and part manufacturing industries, there is a growing trend toward the use of plastic to support the advancement of automotive innovation to be lighter with reduced energy consumption, in addition to the growth of EV market, where plastics play significant roles in both EV parts and batteries.

Energy-Saving Automobile Trends

Nowadays, automakers are striving to enhance energy efficiency of their vehicles. Thus, by reducing weight and thickness of auto parts, while maintaining the same strength, the overall weight of vehicle will decrease, resulting in energy saving and carbon dioxide emissions reduction.

Plastic Designed for Modern Automobiles

With the lightweight automotive trends, plastics are widely and increasingly used. This requires plastic materials with high strength, high impact resistance, and high stiffness properties that meet vehicle safety standards. With the addition of improved flow properties, this enables the production of thinner and larger automotive parts, which is considered as a challenging task as other properties of plastic resins must remain as effective as before.





26 INNOVATION THAT'S REAL

PE112: World-Class Water Pipelines, Enhancing Quality of Life

The growing population has resulted in an expansion of essential utilities to accommodate the rising demand, especially the need for fundamental human necessities like freshwater. For example, Koh Samui in Surat Thani Province is home to many locals and one of the world's top tourist destinations; however, the island's freshwater supply was inadequate for consumption. At the same time, turning seawater into freshwater is costly and potentially has impacts on environment. SCGC collaborated with the Provincial Waterworks Authority (PWA) on the Phun Phin-Samui Submarine Pipeline Construction Project in Surat Thani, stretching over 120 kilometers, with a 100-km section on land and another 20 kilometers underwater. This was the first time Thailand used PE112 resins to manufacture underwater pipelines. SCGC is the first inventor of PE112, the black polyethylene compound (2018 European patent) for high-pressure pipes such as water, gas, and mining pipelines. The pressure resistance of PE112 resins is 10% greater than that of PE100 counterparts on the market, ensuring optimal efficiency and safety standards.

Wiboon Sangwithayanon, CEO of Wiik Public Company Limited, a pipe manufacturer and had a responsibility as a welder of the project, said "For this project, the Company was confident in using PE112 in the manufacturing process of the pipe. The PE112 pipe would enjoy a longer lifespan, thanks to their increased durability, and this would benefit the community and provincial waterworks authorities".



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SCGC Floating Solar Solutions

Integrated Floating Solar Farm for Sustainable Alternative Energy

Solar power generation using photovoltaics is one of the popular ways to produce clean energy, especially in tropical countries such as Thailand. Currently, ground-mounted solar systems are utilized on land, roofs, and water surfaces. Since 2017, SCGC has pioneered the development of Thailand's first floating solar pontoon system for installing solar panels. It was initially installed in a reservoir on the SCGC plant's site to generate electricity for use in the SCGC office building.

Consequently, SCGC expanded the business plans, fulfilling the growing need for renewable energy with SCGC Floating Solar Solutions. SCGC provides a broad range of services, including feasibility study, layout design, engineering, operation and maintenance, and product warranty, striving to promote solar power as an affordable option for sustainable energy.

Expand renewable energy innovations in Thailand

SCGC has collaborated with **Thai Solar Energy Public Company Limited (TSE)** to design an 8-megawatt floating solar plant in Prachinburi Province. The plant utilizes the Company's reservoir to generate clean energy, reducing carbon dioxide emissions and enabling TSE to participate in the production of clean energy for the benefit of customers and communities, a significant step towards carbon neutrality.



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The best floating solar solutions in Thailand **right now for us belong to SCGC**.

"The best floating solar solutions in Thailand right now for us belong to SCGC. As a supplier of solar farm pontoons, SCGC is a leader and the first supplier in Thailand, and regarding their design, the pontoon is strong, durable, and suitable for outdoor uses. That is why we have chosen solar farm components from SCGC", said **Cathleen Maleenont, Ed.D., Chairman of Thai Solar Energy Public Company Limited**.

SCGC has delivered floating pontoons for installation in over 43 floating farm projects. This promotes alternative energy and reduces GHG emissions by more than 35,000 tonnes of carbon dioxide per year, the equivalent of planting 37,150 rai of trees*.

* Information as of December 31, 2021

Research and Development

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Accelerate Expansion of HVA Products with Innovations and Technologies

SCGC has continuously developed its innovation process to accelerate the expansion of High Value Added Products & Services (HVA), offering products and services to address the needs of industries in line with global megatrends.

In 2021, HVA products generated approximately 35.8% of SCGC's total revenue from sales. Furthermore, SCGC accelerates the development of breakthrough technologies to propel and extend product portfolios to satisfy the global market's needs. SCGC has domestic and international R&D centers, such as in the United Kingdom and Norway, to timely create and develop research into commercial innovations in order to meet business, social and environmental needs. SCGC has over 560 R&D and technology experts* both domestically and internationally, as well as networks and innovation partnerships with top global universities and academic institutes. An annual budget of approximately 1,700-2,500 million baht was allocated between 2019 and 2021 to support R&D or approximately 1% of total revenue from sales. Furthermore, SCGC is continuously partnering and embracing new technologies through investments in start-ups and venture capital funds. SCGC currently holds 473 patents*.

* Information as of December 31, 2021









"i2P Center"

(Ideas to Products)

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SCGC established the "i2P Center" (Ideas to Products)

for product innovation and development in Rayong Province, Thailand in 2019, considered as one of the first application and innovation development centers in ASEAN.



To develop products and services to effectively and promptly meet customers and consumers' needs, SCGC established i2P Center (Ideas to Products) in Rayong, Thailand in 2019, considered as one of the first application and innovation development centers in ASEAN in order to provide solutions for material selection, design, and process, as well as prototyping facilities. The i2P Center allows customers and brand owners to be a part of new initiatives, accelerating the process of innovation and prototype product development.

SCGC has exerted its expertises and experiences to support product development for customers, brand owners, partners, and organizations, as well as develop innovations to satisfy the future market demand. The i2P Center is also a platform for exchanging knowledge and



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expertise among specialists, which is essential for developing commercial innovation.

The i2P Center offers a comprehensive range of services throughout the process, from material selection, material formulation to value-added design, covering engineering design and product design in order to ensure that the developed products meet aesthetic and functional needs. In 2021, the i2P Center helped to create more than 100 new product ideas and 90 new product development projects, allowing SCGC to launch 15 new products in Thailand and international markets.



SCGC



Enhance Competitiveness

with Digital Technology

Faster and Better Address Consumer Needs

SCGC has developed the Digital Commerce Platform (DCP), an integrated platform that provides endto-end data visibility to our customers in their journey from ordering to delivering. The platform can respond to customers' inquiries in real-time, allowing customers to make instant decisions, together with utilization of the customer voices for analysis to develop new products, resulting in improvement of customer service and a 70% reduction in customer lead time.



Scan to watch video

Strengthen Manufacturing Process

• Feedstock Sourcing at SCGC

SCGC develops a simulated machine learning to forecast market conditions which assists SCGC to have better decision-making process regarding the sourcing of raw materials to match customer demand.

• Manufacturing

SCGC develops and integrates its platforms by applying machine learning, digital twins or simulation, robotics, and the Internet of Things (IoT) to optimize the business process and maximize reliability with the following solutions:

Digital Reliability Platform - Asset
 Performance Management (APM) solution
 can predict equipment's health, monitor
 performance, and enable advanced
 maintenance across operations to
 minimize unplanned downtime.

- Simulation It is a digital twin or simulation equipped with Artificial Intelligence (AI) in real-time to solve issues arising from the manufacturing process to maximize efficiency and production quality. This can considerably minimize the time and waste associated with problems arising during product transitions.
- Al Supervisory for Energy Analytics -A digital solution for monitoring and reducing energy consumption which helps minimize energy usage and GHG emissions.



Accelerate product development

To develop HVA, SCGC develops an integrated digital platform to collect data for the entire new product development process and builds a simulation model to reduce the time to create prototypes, speeding up product development process and product launch.



Cyber security

SCGC prioritizes cyber security to protect IT and digital infrastructure and systems by applying various cybersecurity technologies and building cyber security awareness in the Company to ensure business continuity.



People Development

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Strengthen Business Efficiency

SCGC seeks to cultivate talented with integrity individuals to drive business, environment, and society forward as part of the ESG strategy.

At SCGC, employees at all levels are encouraged to continuously learn and enhance their knowledge and abilities in their current jobs and prepare for future career path, alongside management and leadership skill under the culture of lifelong learning from diverse sources of knowledge.

70:20:10 learning model

SCGC promotes all forms of learning, of which 70% from hands-on operations, 20% from mentorship, and 10% from learning through courses. The "StartDi Learning Platform" digital learning system is employed to organize curriculums with frequently updated syllabus.

Courses from leading institutions

SCGC offers employee development programs from leading institutions, such as Harvard Business Publishing, and more than 1,300 other general courses to develop employees in management, technology, and leadership.

Operation Excellence Training Center (OETC)

To foster the development of knowledge and technical skills for employees, SCGC has established the Operation Excellence Training Center (OETC) in Rayong, equipped with cutting-edge learning tools that employees and third-party personnels can use for training and workshops aiming at increasing their knowledge and expertise in petrochemical plant operations.

In addition, knowledge and experience are transferred and exchanged to foreign employees working abroad, such as the Long Son Petrochemicals Complex in Vietnam.

Scholarships

SCGC offers scholarships to employees with the potential to pursue higher education at prestigious universities overseas, at master and doctoral levels. Additionally, the program offers more scholarships in energy and digital field, responding to the business strategy.

Reskill and upskill

SCGC seeks to reskill and upskill its employees to have well-rounded knowledge, primarily digital and data utilization, so that they can assess and foresee situations that are advantageous to business operations.

Diversity

SCGC embraces diversity and individuality, which helps the organization reach its full potential and provides the foundation for creativity and innovation.

CGC

35

SCGC seeks to cultivate talented with integrity individuals to drive business, environment, and society as part of its ESG strategy.





SCGC and ESG

For Positive Impacts on Environmental, Social, and Governance

/

SCGC conducts business in accordance with ESG principles,

responsibly addressing the impact on the environment, society, and governance to meet sustainable development goals. SCGC strives to become the "Chemicals Business for Sustainability", conducting business in accordance with ESG principles, responsibly addressing the impact on the environment, society, and governance to meet sustainable development goals. The circular economy concept is integrated into business operations to increase competitiveness in the global market and create sustainable long-term growth.



ENVIRONMENTAL

4

GOVERNANCE



SCGC Strives to Achieve Carbon Neutrality by 2050



20%

(from base year 2021) **by 2030**

38

Climate Resilience in Action

Advance Manufacturing Processes and Innovations

to Reduce GHG Emissions

Increase energy efficiency

- Continuously improve processes and equipment to reduce energy consumption per product unit
- Integrate digital technology into the manufacturing process
- Rayong Olefins Company Limited, a subsidiary of SCGC, has implemented a digital automation system with machine learning to measure and configure highly complex steam control systems and optimize the operation of the plant's most energy-intensive component, the thermal reaction furnace. This helps cut annual energy usage and GHG emissions by 8,030 tonnes of carbon dioxide equivalent.

êmisspro

emisspro[®] high emissivity coating materials to reduce energy loss

- Reduce the furnace's fuel consumption by at least 2%
- Reduce GHG emissions from fuel combustion by 73,539 tonnes of carbon dioxide equivalent during a four-year period (2018-2021). Adoption has spread to other industries, with over 192 furnaces across Asia.

Use renewable energy to reduce dependence on fossil fuels

- Install floating solar systems on the reservoirs and solar rooftops on the office buildings
- SCGC Floating Solar Solutions projects have been installed for SCG subsidiaries and external customers, totaling more than 43 projects with a total power generation capacity of more than 50 megawatts. This aids in the annual reduction of GHG emissions by more than 35,000 tonnes of carbon dioxide equivalent.
- SCGC reduced energy consumption in 2021 by 9.7% or 801,186 tonnes of carbon dioxide equivalent (base year 2007).

Overall GHG reduction (base year 2007)



Advancing Community Improve Community and Society together with Maintaining a Sustainable Environment

40

SCGC improves the quality of life of local communities and society, covering economic, social, and environmental aspects. The focus is on engaging and empowering the communities to be sustainably independent. SCGC also encourages society and communities to adopt circular economy principles in their daily lives through experiential learning.

Promote Circular Economy

Increase Recycling Rate in Communities



Waste-Free Community Project

SCGC has developed an at-source waste management model that includes a network of "homes-templesschools-local waste banks" to facilitate a change in waste sorting practices across all sectors. 14 waste banks were established in Rayong communities with over 3,500 waste bank members*, accounting for a reduction of over 134,000 kilograms of carbon dioxide equivalent (kgCO₃eq).



Scan to watch video

*Information as of December 31, 2021

Upcycling Milk Pouches Project

Milk pouches make up the majority of school waste, and SCGC has developed a way to recycle milk pouches by working with network schools to encourage students to drink milk without wasting and to collect milk pouches for repurposing into **"Recycled Plastic Chairs"**, thereby enhancing the value of used milk pouches.

The initiative serves as educational material to motivate youths to take action. Over 1,300 schools from many provinces have joined the project, and **more than 1.8 tonnes of milk pouches were recycled***. The expanded implementation is in progress.



Scan to watch video

Innovate a way to repurpose used milk pouches where over 1.8 tonnes of milk pouches were recycled.



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41



KoomKah Application

Technologies are used to improve convenience and data management of recyclable items and membership data in waste bank management. In collaboration with Khao Phai Waste Bank in Rayong Province, SCGC has piloted the application and made continuous enhancements to accomplish usable comprehensive upgrades. The application facilitates data management and streamlines the management of membership. The application has been adopted by 14 waste banks* in Rayong Province.

*Information as of December 31, 2021



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SCGC Fish Home

Local fishing communities in Rayong Province have witnessed a considerable drop in the number of fish and marine life, which has had a negative impact on their income and way of life. SCGC has joined hands with the Marine and Coastal Resources Office 1 (under the Department of Marine and Coastal Resources) to design and create fish homes from PE100 pipe materials left over from the testing process in line with the circular economy principles. Over 2,180 fish homes have been installed along the eastern coastline, spanning an area of approximately 50 square kilometers in Chonburi, Rayong, Chanthaburi, and Trat provinces. Additionally, research studies have continuously assessed the environmental guality and abundance of areas where fish homes are installed. The area

survey is found to be home to up to 174 species of diverse organisms. The project has generated over 15,000 baht per month* per household for small-scale fishers.



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Drive Greenhouse Gas Emissions Reduction

Over 152,600 mangrove trees have been planted, and the coverage continues to expand.

Mangrove reforestation projects aimed at reducing global warming

SCGC has created awareness among 100,000+ youth and people in Rayong Province about the significance of reforestation (2017-2021). SCGC has worked alongside the Department of Marine and Coastal Resources and local communities to restore mangrove forests and planted more than 152,600 mangrove trees on the area of 218 rai. These trees are capable of absorbing over 7,000 tonnes of carbon dioxide per year. Plans are underway to expand the coverage of reforestation.

Water Management Project

In collaboration with the communities surrounding Yai Da Mountain in Rayong Province, the Company initiated a water management model, "Song Sarng Song Keb" (Set & Collect) which aims at building capabilities of people, setting rules, collecting data, and retaining water. This approach enables the communities to maintain sufficient water for agricultural use for more than 10,000 rai of fruits farm, yielding more than 79 tonnes of annual production. The project can potentially expand into agricultural tourism, generating more income for the communities.

Following a construction of check dams at Yai Da mountain in Rayong Province in 2014, the NDVI assessment on the biodiversity of the forest was conducted by Pongsak Witthawatchutikul, Ph.D., a former upstream water conservation and management expert from the Department of National Parks, Wildlife and Plant Conservation. The results showed that **Yai Da Mountain now has generated water to the river streams of 14.83 million cubic meters. It also helps absorb 38.40 tonnes of carbon dioxide per rai, or equivalent to more than 20,000 tonnes of carbon dioxide per year, providing clean air to the communities**.



Scan to watch video

Generating Jobs and Income for Communities

SCGC's initiatives helped the communities to generate annual income of **40 million baht**, of which about 7 million baht were from local enterprises. SCGC strives to improve local products with innovations and technologies that combine circular economy principles and local identity to create product differentiation to ensure sustainable income for the communities. SCGC places a strong emphasis on improving potentials of the communities with the help of experts

so that they can become selfreliant in a sustainable way such as providing advices on company registration and organizing e-commerce training. These efforts have improved capabilities of over 1,000 people in the communities. Examples of local enterprises that attended



the training were Saen Yai Khon Saen Witi Community Enterprise, Tulip Housewife Community Enterprise, Noen Payom (Paed Sien) Community Enterprise, and Mab Chalood Community Enterprise.

Board of Directors



Chumpol Na Lamlieng

Chairman of the Board and Independent Director

Date of Appointment as a Director: August 1, 2021

Positions in Listed Companies

 Since 2006 Vice Chairman, Independent Director, and Chairman of the Governance and Nomination Committee, The Siam Cement Public Company Limited

Positions in Non-listed Companies

- Since 2017 Advisor,
- CPB Equity Company Limited
- Since 2012 Director,
- Kempin Siam Company Limited
- Since 2010 Director,
- Siam Sindhorn Company Limited

Positions in Other Organizations/ Special Activities: -

Information as of August 1, 2022



Air Chief Marshal Satitpong Sukvimol Director

Date of Appointment as a Director: August 1, 2022

Positions in Listed Companies

- Since 2021 Director and Member of the Corporate Social Responsibility Committee, SCB X Public Company Limited
- Since 2019 Chairman and Member of the CSR Committee for Sustainable Development, The Siam Cement Public Company Limited

Positions in Non-listed Companies

- Since 2018 Chairman of the Board, CPB Equity Company Limited and its group of companies as being assigned
- Since 2018 Chairman of the Board,
- The Deves Insurance Public Company Limited • Other 7 companies

Positions in Other Organizations/ Special Activities

- Since 2018 President Courtier in H.M. King Maha Vajiralongkorn
- Since 2018 Chairman and Director-General of The Crown Property Bureau
- Since 2018 Lord Chamberlain
- Secretary, Bureau of the Royal Household

nformation as of August 1, 202



Roongrote Rangsiyopash

Vice Chairman of the Board and Chairman of the Remuneration Committee

Date of Appointment as a Director: March 30, 2012

Positions in Listed Companies

- Since 2022 Independent Director and Member of the Nomination and Remuneration Committee, Central Retail Corporation Public Company Limited
- Since 2015 Director, President & CEO, and Member of CSR Committee for Sustainable Development, The Siam Cement Public Company Limited

Positions in Non-listed Companies: 8 companies

Positions in Other Organizations/ Special Activities

- Since 2021 Board of Committee, Ramathibodi Elderly Care and Hospice
- Since 2020 Member, Sub-committee Evaluate the achievement of operations for development, National Science and Technology Development Agency
- Since 2020 Member, Sub-committee Government Administration System Developmen for Driving Toward the Future

Information as of August 1, 2022



Winid Silamongkol

Independent Director and Chairman of the Audit and Risk Management Committee

Date of Appointment as a Director: August 1, 2021

Positions in Listed Companies

- Since 2022 Independent Director and Chairman of the Audit Committee, SCB X Public Company Limited
- Since 2021 Independent Director, Chairman of the Board of Directors and Chairman of the
- Audit Committee, Alla Public Company Limited • Since 2021 Independent Director and Chairman of the Audit Committee, Dusit Thani Public Company Limited

Positions in Non-listed Companies

• Since 2021 Chairman of the Audit Committee and Independent Director, Betagro Public Company Limited

Positions in Other Organizations/ Special Activities

- Since 2020 Director and Chairman of the Auditing Profession Committee, Federation of Accounting Professions under The Royal Patronage of His Majesty The King
- Since 2017 Advisor and Member of Sub-Committees, Thammasat University
 Since 2016 BoardMemberFacultyofCommerce
- and Accountancy, Thammasat University

formation as of August 1, 2022

Board of Directors



Rapee Sucharitakul

Independent Director and Member of the Audit and Risk Management Committee

Date of Appointment as a Director: August 1, 2021

Positions in Listed Companies -

Positions in Non-listed Companies: -

Positions in Other Organizations/ Special Activities

- Since 2020 Member, The Bank of Thailand Board
- Since 2020 Member, Corporate Bond
- Stabilization Fund (BSF) Committee
- Since 2020 Academic Directorial Member (Insurance Branch), The Board of The Office of Insurance Commission
- Since 2020 Member, National Institute
- of Development Administration (NIDA) Council
- Since 2019 Director, National Blood Centre Thai Red Cross Society

Information as of August 1, 2022



Siriluck Rotchanakitumnuai

Independent Director and Member of the Audit and Risk Management Committee

Date of Appointment as a Director: January 1, 2022

Positions in Listed Companies -

- Positions in Non-listed Companies
- Since 2021 Advisor, Twinflows Company Limited
 Positions in Other Organizations/

Special Activities

- Since 2021 Member of the University Council, Shinawatra University
- Since 2020 Member of the University Council, Tapee University
- Since 2019 Chairman of the subcommittee on the Testing of Computer-Assisted Auditing, Federation of Accounting Professionals under the Royal Patronage of His Majesty the King (TEAC)
 - Since 2019 Member of Academic
- Rank Committee, Panyapiwat Institute of Management, Mahanakorn University of Technology, Ubon Ratchathani University, Sripatum University, Vongchavalitkul University, and Christian University Thailand
- Information as of August 1, 2022



Tos Chirathivat

Independent Director and Member of the Remuneration Committee

Date of Appointment as a Director: August 1, 2021

Positions in Listed Companies

 Since 2019 Chairman of the Executive Committee and Member of the Nomination & Remuneration Committee, Central Retail Corporation Public Company Limited

Positions in Non-listed Companies

- Since 2014 Executive Chairman, Central Group Company Limited
 Since 2010 Director, Central Embassy Hotel Company Limited
- Other 49 companies

Positions in Other Organizations/ Special Activities: -

nformation as of August 1, 2022



Suphachai Chearavanont

Independent Director and Member of the Remuneration Committee

Date of Appointment as a Director: August 1, 2021

Positions in Listed Companies

- Since 2020 Chairman, Siam Makro Public Company Limited
 Since 2019 Chairman, True Corporation Public Company Limited
 Since 2019 Vice Chairman (CP ALI
- Public Company Limited
- Since 2019 Vice Chairman, Charoen Pokphand Food Public Company Limited

Positions in Non-listed Companies:

37 companies

Positions in Other Organizations/ Special Activities

- Since 2020 Honorary President,
- the Telecommunications Association
- of Thailand under the Royal Patronage (TCT) • Since 2019 Chairman of the Digital Council
- of Thailand
- Since 2018 Member of the Public Engagement Committee, Princess Maha Chakkri Award Foundation
- Since 2015 Chairman, Global Compact Network Thailand (GCNT)
- Since 2010 Director of Ramathibodi Foundation
- nformation as of August 1, 2022

Board of Directors



Cholanat Yanaranop

Director and Chairman of the ESG Committee

Date of Appointment as a Director: August 1, 2021

Positions in Listed Companies

- Since 2020 Director and Member of the Remuneration Committee,
- The Siam Cement Public Company Limited • Since 2019 Vice Chairman and Member of the Remuneration Committee, SCG Packaging Public Company Limited

Positions in Non-listed Companies: 2 companies

Positions in Other Organizations/ Special Activities

- Since 2021 Member of Banknote
 Management Committee, Bank of Thailand
- Since 2020 Director, SCG Foundation
 Since 2016 Advisor. The Committee
- of Chemical and Petrochemical Engineering, Institute of Thailand Under H.M. The King's Patronage
- Since 2009 Advisor, The Thai Institute of Chemical Engineering and Applied Chemistry

Information as of August 1, 2022



Kitipong Urapeepatanapong

Independent Director and Member of the ESG Committee

Date of Appointment as a Director: August 1, 2021

Positions in Listed Companies

- Since 2019 Independent Director and Member of the Corporate Risk Management Committee, Pruksa Holding Public Company Limited
- Since 2019 Independent Director and Member of Governance and Nomination Committee, SCG Packaging Public Company Limited

Positions in Non-listed Companies: 7 companies

Positions in Other Organizations/ Special Activities

- Since 2019 Executive Board of The Office of National Higher Education Science Research and Innovation Policy Council
- Since 2018 Member of the Professional Expert Committee on Civil and Commercial laws in the National Commission for Justice Administration Development
- Since 2018 Director, Thai Institute of Directors
 Since 2017 Deputy Chairman of the National
- Reform Committee on Legal
- Since 2011 Chairman of the Tax and Regulatory Commission of the Thai Chamber of Commerce

nformation as of August 1, 202.



Thapana Sirivadhanabhakdi

Independent Director and Member of the ESG Committee

Date of Appointment as a Director: August 1, 2021

Positions in Listed Companies

- Since 2020 Independent Director and Member of the Remuneration Committee, The Siam Cement Public Company Limited
- Since 2018 Director and Director of the Corporate Governance Committee, Thai Group Holdings Public Company Limited
- Since 2017 Vice Chairman, Member of the Remuneration Committee, and Chairman of the Executive Committee, Amarin Printing and Publishing Public Company Limited
- Since 2011 Vice Chairman No. 3, Chairman of Executive Committee, Member of Compensation Committee and Member of Sustainability and Risk Management Committee, Sermsuk Public Company Limited
- Since 2007 Vice Chairman of the Board of Directors, Chairman of the Executive Committee, and Member of the Remuneration and Nomination Committee, Univentures Public Company Limited

Positions in Non-listed Companies: 88 companies

Positions in Other Organizations/ Special Activities: -

Information as of August 1, 2022



Tanawong Areeratchakul

Director and Chief Executive Officer and President

Date of Appointment as a Director: January 4, 2017

Positions in Listed Companies

 Since 2019 Chief Executive Officer & President of Chemicals Business, The Siam Cement Public Company Limited

Positions in Non-listed Companies: 37 companies

Positions in Other Organizations/ Special Activities

 Since 2021 Director, Petroleum Institute of Thailand

Since 2017 Director, SCG Foundation

Information as of August 1, 202



Tanawong Areeratchakul

- Chief Executive Officer and President
- Date of Appointment as an Executive: October 1, 2019
- **Positions in Listed Companies**
- Since 2019 Chief Executive Officer & President of Chemicals Business, The Siam Cement Public Company Limited
- **Positions in Non-listed Companies:** 37 companies

Positions in Other Organizations/ Special Activities

- Since 2021 Director, Petroleum Institute of Thailand
 Since 2017 Director, SCG Foundation
- Information as of August 1, 2022



Sakchai Patiparnpreechavud

Chief Commercial Officer, Executive Vice President – Regional, and Executive Vice President - Vinyl Chain

Date of Appointment as an Executive: January 1, 2018

Positions in Listed Companies

 Since 2018 Chief Commercial Officer, Executive Vice President - Regional, and Executive Vice President -Vinyl Chain, Chemicals Business The Siam Cement Public Company Limited

Positions in Non-listed Companies:

Director of SCGC's subsidiaries, associates and other companies which are non-listed as assigned by the company

Positions in Other Organizations/ Special Activities

- Since 2020 Representative of Chulalongkorn University Engineering Alumni
- Since 2019 Advisor, Board of Trade of Thailand

Information as of August 1, 2022



Mongkol Hengrojanasophon

Chief Operations Officer and Executive Vice President -Thailand Olefins Chain

Date of Appointment as an Executive: January 1, 2018

Positions in Listed Companies

 Since 2018 Chief Operations Officer and Executive Vice President -Thailand Olefins Chain, Chemicals Business, The Siam Cement Public Company Limited

Positions in Non-listed Companies: Director of SCGC's subsidiaries, associates and other companies which are non-listed as assigned

Positions in Other Organizations/ Special Activities

Since 2020 Director, The Federation of Thai Industries
Since 2018 Vice Chairman, The Institute of Industrial Energy, The Federation of Thai Industries

Information as of August 1, 2022

by the company



Suracha Udomsak

Chief Innovation Officer and Executive Vice President -New Business

Date of Appointment as an Executive: October 1, 2019

Positions in Listed Companies

 Since 2019 Chief Innovation Officer and Executive Vice President -New Business, Chemicals Business, The Siam Cement Public Company Limited

Positions in Non-listed Companies: Director of SCGC's subsidiaries, associates and other companies which are non-listed as assigned by the company

Positions in Other Organizations/ Special Activities

- Since 2021 Director, Center of Excellence on Medical Biotechnology, Mahidol University
- Since 2020 Director,
- The Federation of Thai Industries • Since 2019 Director.
- Licensing Executives Society (Thailand)
- Information as of August 1, 2022



Kulachet Dharachandra

Chief Financial Officer

Date of Appointment as an Executive: July 1, 2021

Positions in Listed Companies

 Since 2021 Chief Financial Officer, Chemicals Business The Siam Cement Public Company Limited

Positions in Non-listed Companies: Director of SCGC's subsidiaries, associates and other companies which are non-listed as assigned by the company

Positions in Other Organizations/ Special Activities: -

Information as of August 1, 2022

OUR LOCATIONS



Subsidiaries and Production Capacity

Name of Subsidiary	Abbreviation	Principal Products	Business Description	Location	Integration ⁽¹⁾	Nameplate Capacity (tonnes/year)	Commercial Operation (year)
Olefins Chain in Thailand							
Subsidiaries							
Ravong Olefins Co., Ltd.	ROC	Ethylene	Olefins Plant (cracker)	Rayong, Thailand	~	900,000	1999
		Propylene			~	450,000	
Map Ta Phut Olefins Co., Ltd.	мос	Ethylene	Olefins Plant	Rayong, Thailand	~	1,200,000	2010
		Propylene	(cracker)		~	850,000	
Thai Polyethylene Co., Ltd.	TPE	HDPE	HDPE Plant No.1-4	Rayong, Thailand	~	980,000	1989-2010
		LLDPE	LLDPE Plant	Rayong, Thailand	~	140,000	2000
		LDPE	LDPE Plant	Rayong, Thailand	~	150,000	2005
		PP	PP Plant No.1-3	Rayong, Thailand	~	860,000	1993-2010
SCG ICO Polymers Co., Ltd.	SCG ICO	Rotomolding Compound	Rotomolding Compound	Rayong, Thailand	~	85,000	2013
Map Ta Phut Tank Terminal Co., Ltd.	MTT	Jetty and Tank Terminal	4 Jetties	Rayong, Thailand	~	N/A	1998
Rayong Pipeline Co., Ltd.	RPL	Pipe Transportation	Pipe Transportation	Rayong, Thailand	~	N/A	1998

Name of Subsidiary	Abbreviation	Principal Products	Business Description	Location	Integration ⁽¹⁾	Nameplate Capacity (tonnes/year)	Commercial Operation (year)
Vinyl Chain							
Subsidiaries							
Thai Plastic and Chemicals Public Company Limited	TPC	PVC Resins	PVC Plant No.5-9	Rayong, Thailand	v	530,000	1990-2007
		VCM	VCM Plant No.1-2	Rayong, Thailand	\checkmark	590,000	1990-1998
Nawaplastic Industries Co., Ltd.	NPI	PVC Pipes & Fittings	Pipe & Fittings Plant No.1	Saraburi, Thailand	~	131,000	1970
		PVC Pipes & Fittings	Pipe & Fittings Plant No.2	Rayong, Thailand	~	73,000	1997
		PVC Profiles (2)			✓	21,000	
TPC Paste Resin Co., Ltd	TPR	PVC Paste Resins	PVC Plant	Rayong, Thailand	✓	36,000	1993
Nawaplastic (Cambodia) Co., Ltd.	NPIC	PVC Pipes & Fittings	Pipes & Fittings Plant	Phnom Penh, Cambodia	~	18,000	2016
Grand Nawaplastic Myanmar Co., Ltd.	GNM	PVC Pipes & Fittings	Pipes & Fittings Plant	Yangon, Myanmar	~	16,000	2016
PT TPC Indo Plastic and Chemicals	TPC - Indo	PVC Resins	PVC Plant	Gresik, Indonesia	~	120,000	1998
Berjaya Nawaplastic Indonesia	BNI	PVC Pipes & Fittings	Pipes & Fittings Plant	Cikarang Pusat, Indonesia	~	21,000	2019
Binh Minh Plastics Joint Stock	BMP	Plastic Pipes & Fittings	Pipes & Fittings Plant No.1	Ho Chi Minh, Vietnam	~	5,000	1977
		Plastic Pipes & Fittings	Pipes & Fittings Plant No.2	Binh Duong, Vietnam	~	80,000	1999
		Plastic Pipes & Fittings	Pipes & Fittings Plant No.1	Long An, Vietnam	~	40,000	2015

Name of Subsidiary	Abbreviation	Principal Products	Business Description	Location	Integration ⁽¹⁾	Nameplate Capacity (tonnes/year)	Commercial Operation (year)
Vinyl Chain							
Subsidiaries							
TPC Vina Plastic and Chemicals	TPC-Vina	PVC Resins	PVC Plant No.1-2	Dong Nai, Vietnam	~	200,000	1997, 2010
Viet-Thai Plastic Chemical Corporation	VTPC	PVC Compound	PVC Compound Plant	Binh Duong, Vietnam	~	17,000	1994
North Binh Minh Plastics Limited Company	NBM	Plastic Pipes & Fittings	Pipes & Fittings Plant	Hung Yen, Vietnam	~	25,000	2007

Note: ⁽¹⁾ Refers to physical and operational integration of our subsidiaries' and associates' production plants.

(2) Forms part of the "Pipe & Fitting Plant No. 2" facility which produces both pipes & fittings and profiles

Name of Subsidiary	Abbreviation	Principal Products	Business Description	Location	Integration ⁽²⁾	Nameplate Capacity (tonnes/year)	Commercial Operation (year)
Overseas Olefins Business							
Subsidiaries							
Long Son Petrochemicals Co., Ltd.	LSP	Ethylene Propylene HDPE LLDPE PP Butadiene ("BD")	Petrochemical Complex	Ba Ria-Vung Tau, Vietnam		950,000 ⁽¹⁾ 400,000 ⁽¹⁾ 500,000 ⁽¹⁾ 500,000 ⁽¹⁾ 400,000 ⁽¹⁾ 100,000 ⁽¹⁾	2023
Chemtech	Chemtech	Cross-linked Polyethylene ("XPLE")	XPLE Plant	Binh Duong, Vietnam	~	12,000	2005
Recycling Business							
Subsidiaries							
Sirplaste-Sociedade Industrial de Recuperados de Plastico, S.A.	Sirplaste	Recycled Resins	PCR Plant	Porto de Mós, Portugal	×	36,000	1974
Other Facilities							
Subsidiaries							
Rayong Engineering and Plant Service Co., Ltd.	REPCO	Engineering and Plant Service	Engineering and Plant Service	Rayong, Thailand	~	N/A	2001

Note: ⁽¹⁾ Refers to the expected capacity when the construction of the LSP petrochemical complex is complete and the commercial operations commence in 2023.

⁽²⁾ Refers to physical and operational integration of our subsidiaries' and associates' production plants.

CHEMICAL INNOVATIONS THAT SURROUND US IMPROVE QUALITY OF LIFE.

SCG Chemicals or SCGC is committed to develop chemical innovations for better lives, encompassing food packaging, automotive parts, medical equipment, infrastructure and energy solutions. The chemical innovations that surround us, not only propel the economy but also improve quality of life and create a sustainable world.

INNOVATION THAT'S REAL

SCG CHEMICALS



www.scgchemicals.com

SCGC

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