2018

Sino-American Silicon Products Inc.

CSR REPORT

Index

About this report

Report structure

Sino-American Silicon Products Inc.(hereinafter referred to as"SAS") manufactures high-quality solar wafers, cells, and modules as one of the main professional green energy suppliers in Taiwan. In response to global climate change and the latest developments in the field of corporate social responsibility, Sino-American Silicon started compiling CSR reports in 2017. In these reports Sino-American Silicon discloses information on material issues in the four aspect s of corporate governance, economy, environment, and society and the results of implemented improvements as well as the future vision and goals in the field of sustainable development based on long-term in-depth interactions with local communities and engagement with stakeholders.

Reporting standards

The contents and structure of this report are based on the core indicators in the G4 Sustainability Reporting Guidelines released by the Global Reporting Initiative (GRI). This report also conforms to the Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies. Key issues of concern to stakeholders are disclosed and covered in relevant chapters based on materiality analysis results.

Editing procedures and final version

Sino-American Silicon compiles and organizes relevant information and edits CSR reports by relying on the following organizations and procedures.

CSR Task Force

The main members are the President's Office and the Health and Safety Management Department. The task force is in charge of promotion of energy environment related matters, overall planning, information compilation and organization, communication integration, and editing and revisions.

Editing procedures, review, and final version

The preliminary draft of the President's Office and the Health and Safety Management Department is submitted to the members of the Sustainable Development Committee in each department and the Audit Office for review. It is then forwarded to the President (chairman of the Sustainable Development Committee) for final approval prior to publication.

Report boundaries and reporting period

The reporting period and scope of this CSR report released by Sino-American Silicon (SAS) is defined as follows:

Publication time: June 2018

Reporting period: January 1, 2017 – December 31, 2017

Reporting scope: Relevant activities of the SAS solar energy business group in Taiwan (including SAS HQ in Hsinchu, SAS branches in Chunan and Yilan, and the SAS subsidiary Sunrise). The financial data provided by SAS has been audited and attested by KPMG Taiwan in accordance with International Financial Reporting Standards (IFRS). To ensure consistency with the consolidated financial data disclosed in the Annual Report the economic

performance data for the subsidiary Aleo Solar (hereinafter referred to as "Aleo") and the semiconductor business group (GlobalWafers Co., Ltd.) was also included andamounts are given in NT dollars. Provided environmental performance data is compiled and organized by SAS, while social performance data is provided by SAS internal units. The data is presented through internationally accepted indicators and calculation methods.
In the future, SAS will release CSR reports on an annual basis and provide electronic files of the reports in the Corporate Responsibility section of the corporate website for viewing and download.
Publication of the previous report: June 2017

Report Assurance

The SAS Sustainable Development Committee passed a resolution to commission an independent third-party certification body to verify the report in order to ensure conformity to the GRI G4 assurance standards and enhance the transparency and credibility of sustainability related information provided by SAS. The report was verified by DNV GL and met the requirements of GRI G4 Core Option and moderate level assurance requirements of DNV GL VeriSustain Protocol. For more details on the verification statement, please refer to the Appendix. Financial performance data was made public upon attestation by a CPA and is presented in a manner consistent with the Annual Report. GHG data is based on independent inventory results.

Liaison

Should you have any comments or suggestions regarding this report, please free to contact us in one of the following ways:

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Corporate website: http://www.saswafer.com/pages/sas/tw/

2017 Sustainability Performance Overview

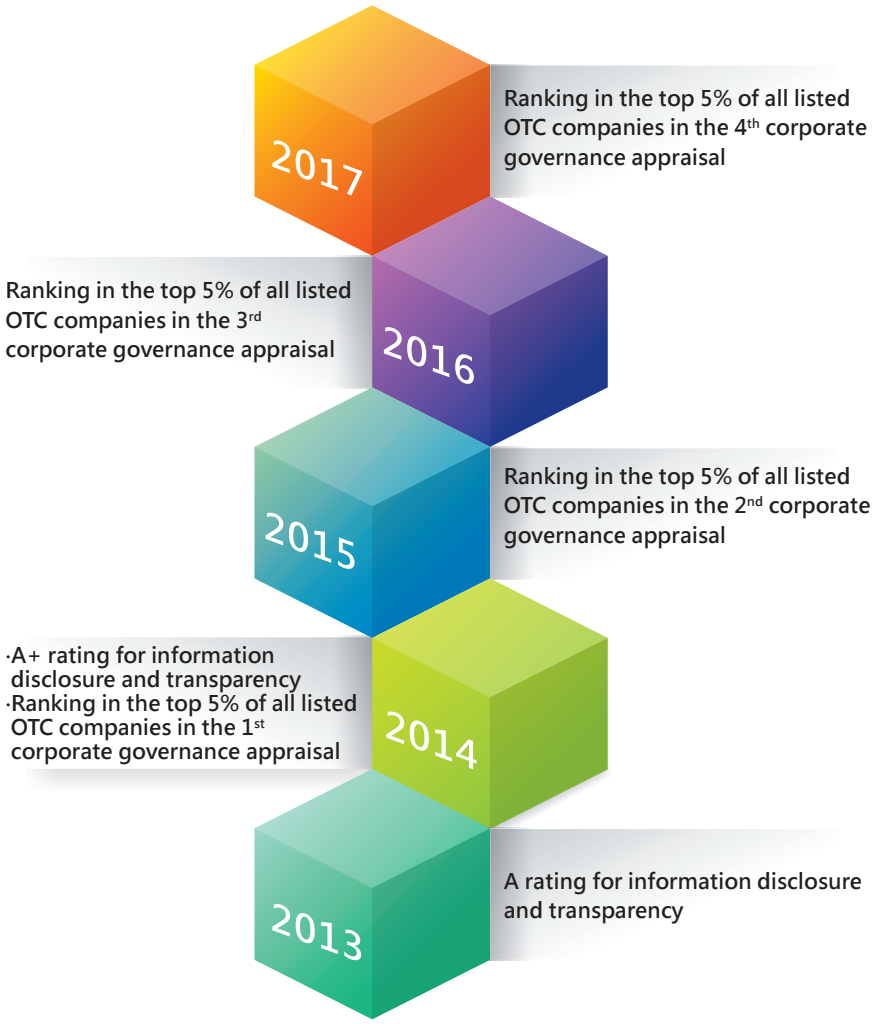
Aspect	Material aspects	Goals in 2018	Goals in 2017	2017 Goal achievement status
 Economy	Corporate governance	* Implementation of transparent corporate governance * Disclosure of board performance assessment results on the corporate website * Disclosure of Remuneration Committee performance assessment results on the corporate website * Disclosure of Audit Committee performance assessment results on the corporate website * Disclosure of board resolutions on the corporate website * Maintenance of the ranking in the top 5% of all TPEx-listed companies in the Corporate Governance Appraisal * Adoption of an e-voting system for shareholders' meetings * Sound sustainability organization and operations	* Implementation of transparent corporate governance * Amendment of board self-evaluation guidelines * Disclosure of board performance assessment results on the corporate website * Disclosure of Remuneration Committee performance assessment results on the corporate website * Disclosure of Audit Committee performance assessment results on the corporate website * Maintenance of the ranking in the top 5% of all TPEx-listed companies in the Corporate Governance Appraisal * Adoption of an e-voting system for shareholders' meetings * Sound sustainability organization and operations	V Goal achievement V Goal achievement V Goal achievement V Goal achievement V Goal achievement V Goal achievement V Goal achievement V Goal achievement
	Economic performance/ Production capacity	* Revenue growth * Profit growth * Lowering of debt ratio	* Revenue growth * Profit growth * Maintenance of low debt ratio	V Goal achievement V Goal achievement V Goal achievement
	Ethics and integrity	* Strengthening of ethical conduct training * Maintenance of zero corruption	* Strengthening of ethical conduct training * Maintenance of zero corruption	V Goal achievement V Goal achievement
	Operating strategy	* Accelerated launch of highly efficient and high-quality differentiated wafers, cells, and modules * Active development of project sources in Taiwan and increase of export sales for the group's cells and modules * Spreading of operating risks through vertical integration and diversified business strategies	–	–
	Market presence	* Direct recruitment and hiring rate>70%	* Direct recruitment and hiring rate>75%	V Goal achievement
 Society	Employee-employer relations	* Organization of interviews to show concern for employees and various health promotion activities	* Interviews to show concern>10 employees/month	V Goal achievement
	Labor/Management Relations	* Zero Labor/Management Disputes	* Zero Labor/Management Disputes	V Goal achievement
	Occupational health and safety	* Provision of more training for professional technical personnel in accordance with relevant laws (OHS personnel >12hours /2years, plant nurses>12hours /3years) * Increase of occupational accidents≦ 0 Incidents * Emergency response drills at least on a quarterly basis	* Occupational accident rate reduced by 50% * 100% tracking of special groups and abnormal findings during health checks * 100% implementation rate of educational training and emergency response drills	V Goal achievement V Goal achievement V Goal achievement
	Forced and compulsory labor	* No shortcomings detected in labor audits	* No shortcomings detected in labor audits	V Goal achievement
 Environment	Utilized raw materials	-	* Reduction of the use of lactic acid for pre-rinse operations by 50%	V Goal achievement
	Energy consumption	* Plant power conservation rate >1%(calculated based on total power consumption of each plant) * Adoption of ISO 50001 energy management system and passing of certifications administered by third-party impartial units	* Plant power conservation rate >1%(calculated based on total power consumption of each plant)	V Goal achievement
	Water consumption	* Process water recycling rate>85%(Amount of recycled process water/ total water intake)	* Running water quantity of Wafer sorter =0	V Goal achievement

Economic aspect

Corporate governance KPI

Information disclosure and corporate governance appraisal and rating of TWSE listed companies

Information disclosure and corporate governance appraisal for TWSE listed companies

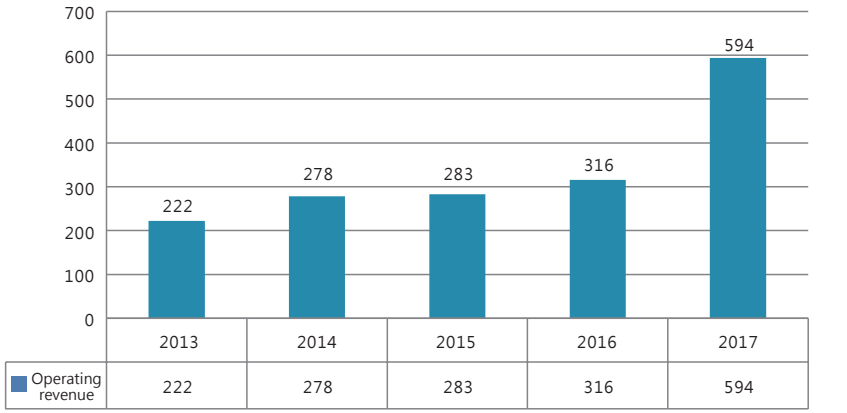


Business KPI

Operating revenue

Consolidated Revenue

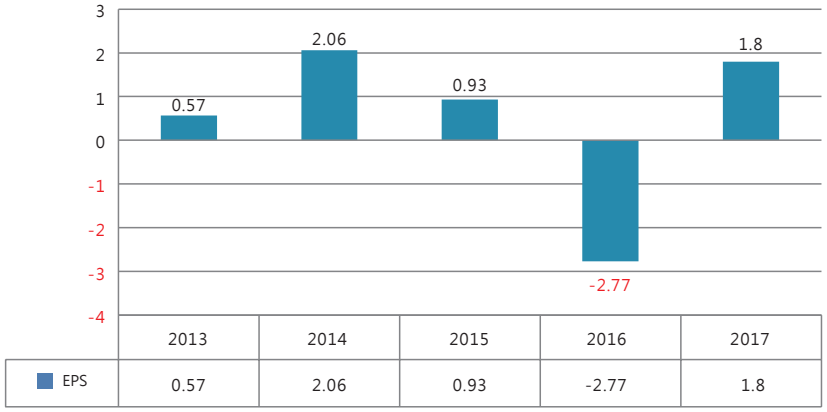
Unit: 100 million NTD



EPS

EPS

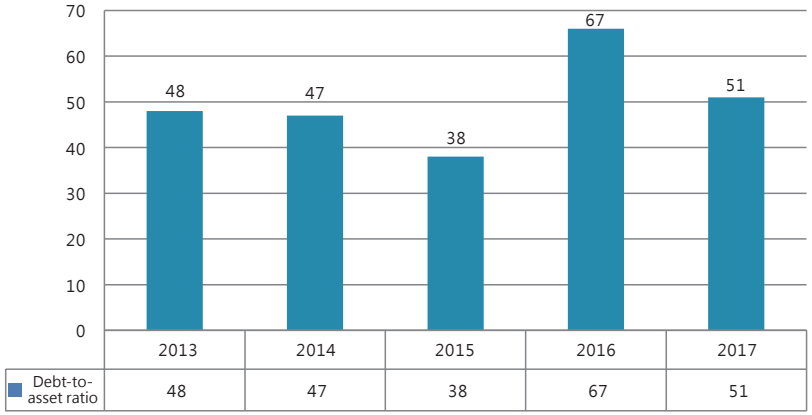
Unit: NTD



Debt-to-asset ratio

Debt-to-asset ratio

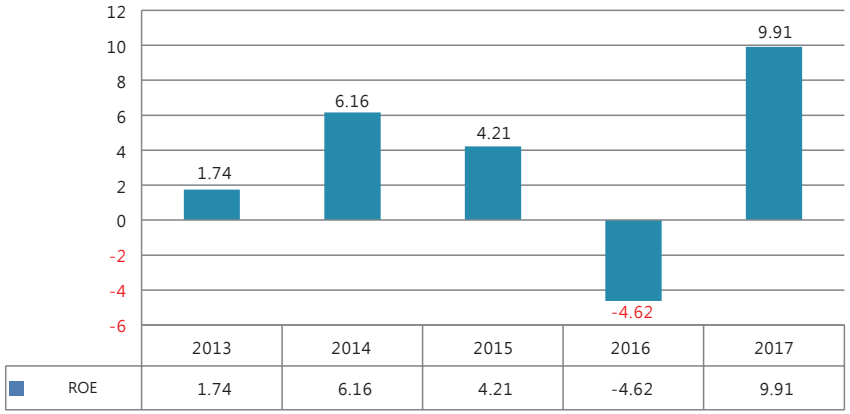
Unit: %



Return on shareholders' equity (ROE)

ROE

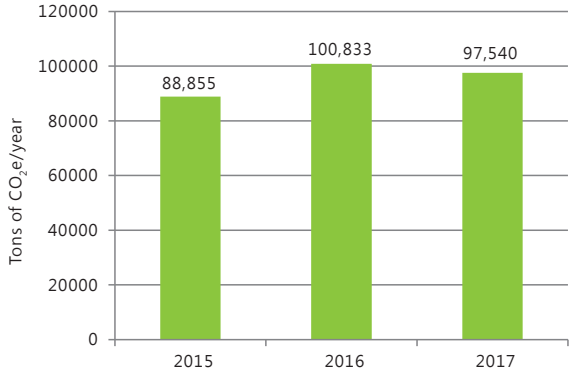
Unit: %



Environmental aspect

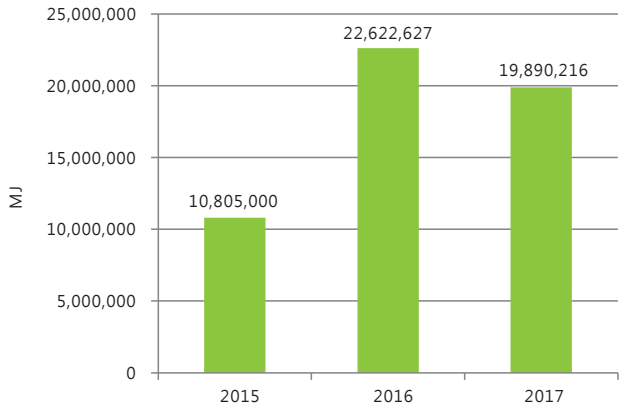
Environmental KPI

Carbon dioxide equivalent



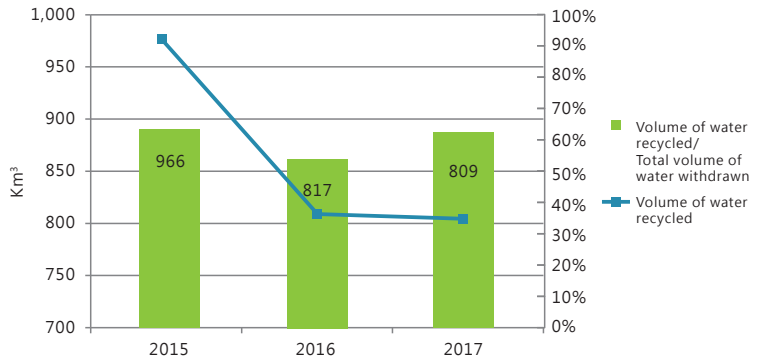
Power conservation effects

Power conservation effects



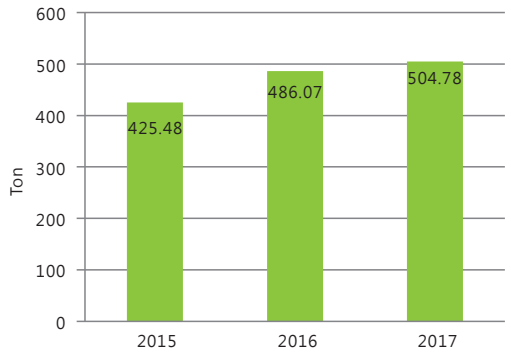
Recycled water

Recycled water



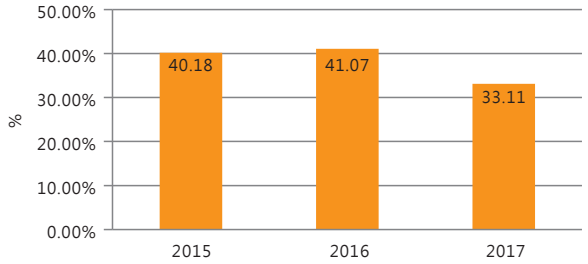
Recycled waste quantity

Recycled waste quantity

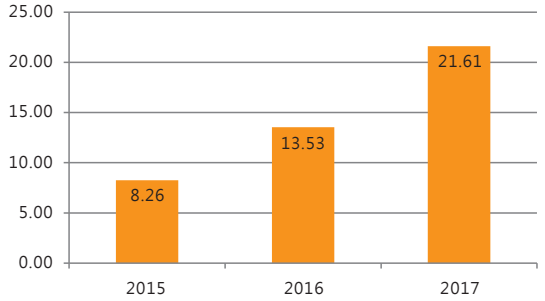


Social aspect

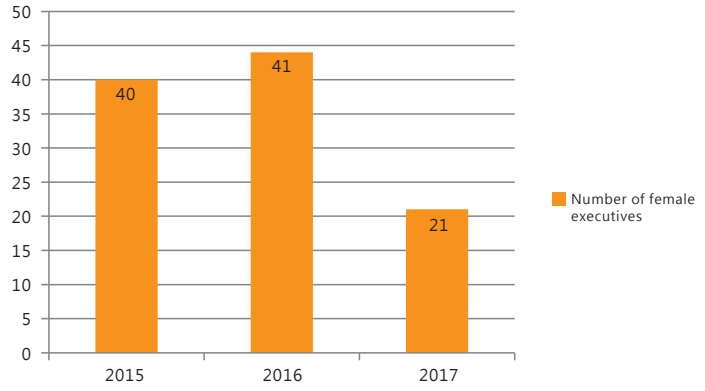
Employee turnover rate



Average training hours per employee



Number of female executives



Message from the Chairman

President 盧明光

Chairman 徐秀蘭

Since the very first day of its inception 37 years ago, Sino-American Silicon Products Inc. (hereinafter referred to as "SAS") has embraced a business philosophy of "Integrity, professionalism, innovation, and service". The company is fully committed and exerts tireless efforts to make steady progress toward its win-win-win vision of mutual growth with customers, pursuit of excellence with its employees, and creation of value for its shareholders. The company places equal emphasis on the pursuit of sustainable operations and creation of sustainable values including business growth, environmental protection, and social progress. SAS has been releasing CSR reports since 2017 to fully disclose its achievements in the field of CSR and present the state of communications and interactions with stakeholders with the goal of realizing sustainable development.

Rising revenues and sustainable governance

In 2017, the solar energy industry was affected by trade wars, technological breakthroughs, and government subsidies, which again resulted in arduous challenges for the company. However, SAS revenues hit another record high in 2017 and the company was able to turn losses into profits and regain its profitability as a result of resource integration, product differentiation, and outstanding business performance of its subsidiary GlobalWafers.

1. Consolidated revenue of NT$ 59.37 billion (record high) and annual growth rate of 88%
2. Consolidated operating income of NT$ 6.33 billion (149-fold increase over the previous year)
3. Restored profitability and EPS of NT$ 1.8
4. Shareholders' equity of NT$ 43.78 billion
5. Total market value rose from NT$19.4 billion in 2016 to NT$45.2 billion at the end of 2017
6. Contracted solar energy installations of a total capacity of 38MW (grid-connected capacity of 14.994MW)
7. Ranking in the top 5% of all TPEx-listed companies in four consecutive corporate governance appraisals
8. Honored with a Gold Award in the Electronic Information Manufacturing Industry category of the 2017 Taiwan Corporate Sustainability Awards (TCSA) – released for the first time
9. Listed as a benchmark enterprise in Economic Daily News (2017 CSR Yearbook)

SAS has a competitive edge in the field of PERC mono-crystal cell efficiency and will continue to develop advanced technologies and accelerate research and development of new-generation products with ultra-high efficiency. We aim to establish mutually beneficial cooperative relationships with our customers to build a win-win environment conducive to joint growth. In the field of corporate governance, we constantly refine our performance to strengthen our commitment to the pursuit of sustainable operations.

Forward-looking and industry-leading technologies

The SAS R&D team is fully committed to the development of high-performance products with high added value. In 2017, the multi crystalline silicon wafer process was converted from Slurry to DW to enhance productivity and minimize environmental pollution. N-type Multi Crystalline Wafers have a conversion efficiency of almost 22%, setting a new world record. The conversion efficiency of P-type single crystal cells has reached 21.5%. As for the development of new products, Multi Crystalline Black Wafers, New-generation Mono Crystalline Busbar-less and Metal-Wrap-Through PERC, High Efficiency Mono Crystalline 310W Modules, and Ultra Efficient 317W Modules have successfully entered mass production. In addition, SAS also actively promotes deployment of patents for key technologies and accelerated development of the company's core technologies. A total of 348 patent applications have been submitted worldwide, 251 of which have already been approved. SAS will continue to accumulate R&D capabilities with a focus on development of advanced technologies and high-performance diversified products. The company's overall competitiveness is enhanced through value-added innovation and optimized product mixes.

Green manufacturing and realization of a low-carbon economy

In the face of global warming, SAS constantly promotes GHG mitigation and adaptation actions. Excellent results have been achieved through recent participation in the Energy Conservation Improvement Project sponsored by the Industrial Development Bureau. In 2017, power savings amounted to 2,211,317 kWh. The air compressor exhaust heat recovery program was initiated in response to efforts by EPA to encourage enterprises to adopt GHG emission reduction measures at an early date. SAS has submitted an application for the GHG Emission Offset Program. The submitted proposal has been verified at the end of 2017 by a certification institution approved by EPA. After the proposal is approved by the EPA Program Review Committee, the company is eligible to apply for GHG emission reduction offset credits. SAS also participated in the Environmental Footprint Program of the Industrial Development Bureau and the Carbon Footprint Inventory Program of the Environmental Protection Administration in 2016 to gain a firm grasp of GHG emission conditions and implement the energy conservation and carbon reduction plan. The company plans to utilize the results of these inventories to initiate a program of substantial reductions to control GHG emissions. SAS plans to provide emission coefficients derived from these inventories to the carbon footprint calculation service platform in a selfless manner. The company was honored with an award for contributions in the field of carbon footprint emission coefficients in 2017. In the field of solar power plant deployment in 2017, our subsidiary SAS Sunrise aggressively targets the Taiwanese market and plans to actively invest in the construction of rooftop, ground-mounted, and floating solar power plants. The adoption of floating solar power systems helps reduce water surface temperatures and greatly enhances the power generation efficiency of solar panels. In 2017, the total grid-connected capacity in Taiwan reached 15MW, which is expected to generate annual CO_2 emission reductions of around 10,470 tons. Overseas and domestic plants have a total capacity of 96MW (around 72MW are currently connected to the grid). These plants are estimated to generate annual CO_2 emission reductions of around 58,542 tons. Looking ahead to 2018, the goal is to acquire contracts for power stations of a total capacity of 100MW to make a contribution to the creation of a sustainable clean requirement for following generations.

Employee care and public welfare

SAS views its employees as key assets and partners. The company provides a competitive compensation system, a comprehensive benefit system, and other relevant employee care programs. It also provides diversified training programs to enhance the skill level and core professional competence and ensure optimal use of talent. The company has made an unwavering commitment to employee training and care. In 2017, 64 employees tied the knot and 74 SAS babies were born. The company is also firmly committed to harmonious labor-management relations and creation of a healthy and blissful workplace. In the field of social welfare, the company encourages its employees to actively participate in social services, fulfill their social responsibility through personal commitment, and show continued concern for underprivileged groups through participation in various charitable activities.

SAS firmly embraces a business philosophy of clear focus and deep commitment. Although the solar energy industry still faces uncertainty and challenges in 2018, SAS will continue to pursue innovation and R&D, cost reduction, and strengthening of capabilities with a focus on the company's competitive advantages and strategic deployment of solar power plants to enhance operational synergy. SAS will continue to embrace its original vision and make an all-out effort to fulfill its commitment to a friendly workplace, environmental protection, and social concern. We strive to turn SAS into a sustainable green enterprise with steadily growing revenues and profits.

Stakeholder engagement and analysis

Stakeholder identification

Stakeholder identification and communication represents the foundation of corporate social responsibility. The following stakeholders of the company were identified in cross-departmental meetings and discussions in accordance with the operating characteristics of the company: employees, customers, shareholders (investors), suppliers (contractors), government agencies (Science Park Bureaus, Environmental Protection Bureaus, EPA, the Bureau of Energy, and the Ministry of Labor), and the media.

Stakeholder communication and responses

SAS has established various communication channels in its daily operations to maintain interactions with stakeholders. A mailbox for external communications has been set up on the website and a customer service hotline has been created. This enables the company to gain a clear understanding of the opinions of key stakeholders such as investors, customers, and media that are closely related to the company's business operations.

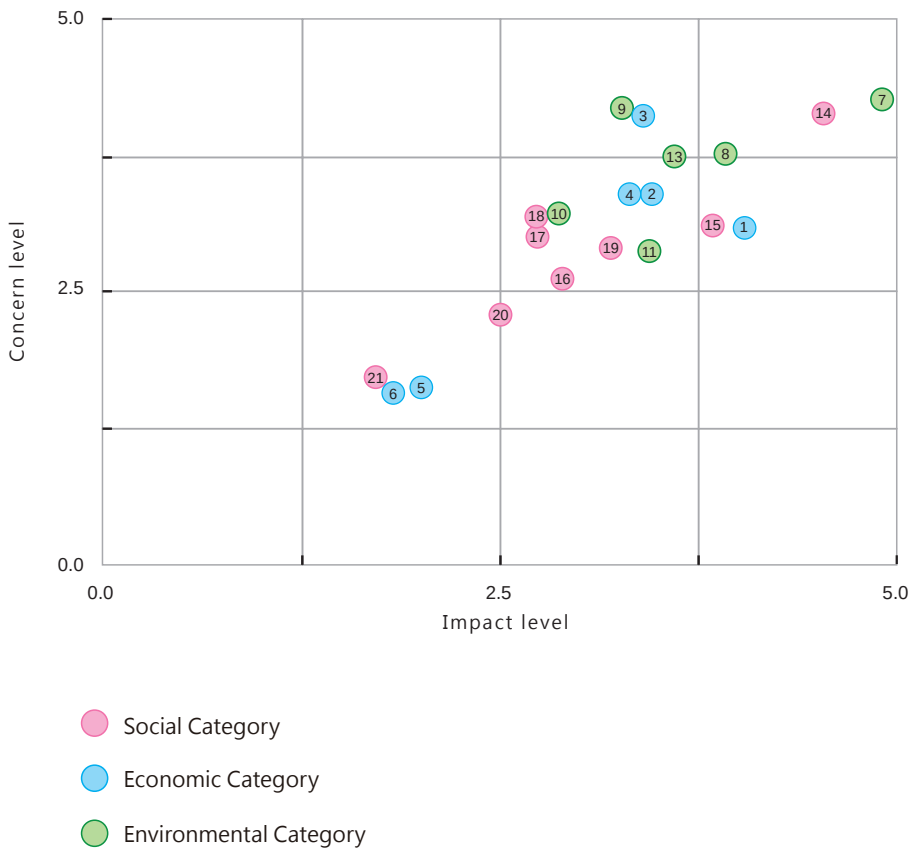
Main stakeholders	Importance for SAS	Communication channel	Communication frequency	Issues of concern
 Customers	Main revenue source	Sales meetings	Non-scheduled	1. Price 2.Quality 3.Delivery time 4.Environmental responsibility 5.Carbon inventories, carbon footprint (GHG emissions)
		Annual customer satisfaction surveys	Once a year	
		Customer audits	Non-scheduled	
		Customer questionnaires	Non-scheduled	
		Grievances or complaints by phone or e-mail	Non-scheduled	
 Employees	Employees are the most important asset of the company; mutual growth requires proper care for employees	Internal website and e-mail	Non-scheduled	1.Salary 2.Benefits 3.Work environment (including occupational health and safety, healthy workplace) 4.Career development 5.Forced labor 6.Equal rights
		Bulletin board	Non-scheduled	
		Labor-management meetings	Four times a year	
		Grievance mailboxes or hotlines	Non-scheduled	
		Performance evaluation interviews	Once a year	
		Organizational meetings	Non-scheduled	
 Shareholders / Investors	All shareholders are investors of the company; information disclosure is based on the principle of fairness	Shareholders' meetings, investor conferences, domestic institutional investor discussion forums, face-to-face communication meetings	Two investor conferences held in 2017	1.Business performance 2.Corporate governance
		Annual reports	Once a year	
		Corporate website, news and information posted on the Market Observation Post System	Non-scheduled	
		Collection of information and feedback by phone and e-mail	Non-scheduled	
 Suppliers / Contractors	Partners of the company; shared beliefs are a key prerequisite for the provision of services that meet the requirements of the company	Sales meetings	Non-scheduled	1.Price 2.Supplier/Contractor management regulations
		On-site audits	Annually or biennially	
		Collection of information and feedback by phone and e-mail	Non-scheduled	
 Government agencies (Science Park Bureaus, Environmental Protection Bureaus, EPA, the Bureau of Energy, and the Ministry of Labor)	Open and positive communication must be maintained to express the determination of the company to observe legal requirements	Document exchanges, meetings (public hearings or information meetings)	Non-scheduled	1.Maintenance of legal compliance (Energy Act: Power savings of 1% per year, waste water management standards: waste water treatment for new processes, Labor Standards Act/ Occupational Safety and Health Act: labor conditions and burnout issues) 2.Announcements on new laws/amendments, permit review/approval (Waste Disposal Act- Monitoring and management of waste disposal businesses, waste sorting) 3.Communication on laws (drafts) and legal interpretation (air pollution reporting procedures and communication on draft legislation for continuous monitoring facilities)
		Communication via society/association meetings	Non-scheduled	
		Factory audits	Non-scheduled	
 Media	Establishment of media liaison channels; provision of accurate and unbiased industry and corporate information on a non-scheduled basis	News releases Non-scheduled media interviews and coverage and provision of industry information	2-3 Press releases per quarter	1.Development direction 2.Business performance 3.Energy conservation results/water recycling efficiency (media coverage)

Identification and analysis of material issues

SAS has solicited a wide range of opinions for the definition of report contents in accordance with stakeholder inclusiveness, sustainability context, materiality, and integrity principles with reference to the GRI G4 Sustainability Reporting Guidelines.

Issues of concern to employees, customers, shareholders (investors), suppliers (contractors), government agencies (Science Park Bureaus, Environmental Protection Bureaus, EPA, the Bureau of Energy, and the Ministry of Labor), and the media are compiled based on experiences and records of interaction and communication between stakeholders and the President Office, Marketing Division, Procurement Division, Administrative Division, and PR units of all branches. Members of the Sustainable Development Committee determine the materiality of identified issues of concern in internal meetings based on the two dimensions of stakeholder level of concern and level of impact on SAS. This is followed by creation of a materiality matrix divided into the three dimensions of economy, environment, and society. Issues with high level of concern and impact on all dimensions are listed as material issues. We also disclose adopted Management policies for these issues in this report, while issues that don’ t have a material impact are either disclosed in summarized form or are not included in this report.

Results of materiality analysis



Dimension	Issues of concern	No	Materiality
Economy	Ethics and integrity	1	V
	Economic performance/Production capacity	2	V
	Corporate governance	3	V
	Operating strategy	4	V
	Market presence	5	
	Group relations	6	
Environment	Legal compliance	7	V
	Pollution source	8	V
	Pollution control (Air, water)	9	V
	Waste management	10	V
	Energy waste	11	V
	Environmental system management	12	
	GHG emissions	13	V
Society	Legal compliance	14	V
	Product quality	15	V
	Welfare policy	16	V
	Work environment (including occupational health and safety/healthy and friendly workplace issues)	17	V
	Services (including quality and innovative services)	18	V
	Customer satisfaction	19	V
	Delivery schedule/speed	20	
	Product prices and cost-performance ratio	21	

Material aspect scope and boundaries

Issues of concern to stakeholders \ Boundaries		Aspects	GRI G4	Internal boundaries						External boundaries
				SAS			Subsidiaries			
				HQ	Chunan Branch	Yilan Branch	Aleo	GlobalWafers	SAS Sunrise	
Economy	Ethics and integrity	Integrity governance	G4-56~58 G4-SO3~SO5	○	○	○	-	-	-	-
	Economic performance/Production capacity	Operating performance	G4-EC1~4	○	○	○	○	○	○	-
	Corporate governance	Corporate governance	G4-34~38、 41、42、48、52	○	○	○	-	-	-	-
	Operating strategy	Operating performance	G4-EC1~4	○	○	○	-	-	-	-
Environment	Legal compliance	Legal compliance	G4-EN29	-	○	○	-	-	-	-
	Pollution source	Green design and clean production	G4-EN27	-	○	○	-	-	-	-
	Energy management/water resource management	Energy consumption	G4-EN3~EN7 G4-EN8~10	-	○	○	-	-	○	-
	Carbon inventory/Carbon footprint	GHG emissions	G4-EN15~18	-	○	○	-	-	○	-
	Emission-Effluent treatment/air pollution treatment and reporting	Pollution control(air, water)	G4-EN20~EN22	-	○	○	-	-	-	-
	Waste sorting and manufacturer monitoring and management-waste management and reduction	Waste management	G4-EN23~EN26	-	○	○	-	-	-	-
Society	Legal compliance	Legal compliance	G4-SO8	○	○	○	-	-	-	-
	Product quality	Customer and product services	--	-	○	○	-	-	-	-
	Welfare policy	Labor/management relations	G4-LA1~LA3	○	○	○	-	-	-	-
	Work environment- Occupational health and safety/healthy and friendly workplace	Occupational health and safety	G4-LA5~LA8	○	○	○	-	-	-	-
	Services (including quality and innovative services)	Customer and product services	G4-PR3~PR5	-	○	○	-	-	-	-
	Customer satisfaction	Customer and product services	G4-PR5	-	○	○	-	-	-	-

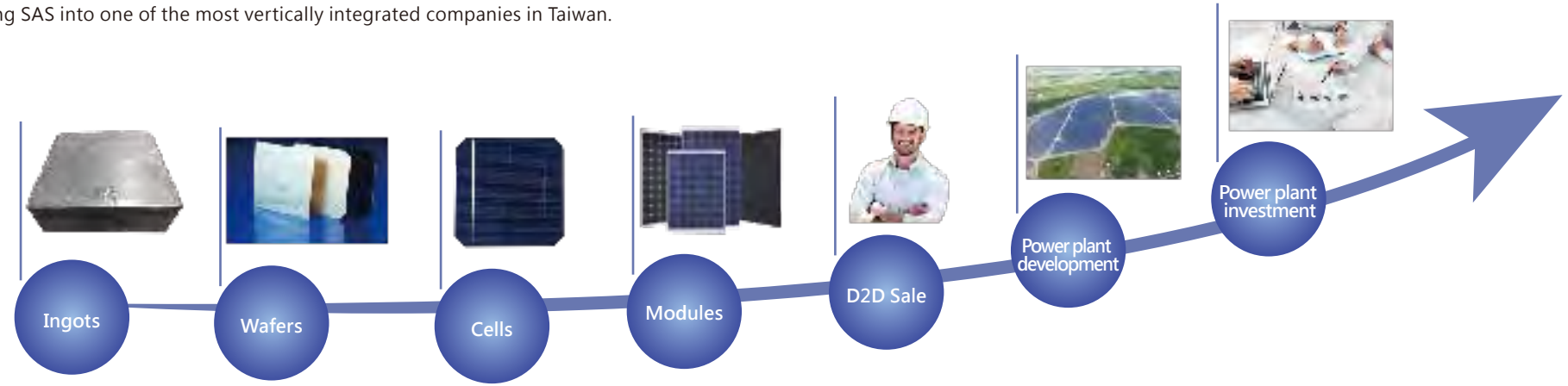
Company Overview

Company Overview

Company profile

Sino-American Silicon Products Inc.(hereinafter referred to as "SAS"), a professional wafer manufacturer, was established on January 21, 1981. The company features two main business groups – semiconductor and solar energy. The semiconductor and silicon wafer business units were spun off and transferred to GlobalWafers Co., Ltd. (hereinafter referred to as "GlobalWafers") on October 1, 2011. The parent company focuses on the solar energy sector with production lines for solar ingots, solar wafers, solar cells and modules. Company operations also span downstream power generation system services, turning SAS into one of the most vertically integrated companies in Taiwan.

SAS has made a deep commitment to developing advanced technologies and constantly releases new-generation solar energy products with high conversion efficiency. This sets the company apart from its competitors and is the key to attracting niche customers. Through vertical integration strategies, the company enhances its international competitiveness and establishes a unique market position. The goal is to showcase and popularize the Taiwanese solar power industry on an international stage, polish the MIT image, and maximize benefits for shareholders and employees.



SAS Basic Information

Foundation date
January 21, 1981

Capital
NT$ 5.9 billion

Headquarters
4F, No. 8. Industrial East Road 2, Hsinchu Science Park, Hsinchu City, Taiwan, R.O.C

Main products and technologies
Solar ingots / Solar wafers / Solar cells / Solar modules
Solar power generation system services

Operating bases
HQ: 4F, No. 8. Industrial East Road 2, Hsinchu Science Park, Hsinchu City, Taiwan, R.O.C
Chunan Plant 1: No. 21, Kejung Rd., Chunan Science Park, Chunan, Miaoli County, Taiwan, R.O.C.
Chunan Plant 2: No. 6, Kejung Rd., Chunan Science Park, Chunan, Miaoli County, Taiwan, R.O.C
Yilan Branch: No.1, Sec. 2, Ligong 1st Rd., Wujie Township, Yilan County, Taiwan, R.O.C

Workforce
Taiwan: 1,643 employees; Overseas: 215 employees

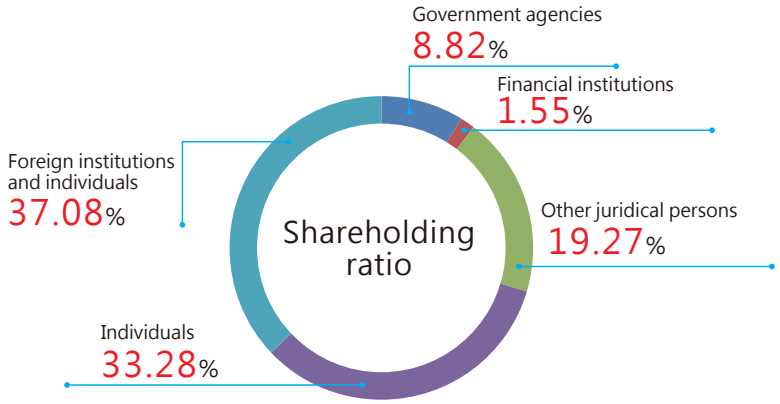
Chairman & CEO-M.K. Lu
Vice Chairman & Deputy-Tom Yao
President-Doris Hsu

Affiliated enterprises
SAS affiliates are engaged in the following industries: semiconductor and wafer manufacturing, solar cell and module manufacturing, and solar power generation system services

Shareholder structure

Shareholders Structure & Number	Government agencies	Financial institutions	Other juridical persons	Individuals	Foreign institutions and individuals	Total
Shareholding ratio	8.82%	1.55%	19.27%	33.28%	37.08%	100.00%

Last updated: April 30,2018



Operating bases

SAS embraces the concept of integrity and relies on accumulated experiences and robust growth in the production of high-performance solar wafers, cells, and modules. Through vertical integration, the company's operations span downstream systems which generates relevant benefits and expands the layout of the solar energy business unit, turning SAS into one of the domestic providers of professional green energy solutions.

SAS HQ is located in Hsinchu City, Taiwan and SAS bases are situated in Taiwan, Germany, Italy, and the Philippines. The main markets for the company's products are Asia, Europe, and America. SAS is also firmly committed to making contributions to environmental protection and strives to turn into a cutting-edge global provider of green energy solutions.

Market and product services

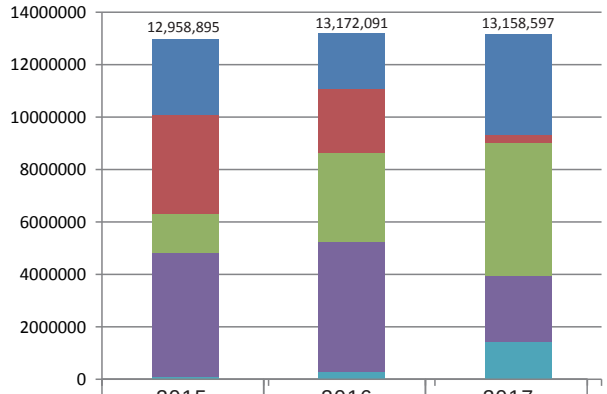
Solar energy industry

Product sales

The main reason for the increased revenue ratio of solar cells in 2017 lies in the growing production capacity for high-performance solar cells. Declining revenues from solar wafers and ingot revenue growth in 2017 are a direct result of changing market demands.

Sales volume

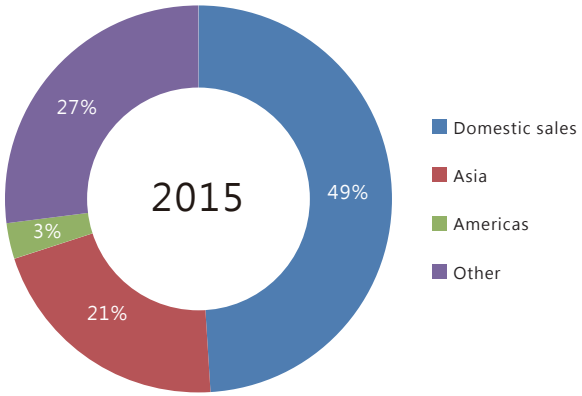
Unit: 1000 NTD

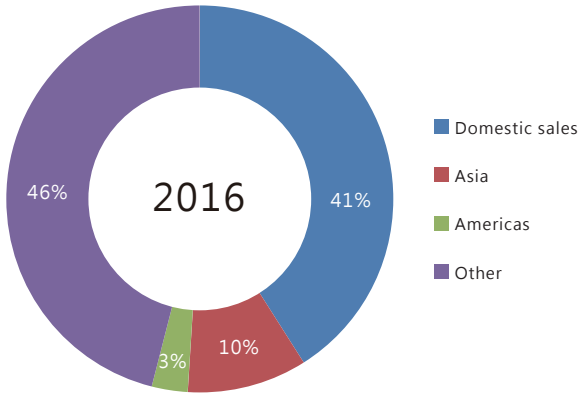


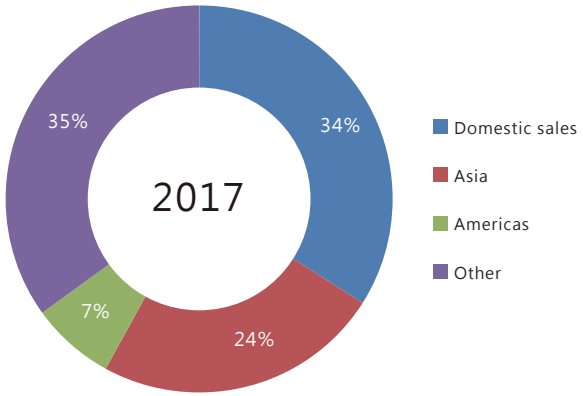
	2015	2016	2017
Other	2,891,396	2,104,081	3,842,447
Solar module products	3,771,114	2,437,016	327,950
Solar cell products	1,485,793	3,390,511	5,054,173
Solar wafer products	4,741,481	4,982,969	2,524,614
Solar ingot products	69,111	257,514	1,409,413

Sales area ratios

Sales area ratios changed in line with expansion or contraction of individual markets between 2015 and 2017. Manufacturing locations shifted as a result of module plant changes. Domestic sales accounted for 40%. SAS sells high-performance diversified products with corresponding adjustments of sales areas.







Sales areas

Canada, USA, Mexico

Portugal, the Netherlands, UK, Germany, Poland, Luxembourg, Belgium, Switzerland, Austria, France, Italy, Turkey, Russia

China, Korea, Hong Kong, Japan, Taiwan, Singapore, Vietnam, Jordan, the Philippines

Semiconductor industry

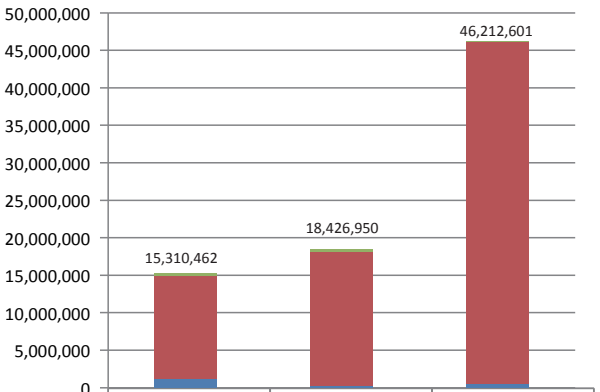
Product sales

Revenue growth in 2016 was mainly caused by the acquisition of Topsil in July and SEMI in December by GlobalWafers. Revenues increased again in 2017 in the wake of the acquisition of Topsil and SEMI mainly due to the fact that the improvements of the financial structure and operational enhancements of GlobalWafers following organizational restructuring of the group and optimization of management efficiency by far exceeded all expectations. The added impact of robust global demand for semiconductors and wafers and rising prices led to a significant increase in profits for GlobalWafers compared to the previous years.

Note: SunEdison Semiconductor Limited(SEMI for short)

Sales volume

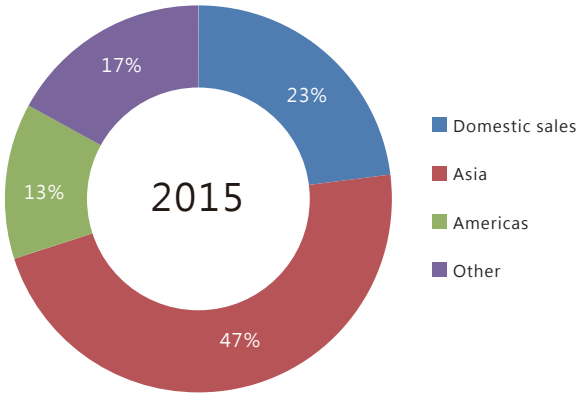
Unit: 1000 NTD

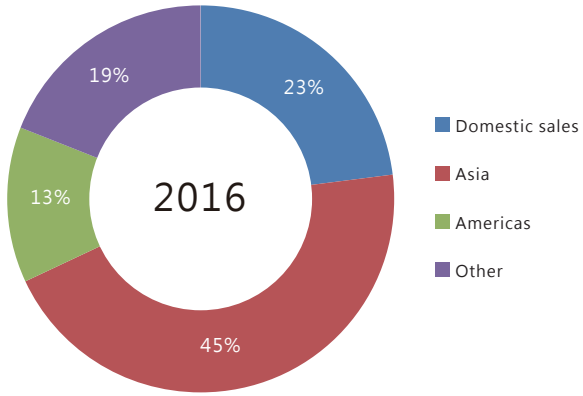


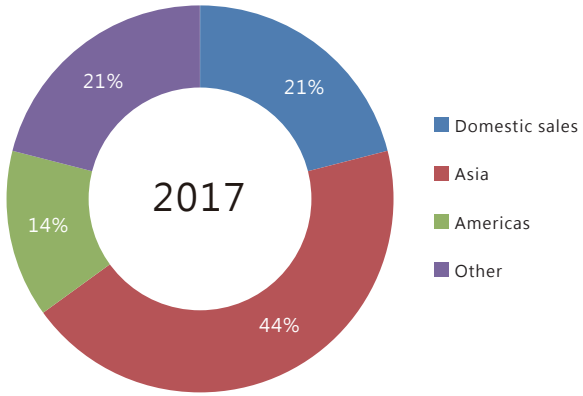
	2015	2016	2017
Other	518,399	408,912	175,584
Semiconductor chip products	13,614,573	17,850,125	45,540,327
Semiconductor ingot products	1,177,490	167,912	496,690

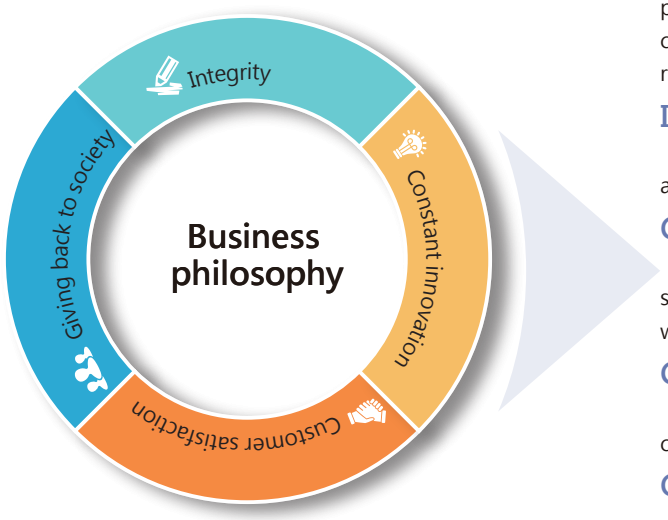
Sales area ratios

Due to the acquisition of Topsil and SEMI (a European and US company) by GlobalWafers, the ratio of American and European customers increased in 2016. Sales ratio changes in 2017 were mainly caused through steady orders from existing customers and expansion of the global sales network, which generated an almost perfect balance of revenue ratios.









Business philosophy

SAS embraces a philosophy of integrity, constant innovation, customer satisfaction, and giving back to society. It also strives to provide superior quality, technologies, and services and pursues sustainable operations and growth in close cooperation with customers and suppliers. It aims to create outstanding value for shareholders and employees and thereby fulfill its corporate social responsibility.

Integrity

SAS upholds integrity and strictly observes corporate regulations and social and ethical norms to honor its commitment to the active implementation of its ethical management policy.

Constant innovation

The development of new-generation ultra-high performance products is accelerated and corporate competitiveness is strengthened through innovative concepts and business models, a firm grasp of opportunities and pursuit of new knowledge, as well as a deep commitment to development of cutting-edge technologies.

Customer satisfaction

In the field of technology, strategy, and profitability, the company builds mutually beneficial cooperative relationships with its customers to create a win-win environment of joint growth.

Giving back to society

SAS embraces a spirit of giving back to society, shows concern for underprivileged groups, and actively participates in social welfare and environmental protection to fulfill its corporate social responsibility.

Participation in external associations

Association/organization	Participant	Member	Role
Taiwan Photovoltaic Industry Association		●	Director
SEMI Taiwan	●	●	Member
Chinese Professional Management Association	●	●	Supervisor
Taiwan Mergers & Acquisitions and Private Equity Council	●	●	Chairman
International Technology Roadmap for Photovoltaic (ITRPV)	●	●	Co-chairman
Chinese Professional Management Association of Hsinchu		●	
Allied Association for Science Park Industries		●	
Institute of Internal Auditors (IIA)-Chinese Taiwan		●	
Computer Audit Association		●	

Awards and recognitions

2016/04

Ranked in the top 5% of all TPEx-listed companies in the 2nd Corporate Governance Appraisal

2016/08

Dr. Chun-wen Lan, chief high-tech consultant of SAS, is recognized with the prestigious Laudise Prize by the International Organization of Crystal Growth (IOCG) in 2016– the award-winning high-performance polycrystalline crystal growth technology was jointly developed by Dr. Lan and the SAS R&D team

2016/12

Honored with the Golden Energy Award for outstanding photovoltaic products presented by the Bureau of Energy, MOEA

2017/02

SAS Sunrise Energy, an SAS subsidiary, is honored with the System Integration Output Award at the 2017 Smart City Summit & Expo

2017/04

Ranked in the top 5% of all TPEx-listed companies in the 3rd Corporate Governance Appraisal

Milestones

For more details on the history of the company, please refer to the "About SAS" section of the corporate website

2017/04

Honored with the 2016 National Invention & Creation Award

2017/11

Recognition as a unit with outstanding performance in the fields of green procurement, green services, and manufacturing of low-carbon products

2017/11

Honored with a Gold Award in the Electronic Information Manufacturing Industry category of the 2017 Taiwan Corporate Sustainability Awards (TCSA) – released for the first time

2017/12

Listed as a benchmark enterprise in Economic Daily News (2017 CSR Yearbook)

2018/04

Ranked in the top 5% of all TPEx-listed companies in the 4th Corporate Governance Appraisal

1 Corporate Governance

Material aspects

Significance for SAS

SAS embraces the principles of ethics, integrity, and transparency in all its corporate governance practices. The company strives to establish an effective corporate governance framework and strengthens board functions, internal management, risk control, and product performance and differentiation strategies to fulfill its corporate social responsibility and generate long-term benefits for all shareholders and stakeholders.

Management mechanism

Policies

·Customer services through vertical integration.
·Resource integration, cost reduction, and creation of solid competitive advantages through product performance and differentiation strategies.
·Active expansion of power plant deployment to strengthen export opportunities and thereby achieve sales volume growth.

Commitment

Maximization of shareholders' equity and sustainable corporate development.

Goals

Short-term goals

·Strengthened cooperation with markets and regions that are not linked to China and enhancement of the ability to respond to market changes.
·Maintenance of the competitive edge and leadership position in the field of PERC mono-crystal cell efficiency and increase of production capacity and quality of high-performance polycrystalline PERC cells.
·Active expansion of solar power plant business layout with a focus on Taiwan and Southeast Asia and accelerated planning, investment, development, and construction of ground-mounted and floating power plants.

Mid-term goals

·Expanded cooperation with strategic customers and extension of product services with the goal of turning the company into a provider of cutting-edge green energy solutions.
·Strengthening and expansion of market development and accelerated development of next-generation highly efficient new products with competitive prices.
·In-depth development of downstream system services, strengthening of vertical integration and global layout, further expansion of export sales, and increase of operating profit ratios.

Long-term goals

·Firm grasp of market trends and industry pulse, real-time adjustment of business strategies, continued R&D of new-generation ultra-efficient products to strengthen overall competitiveness.
·Development of new energy system investment partnerships and creation of terminal export opportunities to achieve the goal of long-term stable returns.
·Establishment of a corporate culture characterized by business integrity and implementation of a sound corporate governance system to achieve the goal of sustainable growth.

System

External system

Compliance with the Company Act, the Securities Exchange Act, the Enterprises Mergers and Acquisitions Act, the Guidelines for Online Filing of Public Information by Public Companies, the Fair Trade Act, and the Labor Standards Act.

Internal system

Establishment of an internal control system, Articles of Incorporation, Procedures Governing the Acquisition and Disposal of Assets, Endorsement / Guarantee Management Guidelines, Operating Procedures Governing Loaning of Funds, Procedures Governing Derivative Transactions, Corporate Governance Best Practice Principles, Corporate Social Responsibility Best Practice Principles, Ethical Corporate Management Best Practice Principles, Risk Management Guidelines, Code of Ethical Conduct, Guidelines for the Handling of Reported Cases of Illegal and Unethical Conduct, Rules Governing the Exercise of Rights and Participation in Resolutions by Juristic Person Shareholders With Controlling Power, Operating Procedures for the Handling of Material Internal Information, Management Procedures for the Prevention of Insider Trading, Guidelines for the Reporting of Public Information, Management Guidelines for Liability Commitments and Contingencies, Operating Procedures for Transactions between Conglomerates, Specific Companies, and Related Parties, Rules Governing Supervision and Management of Financial and Business Matters Between Affiliated Enterprises, and Management Guidelines for Long- and Short-Term Investments.

Resources

R&D investments of NT$ 1,671,895 in 2017 account for 3 % of total revenue and expenses.

3%

Professional R&D team with a strong lineup of 66 R&D engineers.

66

Concrete actions

·Initiation of Annual Operation Plans and formulation of KPIs for each department to strengthen internal operational management and control.
·Regular convening of business and production & marketing meetings to review goal achievement status and propose improvement strategies.
·Establishment of an incentive system for improvement proposals to boost process research and product quality improvements.
·Formulation of appropriate measurement methods upon identification of potential risk factors by each department (risk measurement includes risk analysis and assessment).
·Strengthening of compliance with concepts set forth in laws and regulations and relevant industry laws and regular internal reviews of the status of compliance with laws and regulations governing the industry to which the company belongs.
·Implementation of a legal affairs mechanism and internal audits to realize sustainable development.

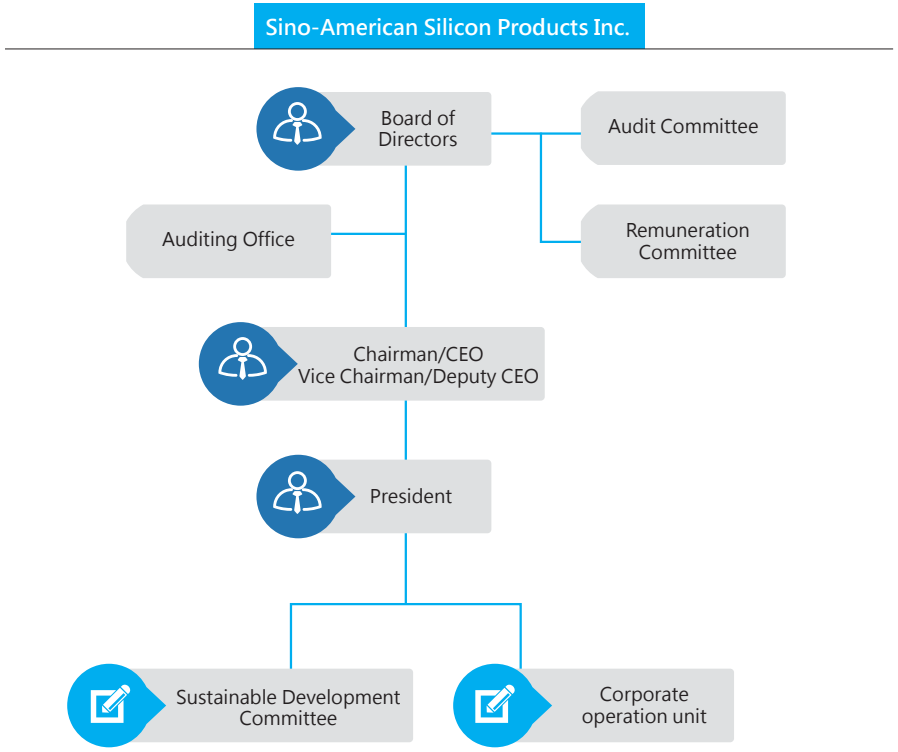
2017 Achievements and performance

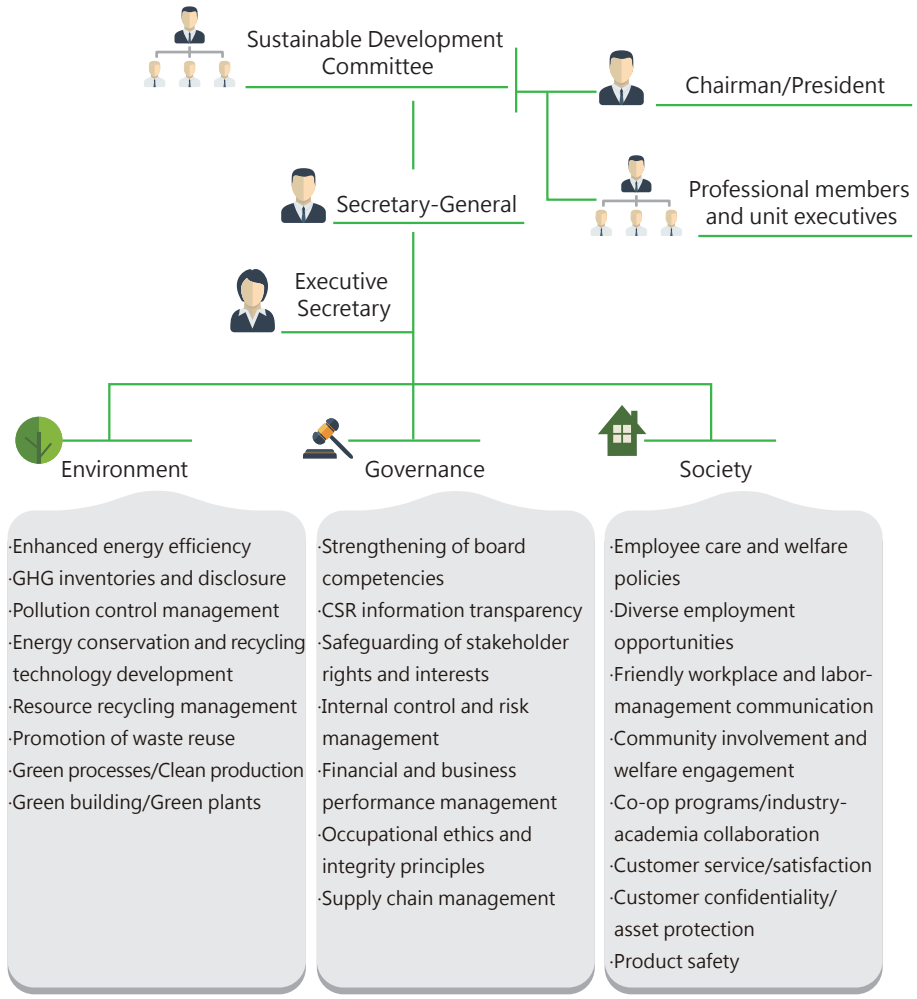
- Consolidated revenue of NT$ 59.37 billion, annual growth rate of 88% (record high).
- Consolidated operating income of NT$ 6.33 billion (149-fold increase compared to the previous year).
- Restored profitability and EPS of NT$ 1.8.
- Shareholders' equity of NT$ 43.78 billion.
- Individual debt ratio has been reduced from 28% to 22%.
- Consolidated debt ratio has been reduced from 67% to 51%.
- Total market value has climbed from NT$ 19.4 billion in 2016 to NT$ 45.2 billion at the end of 2017.
- Contracted solar energy installations of a total capacity of 38MW (grid-connected capacity of 14.994MW).
- Acquisition of 16 patents.
- Ranking in the top 5% of all TPEx-listed companies in four consecutive corporate governance appraisals.
- Honored with a Gold Award in the Electronic Information Manufacturing Industry category of the 2017 Taiwan Corporate Sustainability Awards (TCSA) – released for the first time.
- Listed as a benchmark enterprise in Economic Daily News (2017 CSR Yearbook).
- SAS Sunrise Energy, an SAS subsidiary, is honored with the System Integration Output Award at the 2017 Smart City Summit & Expo.
- Honored with the 2016 National Invention & Creation Award.
- Recognition as a unit with outstanding performance in the fields of green procurement, green services, and manufacturing of low-carbon products.

1.1Sustainability organization

SAS established a Sustainable Development Committee in April 2016 to realize its sustainability goals and fulfill its corporate social responsibility. The committee is the highest body in charge of implementation of CSR. The organizational structure of the committee is shown below. The President serves as the Chairman and department executives serve as members of this committee which plans and coordinates CSR and sustainable development directions and goals.

The committee is further divided into three task forces (environmental, governance, and social) to ensure implementation of activities in the aspects of environment, society, and governance. Professional members involve all departments in the execution and concern for CSR related issues. Tracking, examinations, and reviews are carried out on a regular basis and performance and goal achievement is reviewed by the chairman on an annual basis. In addition, the committee reported key implementation points for the respective year to the board on December 14, 2017.



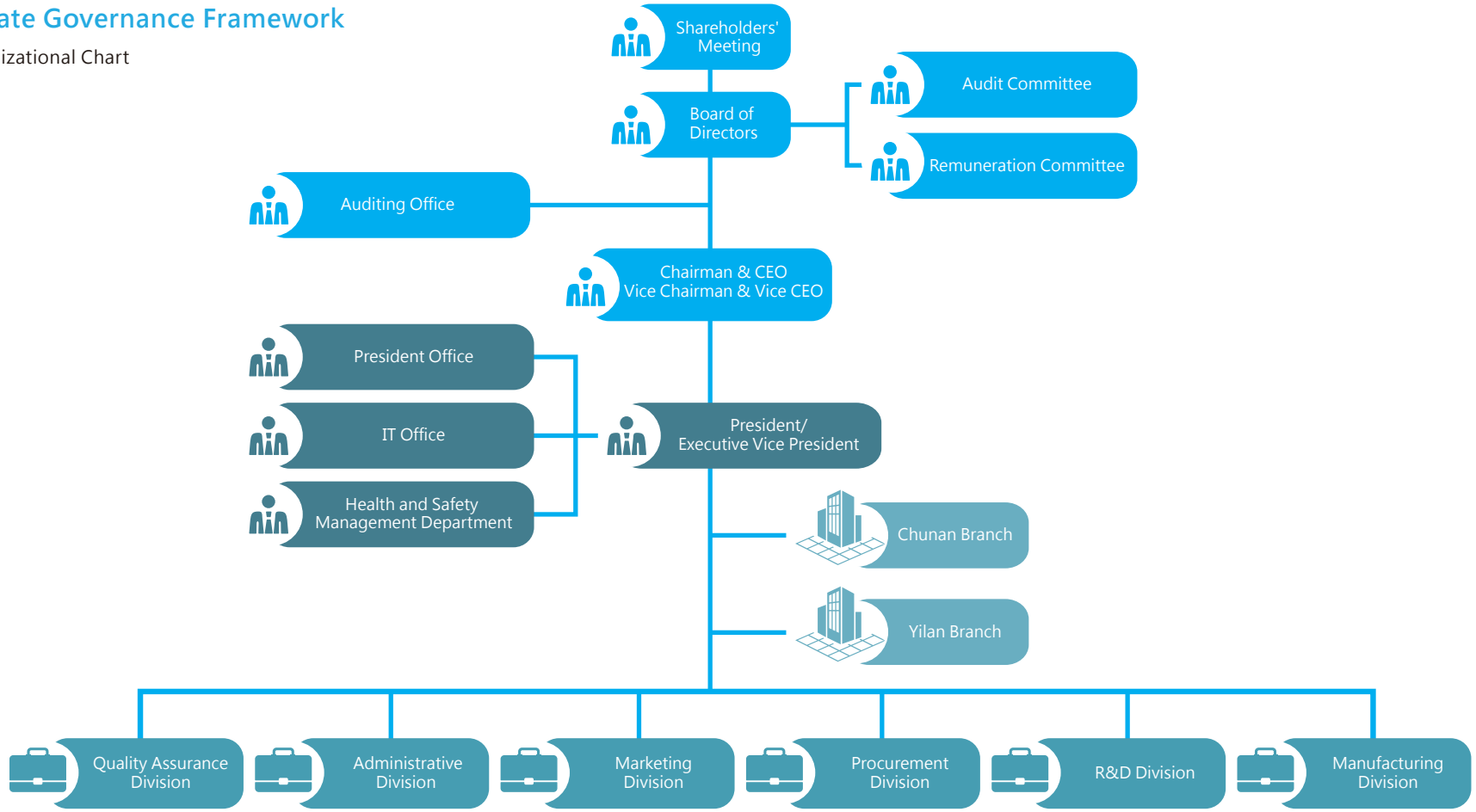


1.2Corporate Governance

SAS has made a long-term commitment to promote business integrity policies to form a corporate culture characterized by ethical corporate management. The company also strengthens information disclosure transparency and has been ranked in the top 5% of all TPEx-listed companies in four consecutive corporate governance appraisals. The company aims to demonstrate its determination to pursue sustainable corporate operations.

Corporate Governance Framework

SAS Organizational Chart



Key characteristics of corporate governance organization

- Three of thirteen board members are independent directors.
- Three of thirteen board members are female directors (one female director stepped down before the mid-year board election).
- The Audit and Remuneration Committees are solely comprised of independent directors.
- The organizational charter of each committee is publicly disclosed on the corporate website.
- Results of annual self-performance appraisals conducted by the board are publicly disclosed on the corporate website.
- Results of annual self-performance appraisals conducted by the audit and remuneration committees are publicly disclosed on the corporate website.

Board Operations

The SAS board of directors is comprised of 13 directors with profound knowledge in their areas of expertise. They are elected for a term of three years and possess professional skills and expertise in the areas of professional technology, business management, legal and financial affairs, and strategy management. Board members receive 6 hours of advanced training per year to enhance their professional competence and legal literacy. Important motions are submitted to the Audit Committee for preliminary review and discussion prior to resolution by the board. Board resolutions are made public on the corporate website to enhance information transparency and safeguard shareholder rights and interests.

Recusal by board members

The Rules of Procedure for Board of Directors Meetings and the organizational charter of the Audit Committee contain the following provision: If a director or a juristic person that the director represents is an interested party in relation to an agenda item, the director shall state the important aspects of the interested party relationship at the respective meeting. When the relationship is likely to prejudice the interest of this Corporation, that director may state his/her opinions and respond to inquiries but shall not participate in discussion or voting on that agenda item and shall recuse himself or herself from the discussion or the voting on the item. Said director may also not exercise voting rights as proxy for another director.

Pursuant to the regulations set forth in Article 192-1 of the Company Act, a candidate nomination system has been adopted for SAS board (including independent directors) elections. Shareholders elect the directors from among the nominees listed in the roster of director candidates. A total of 9 board meetings were held in 2017 with an average attendance rate of 91%. Board composition, professional and educational background, and attendance record of board members are shown in the table below :

Meeting attendance and educational/professional background of board members in 2017

Title	Name	Gender	Professional/educational background	Personal attendance	Attendance by proxy	Personal attendance rate (%)	Note
Chairman	M.K. Lu	Male	Honorary Doctorship in Engineering from National Chiao Tung University /Successful completion of the advanced MBA Training Program for Entrepreneurs offered by National Chengchi University President of Lite-On Semiconductor Corp. and Lite-On Power Semi and Vice President of Silitek Corp.	9	0	100%	Reelected on June 27, 2017
Vice Chairman	Tom Yao	Male	MA Degree from the Graduate Institute of Management at Tamkang University Assistant Vice President of the Manufacturing Division of Lite-On Power Semi and President of Sino-American Silicon Products Inc.	9	0	100%	Reelected on June 27, 2017
Director	Doris Hsu	Female	MA in Computer Science from University of Illinois Executive Vice President of Sino-American Silicon Products Inc.	8	1	89%	Reelected on June 27, 2017
Director	Solartech Energy Corp Representative: Kang-Hsin Liu	Male	Department of Shipping & Transportation Management, National Taiwan College of Marine Science and Technology Assistant Vice President of the General Administration Division of Formosa Plastics, Director of Formosa Chemicals & Fibre Corporation	8	1	89%	Reelected on June 27, 2017
Director	Chin-Lung Chang	Male	MA in Chemical Engineering from Yokohama National University Associate Professor at Feng Chia University and Taipei Tech, Manager of the Business and Foreign Sales Department and Supervisor of Nan Ya Plastics, and Formosa Plastics Supervisor	2	1	67%	Resigned on June 26, 2017
Director	Wen-Hui Tsai	Male	Accounting Department, National Chengchi University Director of Actherm Inc. and ENE Technology Inc.	9	0	100%	Reelected on June 27, 2017
Director	Kui-Chang Hsu	Male	MA in Human Resource Management from Texas A&M University,C.S. / MA in Thermal and Fluid Science, Graduate Institute of Mechanics, Yuan Ze University Chairman and President of Sunrise Global Solar Energy Co., Ltd. / Assistant Research Fellow at the Energy and Resources Laboratories of the Industrial Technology Research Institute	2	1	67%	Resigned on June 26, 2017
Director	Mao Yang Representative: Tie-Chih Sun	Male	MA from the Graduate Institute of Law, National Chengchi University Chairman of Tycoon Securities Co., Ltd.	3	0	100%	Resigned on June 26, 2017
Director	Mao Yang Representative: Rung-Kang Sun	Male	Department of Law, Chinese Culture University/Chairman of Yuanjie Investment	5	1	83%	Newly appointed on June 27, 2017
Director	Kai Jiang Representative: Hao Fang	Male	MA in International Business Management from National Chengchi University / Vice President of Taiwan United Medical Inc. University of California, Santa Cruz Vermont Law School	5	1	83%	Newly appointed on June 27, 2017
Director	Kai Jiang Representative: Chih-Yao Sun	Female	University of California, Santa Cruz Vermont Law School	3	0	100%	Resigned on June 26, 2017
Director	Kun Chang Investment Co., Ltd Representative: Yu-Ta Chang	Male	MA from the NTU Graduate Institute of Finance Vice President of Weilian Technology Co., Ltd.	8	1	89%	Reelected on June 27, 2017
Director	Hung Mao Investment Representative: Hsueh-Chung Lu	Male	MA in Electrical and Computer Engineering from UC Santa Barbara, California, USA /President of the R&D Division of VIA Technologies	5	1	83%	Newly appointed on June 27, 2017
Director	CDIB Venture Capital Representative: Hung-Cheng Wei	Male	MA from the Institute of Business & Management, National Chiao Tung University, Assistant Vice President of CDIB Capital Management Corp.	6	0	100%	Newly appointed on June 27, 2017
Independent Director	Ting-Kuo Chen	Male	PhD in Business Administration from University of Michigan Ruentex Group Consultant, President of Charoen Pokphand New York, Vice President of Formosa Plastics JM Eagle USA, Chairman of Sinofac Securities Co., Ltd., Professor/Director/Dean of the NTU College of Management, Dean/ Professor of the College of Management, Tamkang University, Chair Professor and Dean of the College of Management, Asia University	10	0	100%	Reelected on June 27, 2017
Independent Director	Hsing-Hsien Lin	Male	Master of Commerce, Tulane University, USA BA from the Department of Electrophysics, National Chiao Tung University President and CEO of Lite-On Technology Corporation, Vice Chairman of Lite-On Group, President of Silitek Corp., President of Texas Instruments Taiwan	7	1	78%	Reelected on June 27, 2017
Independent Director	Meng-Hua Huang	Female	Master of Commerce, Tulane University, USA President of Leotek Electronics Corporation, Manager and Senior Accounting Officer of Texas Instruments Taiwan, President Office Director (Vice President) of Silitek Corp., Chief Auditor (Vice President) of Lite-On Group, Senior Vice President of Lite-On Technology Corporation	9	0	100%	Reelected on June 27, 2017

For concurrent positions of SAS directors in SAS and other companies please refer to the 2017 Annual Report.

Remuneration Committee

SAS established a Remuneration Committee on December 20, 2011 to implement a systematic compensation scheme. The committee is in charge of formulation and review of performance assessment and remuneration policies, systems, standards, and structures for directors and managers.

For the organizational charter of the Remuneration Committee, please refer to the SAS corporate website

The average attendance rate for the two remuneration committee meetings in 2017 reached 100%

Attendance record of independent directors in remuneration committee meetings in 2017

Title	Name	Personal attendance	Attendance by proxy	Personal attendance rate (%)	Note
Convener	Ting-Kuo Chen	2	0	100%	-
Member	Hsing-Hsien Lin	2	0	100%	-
Member	Meng-Hua Huang	2	0	100%	-

Audit Committee

SAS established an Audit Committee on June 26, 2014 to strengthen the internal monitoring mechanism in the field of corporate governance. The committee is comprised of three independent directors. Its main responsibilities include appointment/dismissal of CPAs, determination of CPA remuneration, auditing and discussion of quarterly/semiannual/annual financial statements, auditing of the internal control system, and revision and auditing of internal control statements.

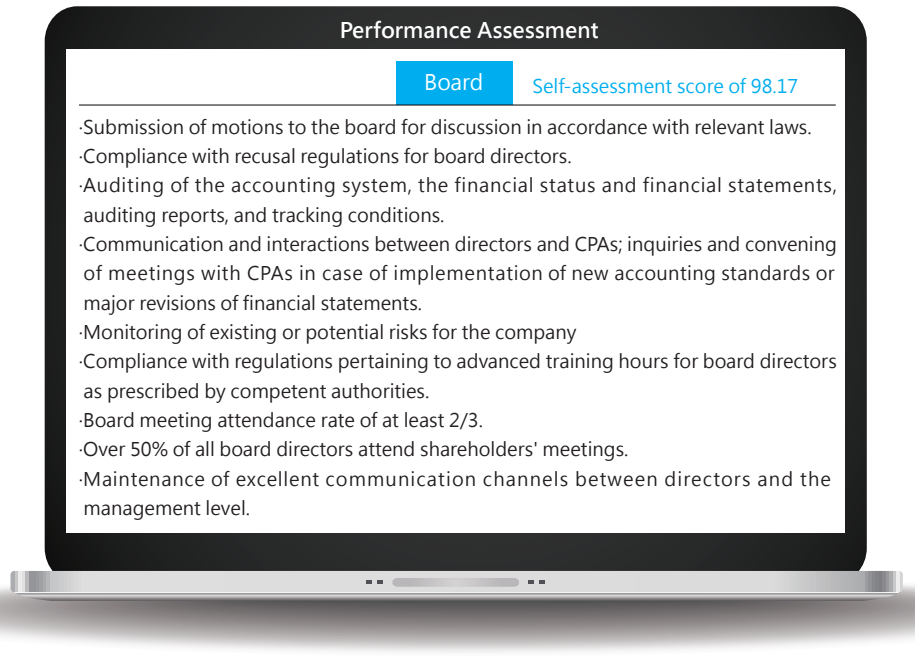
For the organizational charter of the Audit Committee, please refer to the SAS corporate website.

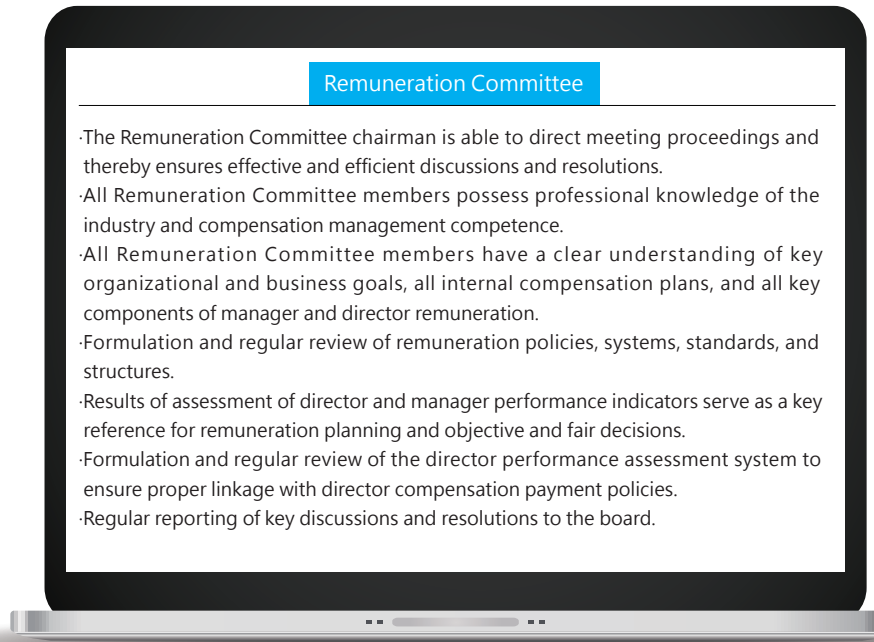
For major resolutions of the Audit Committee, please refer to the 2017 Annual Report.

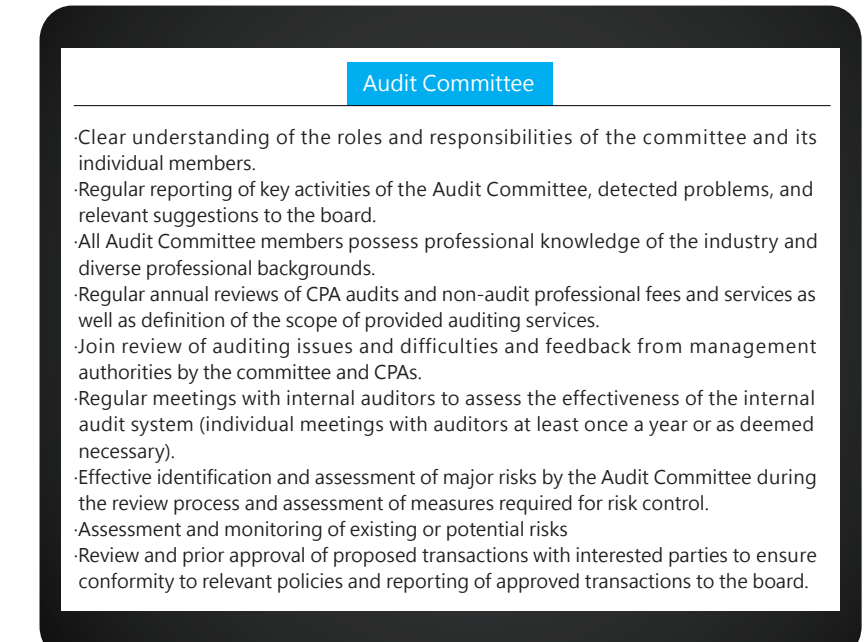
The average attendance rate for the seven audit committee meetings in 2017 reached 100%

Attendance record of independent directors in remuneration committee meetings in 2017

Title	Name	Personal attendance	Attendance by proxy	Personal attendance rate (%)	Note
Independent director	Ting-Kuo Chen	7	0	100%	-
Independent director	Hsing-Hsien Lin	7	0	100%	-
Independent director	Meng-Hua Huang	7	0	100%	-







1.3 Integrity Governance and Legal Compliance

SAS implements ethical corporate management and formulates integrity related internal regulations to be observed by all staff members.

Integrity and Ethical Norms

Integrity is the core value of the company. Relevant norms and rules have been formulated and a communication mechanism has been established to create an environment conducive to ethical corporate management. These rules must be observed by all directors, managers, and staff members. Integrity risks are minimized through a rigorous management mechanism and effective controls to realize the vision of maximizing value and benefits for customers, shareholders, and stakeholders.

SAS has formulated relevant internal regulations such as Ethical Corporate Management Best Practice Principles, Code of Ethical Conduct, and Risk Management Guidelines" to ensure that all employees uphold the highest ethical standards in the performance of operating activities. All these regulations have been made public on the corporate website and internal website to allow queries by employees at any time. These regulations clearly stipulate precautions for SAS directors, managers, and employees in the performance of their duties. Employees are provided with a full understanding of these regulations and full compliance is ensured through training and education on ethical management policies. All regulations are implemented in daily operations to enhance the quality of conduct and occupational ethics of all staff members.

Anti-corruption

SAS is firmly committed to anti-corruption and active prevention of unethical conduct. In addition to the signing of IPR and Confidentiality Agreements with all employees to ensure that they refrain from sacrificing the company's rights and interests for the sake of their own benefits. The Ethical Corporate Management Best Practice Principles clearly stipulate that staff members shall not directly or indirectly offer, promise to offer, request or accept any improper benefits or commit unethical acts including breach of ethics, illegal acts, or breach of fiduciary duty for purposes of acquiring or maintaining benefits when engaging in commercial activities. Ethical Corporate Management Best Practice Principles and other internal regulations are posted on the SAS website.

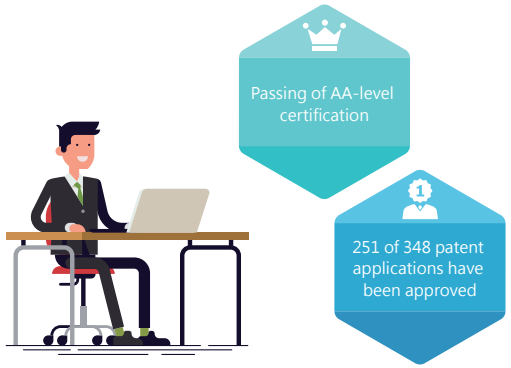
Reporting channels and protection of informants

SAS has formulated Guidelines for the Handling of Reported Cases of Illegal and Unethical Conduct and established a well-defined disciplinary and appeal system for violations of the ethical corporate management rules to ensure implementation of ethical management. An employee suggestion box, email box, and grievance hotline are available on the internal website and have been made public to encourage internal and external personnel to report unethical or improper behavior. The identity of the informant and the reported contents are kept strictly confidential. HR units are in charge of verification and follow-up handling. Disciplinary measures are imposed based on the severity of the offense if infractions of ethical management regulations are verified. The President Office is responsible for the implementation of ethical corporate management policies and the formulation of prevention plans as well as monitoring of plan execution. The implementation status is reported to the board on an annual basis. No instances of corruption were reported in 2017.

- Formulation of Guidelines for the Handling of Reported Cases of Illegal and Unethical Conduct.
- Establishment of a well-defined disciplinary and appeal system for handling violations of the ethical corporate management rules and provision and public announcement of an employee suggestion box, email box, and grievance hotline on the internal website.

- Provision and public announcement of an employee suggestion box, email box, and grievance hotline on the internal website to encourage internal and external personnel to report unethical or improper behavior.
- The identity of the informant and the reported contents are kept strictly confidential. HR units are in charge of verification and follow-up handling. Disciplinary measures are imposed based on the severity of the offense if infractions of ethical management regulations are verified.

- The President Office is in charge of the implementation of ethical corporate management policies and the formulation of prevention plans as well as monitoring of plan execution. The implementation status is reported to the board on an annual basis.
- No instances of corruption were reported in 2017



Intellectual property management regulations

SAS adopted the Taiwan Intellectual Property Right Management System (TIPS) in 2010. The company passed the basic and advanced certifications in 2010-2011 and 2012-2015, respectively. In 2016, SAS became the first company in the solar energy industry to pass the AA-level certification. Since the adoption of TIPS, we have gradually established patent management norms and regulations and systematic e-management. We have also purchased a patent retrieval system for initial queries and organize proposal review meetings to enhance patent quality and strengthen patent deployment for different technologies and products. In addition, SAS has gradually enhanced confidentiality controls (e.g., control and audits of electronic storage devices and externally sent e-mails) to ensure effective protection of business secrets and prevent leakage of R&D results. A total of 348 patent applications have been submitted worldwide, 251 of which have already been approved. In the future, the company will continue to expand global patent deployment to increase its international competitiveness.

Prevention of conflicts of interest

SAS places high emphasis on integrity and ethical principles. The company therefore clearly stipulates in its Procedures for Ethical Management and Guidelines for Conduct that a director, manager, or other stakeholder who attends board meetings or a juristic person that he/she represents is an interested party in relation to an agenda item, the director/manager/stakeholder shall state the important aspects of the interested party relationship at the respective meeting. When the relationship is likely to prejudice the interest of this Corporation, that director/manager/stakeholder shall not participate in discussion or voting on that agenda item and shall recuse himself or herself from the discussion or the voting on the item. Said director/manager/stakeholder may also not exercise voting rights as proxy for another director.

Internal Audit System

The Auditing Office, which is subordinate to the board, assists directors and managers in the design of an adequate internal control mechanism to ensure sound business operations and reasonable achievement of operating objectives.

The company upholds a spirit of absolute independence, objectivity, and impartiality in the implementation of its internal audit system which has been approved by the board. The office assists the board and managers in the inspection and assessment of shortcomings and deficiencies of the internal control system and tracking of improvements with regard to shortcomings and irregularities. Audit operations are reported to independent directors and the board on a regular basis.

The goal is to implement the self-monitoring mechanism of the company, respond to environmental changes in a timely manner, review independent inspection records of all departments, and provide suggestions for improvement in a timely manner. This data serves as a key reference for review, revision, and adjustment of the design and execution of the internal control system to guarantee and effective implementation of the system. In 2017, the internal audit rate in the three operating bases in Taiwan reached 100%. Audits are carried out pursuant to the internal control principles promulgated by the Financial Supervisory Commission (including anti-corruption audit items).

Definition of unethical conduct

Unethical conduct shall include the following: Offering and acceptance of bribes, illegal political donations, improper charitable donations or sponsorship, offering or acceptance of unreasonable presents or hospitality, or other improper benefits, misappropriation of trade secrets and infringement of intellectual property rights, engagement in unfair competitive practices, direct or indirect damage to the rights or interests of stakeholders in the course of research and development, procurement, manufacture, provision, or sale of products and services.

Audits are carried out for the three operating bases in Taiwan (Taiwan HQ, Chunan Branch, Yilan Branch).

100%

Anti-corruption review rate in the context of audits of the three operating bases in 2017: 100%.

1.4 Risk Management

SAS has formulated a Risk Management Policy and Risk Management Guidelines in 2014 in response to a rapidly changing business environment to ensure stable business operations and sustainable development. The three major goals of the risk management system are as follows:

Active engagement in various operations and services under the premise of acceptable risk levels to increase the quality and quantity of revenue.

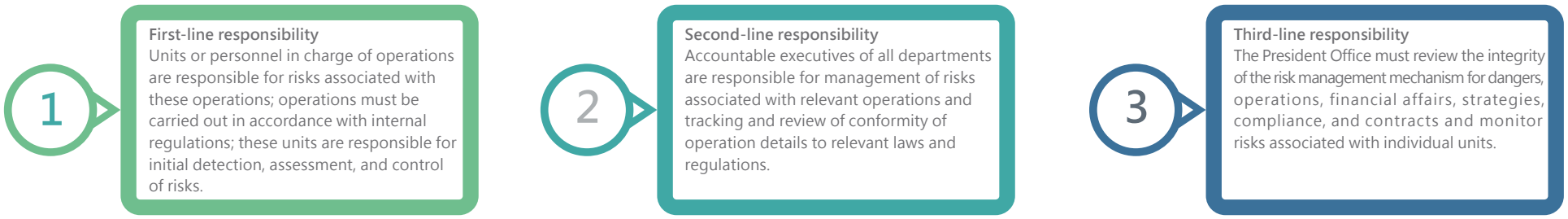
Increased scope of risk control and negative listing of routine operations and important principles if deemed necessary.

Institutionalization, computerization, and focus on discipline to ensure compliance with risk controls.

The SAS risk management process is composed of the following five tasks: Risk identification, risk measurement, risk monitoring and control, risk reporting and disclosure, and risk response. Risk management strategies are implemented through the effective execution of this risk management process.

SAS has developed a measurement method as a key reference for risk management. For quantifiable risks, we adopt rigorous statistical analysis techniques to conduct analyses and management. An incremental approach is adopted for the management of quantification processes. Risks which are hard to quantify are measured through qualitative methods. The probability and impact of risk occurrence is expressed through verbal description. Relevant operations and risk management-related information are disclosed in annual reports and on the corporate website.

SAS risk management operations are based on the three-tier framework for division of duties in the field of risk management



SAS has created a framework for risk management on three levels characterized by division of duties. An effective risk management mechanism has been established to assess and monitor risk tolerance capabilities, current state of sustained risks, determination of risk response strategies, and compliance with risk management procedures. SAS has identified the following ESG risks and opportunities:

Identified risks	Strategy of turning risks into opportunities
Management and investment risks	◎Creation of a supply chain with fully integrated up-, mid- and downstream operations to expand the scope of operations and spread out operational risks through diversified business strategies. ◎Development of crystal growth automation systems to enhance process stability and achieve quality optimization and cost reduction. ◎Continued in-depth development of advanced technologies to enhance the performance of power components and key materials and thereby widen the gap between the company and its competitors.
Corporate governance risks	Implementation of corporate governance policies, formulation of governance regulations, and definition of a disciplinary and grievance system to fulfill CSR and demonstrate the commitment and determination of SAS to pursue sustainable operations.

Climate change risks	Management through the two aspects of alleviation and adjustment **Alleviation** ◎Promotion of the ISO50001 energy management system, monitoring of major energy usage equipment and formulation of energy action and improvement plans. ◎Promotion of green products and green production to reduce the consumption of energy resources. ◎Promotion of water conservation measures. **Adjustment** ◎Strengthening of the endurance capacity of the company in the face of extreme weather patterns (droughts, floods, avalanches). ◎Energy management and enhanced energy efficiency in response to energy cost hikes (e.g., electricity fee increases, carbon taxes, and energy taxes).
Environmental protection risks	◎Establishment of a pollution and emission monitoring system and commitment to pollution reduction. ◎Strengthening of risk control through waste reclamation and reuse and use of recycled materials if possible.

Social aspect

Identified risks	Strategy of turning risks into opportunities
Challenge of maintaining relationships and communication with internal and external stakeholders	Improvement of the stakeholder section of the corporate website and creation of stakeholder communication channels to gain a better understanding and ability to respond to issues of concern to stakeholders.
Occupational health and safety risks	◎Hazard identification and risk assessment, adoption of risk minimization measures and formulation of relevant management procedures and operational guidelines as well as regular organization of emergency response drills. ◎Regular organization of health and safety training to prevent occupational accidents and guarantee labor health and safety.
Labor health risks	◎Carrying out of special physical examinations for newly hired or transferred employees who are engaged in operations with special health hazards. Special health checks are also administered on an annual basis and monitoring of operational environments is implemented. ◎Organization of employee health management and promotion activities on a non-scheduled basis to raise health awareness and share information related to critical illnesses or health with the goal of giving employees a comprehensive understanding of health-related information.
Labor-management	◎Labor-management communication: The company places great value on employee rights and interests. Prior to the implementation of major policies and changes, employees are notified of impacts through labor-management meetings, newsletters, and HR announcements to safeguard employee rights and interests. ◎Interviews of incoming employees: By showing concern through interviews we gain a clear understanding of employee work conditions, shorten the adaptation periods of new employees, and reduce labor risks. ◎Employee grievance channels: Assignment of dedicated personnel for the processing of employee opinions and problems reported by employees to reduce labor-management conflicts.

Business Continuity Management (BCM)

In the future, SAS will assess new risks that have an impact on the company and are generated by internal and external changes each year (natural disasters, human factors, equipment failure, and information events). Business Continuity Plans (BCP) are implemented and risks are defined to identify emergencies or risks affecting company operations. Risk severity levels and incidence rates are measured, and the main risk factors are identified through analysis based on the measurement results. Preventive measures are adopted and emergency response drills with simulated scenarios are carried out with regard to these factors to achieve early prevention and control. Risk management is implemented through effective execution of the risk management process.

(Continued improvement)

1.5 Legal Compliance

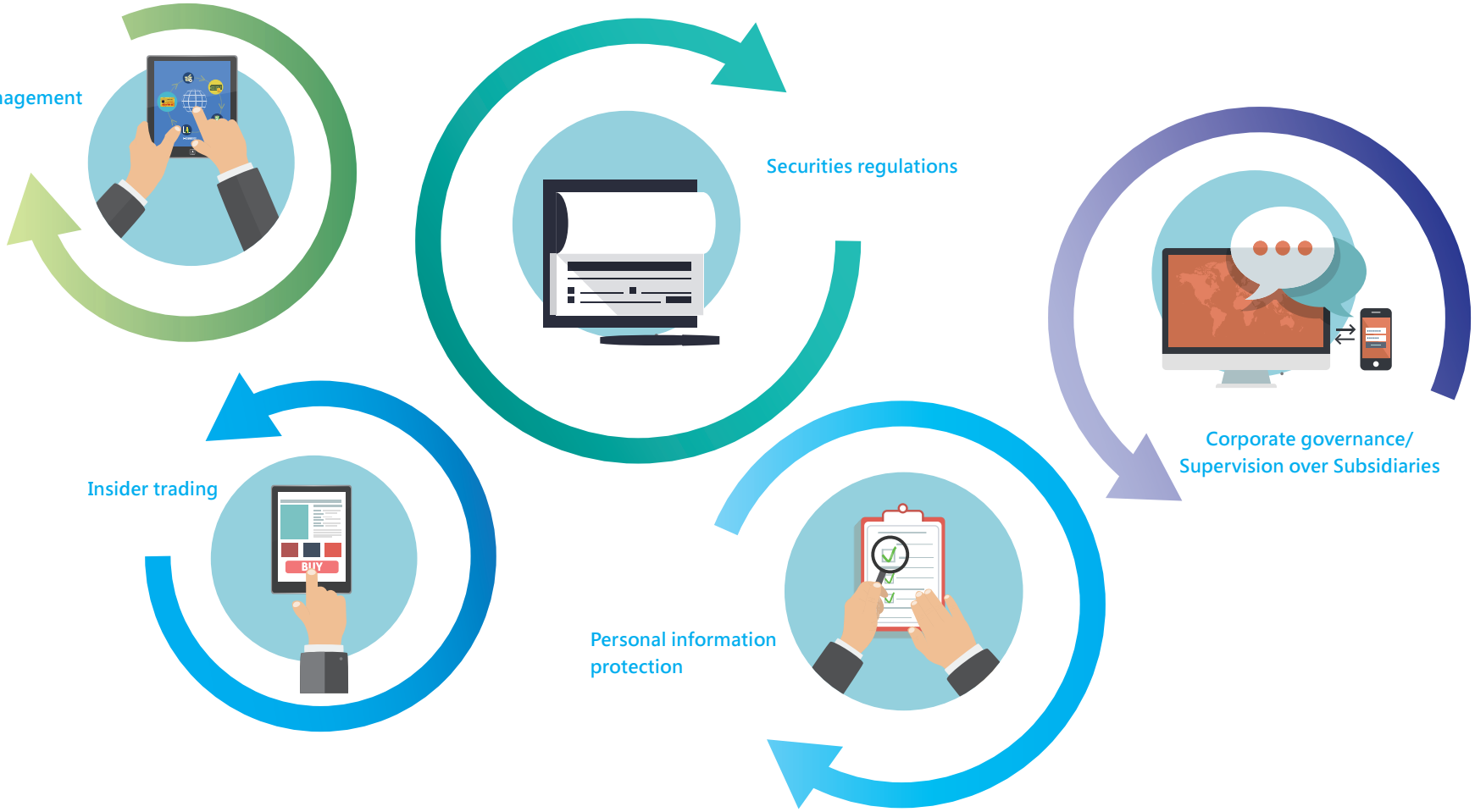
SAS formulates relevant policies and norms and the board leads by example through supervision of the management team to ensure effective and continued implementation of ethical norms and compliance with relevant laws and regulations. Continued training and education ensures compliance by all staff members.

SAS has formulated the following policies and guidelines in response to different legal compliance fields :

Fines in 2017

Item	Penalty of fines(NT)	Penalty of Plant	Violates stipulation	Correct action
1	60,000	Chunan Plant	Employees got accident work injury with non-wearing personal protective equipment. (violates of occupational safety and health act)	To inspect works that may cause work injury in the factory, and to stipulate and purchase enough personal protective equipment.
2	20,000	Yilan Plant	Employees extend work hour over 46 hour a month (violates of labor standards act)	1.Augment the staff. 2.To pass overtime hours regular on the supervisor of each department to control.

Legal compliance



2017 Key legal compliance items

Securities regulations

Rigorous management mechanism

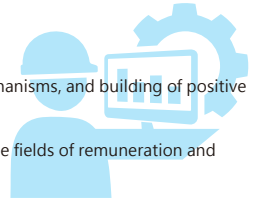
SAS shares are officially listed on Taipei Exchange (TPEx). The company must therefore strictly abide by TPEx regulations and relevant laws and policies.

- The President Office has established excellent communication channels with competent authorities and constantly monitors the latest legal trends. The Office is also responsible for queries of the latest legal announcements and changes. Upon identification of the latest developments, relevant business units are notified to adopt response measures as required.
- With regard to questions submitted by relevant business units, the legal affairs department further analyzes relevant regulations and proposes accurate response strategies upon communication and confirmation with competent authorities.

Labor laws and regulations

Strict compliance with relevant labor laws and regulations

- Adoption of relevant work systems and management standards that meet or exceed the requirements set forth in labor laws and regulations, development of excellent working conditions and communication mechanisms, and building of positive labor-management relations and interactions with co-workers.
- Emphasis on employee compensation and benefits, talent training, implementation of labor laws, and safeguarding of employee rights and interests. Prior to the implementation of major policies and changes in the fields of remuneration and retirement systems, employees are notified of impacts through labor-management meetings, newsletters, and HR announcements to safeguard employee rights and interests.



Data management

- Major policies and documents：Employment contracts and Business Secret and IPR agreements, Code of Ethical Conduct, Handling Procedures for Intellectual Property Disputes, and Confidentiality Agreements.
- Management mechanism: Education on the importance of intellectual property and business secrets though posters and slogans, employee training and education, and signing of confidentiality agreements with employees in charge of relevant operations.

Corporate governance/Supervision over Subsidiaries

- Major policies and documents: Code of Ethical Conduct, Guidelines for the Handling of Reported Cases of Illegal, Unethical, and Dishonest Conduct.
- Management mechanism: Relevant contents are incorporated into education for current employees and orientation training for newly inducted employees to ensure compliance by all employees with said code of conduct in the performance of duties.

Environmental/OSH laws and regulations

- Major policies and documents: Identification and management of environmental, energy management, and OSH related laws and other relevant requirements.
- Management mechanism: Annual review of conformity to the latest amendments of relevant environmental, energy management, and OSH related laws and other relevant requirements, regular assessment of conformity to applicable legal requirements.

Legal compliance courses and education

259 courses

Legal compliance

1337 participants

·Ethical corporate management and code of ethical conduct.
·Personal information protection.
·Non-compete compensation clause.
·Intellectual property concepts/ confidential information management.

106 courses

Health care

765 participants

·CPR and first aid.
·In-plant handling procedures for emergencies, injuries, and diseases.
·Prevention of workplace violence.

143 courses

Environment, safety, and health

1082 participants

·General education on health and safety hazards of chemicals.
·Fire safety.
·Usage and handling of toxic chemical substances and chemicals.

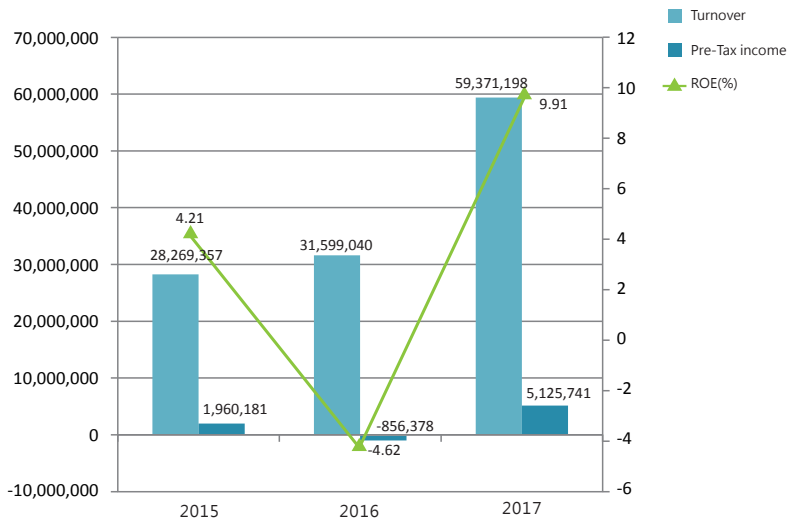
1.6 Operational Performance

SAS embraces corporate ethical management principles and is firmly committed to creating value for shareholders, customers, and employees. In 2017, the solar energy industry was affected by trade wars, technological breakthroughs, and government subsidies and a sluggish economy in the first half of the year. In the third quarter, the market picked up steam due to rush orders as a direct result of the extension of subsidy periods in China from June 30 to September 30 and increased demand prior to the final decision on Section 201 of the US Trade Act. However, sluggish demand in the fourth quarter coupled with dropping product prices again resulted in arduous challenges for domestic manufacturers. SAS revenues hit another record high in 2017 and the company was able to turn losses into profits and regain its profitability as a result of the joint efforts of all staff members, resource integration, product differentiation, and outstanding business performance of its subsidiary GlobalWafers. The consolidated revenue of the group reached NT$ 59.3712 billion in 2017, which represents an increase by NT$ 31.599 billion compared to the previous year. Net income after tax of the parent company amounted to NT$ 1.03551 billion. After-tax EPS and cash dividends per share equaled NT$ 1.8 and NT$ 3, respectively.

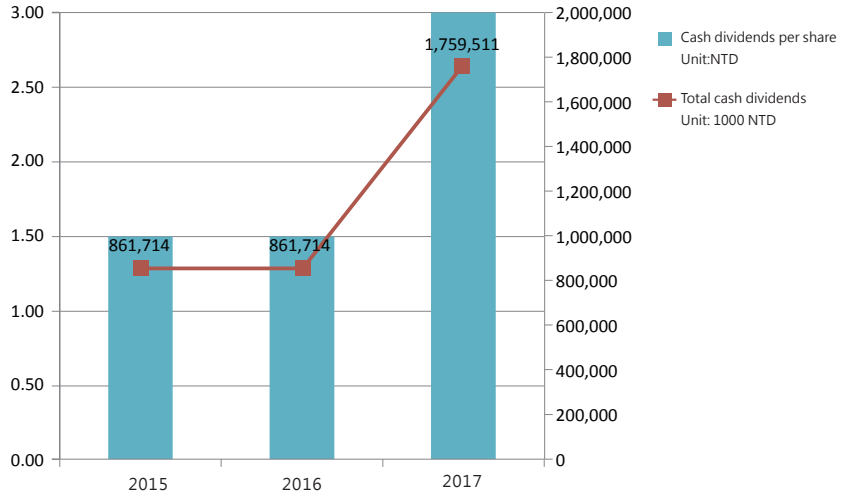
For more details on operational performance and financial data, please refer to the SAS 2017 Consolidated Financial Statement.

Financial performance (consolidated)

Unit: 1000 NTD



Cash dividends



2017 Economic Value Analysis

Unit: 1000 NTD

Direct economic value	Income (reporting year)	59,371,198
Distributed economic value	Operating costs	47,967,962
	Employee compensation and benefits	12,334,382
	Payment to investors	1,759,511
	Payment to the government	166,702
	Community resources	129

Overall economic environment and industry trends

In 2017, the company benefited from large-scale installation of centralized and decentralized power plants in the Chinese solar energy market, which greatly increased the demand for raw materials in China. GTM Research estimates that the newly installed capacity will reach a new high of 100GW worldwide in 2017, which represents an increase by 28% compared to 2016 (total capacity of 79.4GW). In 2017, the solar energy business group continued to focus on the enhancement of the conversion efficiency of high-performance solar energy products, strengthening of cost controls, and integration and strategic alliances with downstream systems and power plants to increase operating efficiency and corporate competitiveness. It is expected that 2018 will be another year of uncertainty and challenges for the solar energy industry.

Despite the rosy forecast of a newly installed capacity of 100GW for 2018 by the market analysis firm GTM Research, the overall environment is still characterized by long-term uncertainty and unpredictability. SAS will still to pursue innovation and R&D, cost reduction, and strengthening of capabilities with a focus on the company' s competitive advantages and strategic deployment of solar power plants to enhance operational synergy. We strive to create maximum value for shareholders and turn SAS into a sustainable green enterprise with steadily growing revenues and profits.

2.1 Innovation Management

2.2 Customer and Product Services

2.3 Protection of Confidential Customer Information

2.4 Product Liability and Marketing Communication

2.5 Establishment of an Integrated Up-, Mid-, and Downstream Solar Industry Supply Chain

2 Innovative R&D and Services

Material aspects

Significance for SAS

SAS is engaged in the manufacture of solar energy products. The company's green product range includes ingots, wafers, cells, modules, and power plants. RoHS testing is carried out for products at the source (wafers, cells) and laboratory testing results of hazardous substance contents must be certified by third-party impartial units to ensure conformity to international laws and regulations and customer requirements in the field of hazardous substances.

SAS also requires its raw material and packing material suppliers to submit reports on laboratory testing of hazardous substance contents certified by third-party impartial units to ensure conformity of the upstream supply chain to product safety and toxicity requirements. The goal is to realize eco-friendliness and environmental protection at the source.

SAS views the provision of services and high-quality products that satisfy customers as its core mission. The company is deeply aware of the fact that superior product quality is a key prerequisite of corporate competitiveness. Professional teams are in charge of product development, costs, manufacturing, quality, and customer services. Product quality is constantly improved to achieve the goals of customer satisfaction and sustainable operations.

SAS is firmly committed to providing its customers with the best services possible and is deeply convinced that an excellent service quality is the key to improved customer satisfaction and consolidated customer loyalty. Professional internal customer service teams maintain excellent open communications with customers and strive to gain a better understanding of customer opinions and needs through different channels to earn their long-term support.

SAS schedules regular meetings with customers to maintain excellent communications with customers and conduct discussions on production and sales quality and engineering technologies. The company develops new-generation products in cooperation with its customers and enhances product power conversion through technical discussions with the supply chain. It further optimizes the usage of social resources to reduce environmental pollution. The ultimate goal is to ensure in-depth cooperative relationships with customers and higher customer satisfaction with products, technologies, and services.

Management mechanism

1. SAS requires suppliers of raw materials and packing materials to provide RoHS reports during the product certification stage. Hazardous substance contents must meet customer requirements.

2. RoHS testing must be carried out for solar wafers and cells on an annual basis to ensure that hazardous substance contents meet customer requirements.

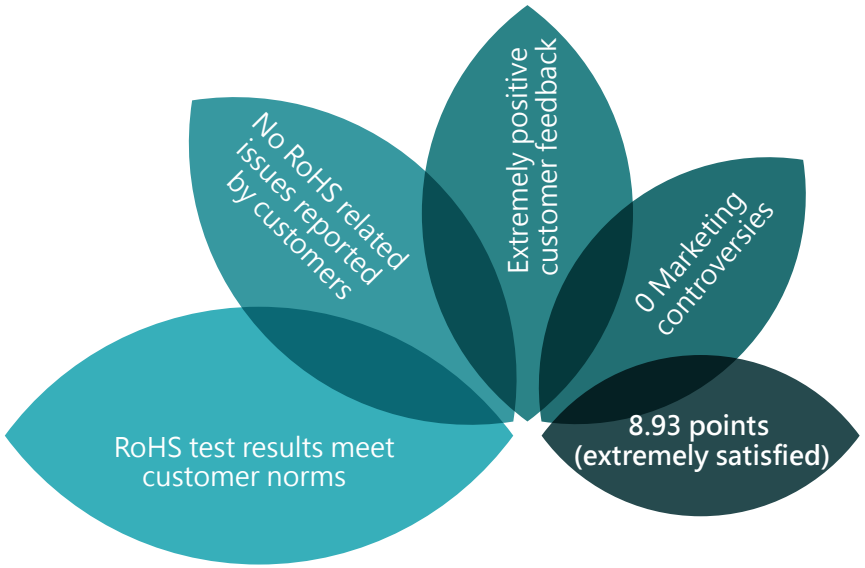
3. SAS is firmly committed to satisfying customer requirements. In 2017, customers requested modification of wafer dimensions mainly due to the fact that enlarged dimensions have a positive effect on wafer conversion efficiency. The new dimensions have therefore been adopted for mass-produced products in accordance with customer requirements after careful assessments by R&D, plant affairs (?), manufacturing, and quality assurance units and meticulous planning, testing, and monitoring.

4. In the field of marketing and promotion (including advertising, sales promotion, and sponsorship), SAS strictly abides by relevant laws and regulations to prevent violations of voluntary guidelines governing marketing and promotion and avoid false or misleading advertisements.

5. SAS conducts customer satisfaction surveys on a regular basis and collects customer opinions about services, quality, costs, and innovation. The goal is to gain a better understanding of customers as a reference for constant improvements to ensure sustainable operations and development in cooperation with customers.

6. Average weighted customer satisfaction scores must exceed 8 points (extremely satisfied) to prove that customers have a high level of confidence in SAS product and service quality.

2017 Key Achievements



1. All raw materials and packing materials provided by suppliers and RoHS testing results conformed to customer specifications. RoHS testing was completed in 2016 and 2017 without any negative feedback.
2. Results of RoHS testing conducted for solar wafers and cells in 2016 and 2017 conformed to customer specifications. No RoHS related issues were reported by customers.
3. Wafer dimensions were fully modified and mass production was initiated in 2017 in accordance with customer requirements with excellent feedback from customers.
4. 0 Marketing controversies
5. Average weighted customer satisfaction score of 8.39 (extremely satisfied)

Short-, mid-, and long-term development goals

Short-term goals — 1 year

1.Continued satisfaction of customer requirements in the field of environmental laws and regulations (RoHS、REACH).
2.Improvement proposal achievement rate of 100%: SAS strongly encourages its employees to submit new improvement proposals in the fields of quality, R&D, information, production, safety, and energy conservation through organization of relevant activities with the goal of providing customers with better product quality and services. All proposals are implemented upon careful assessment by professional teams to maximize benefits and achieve the goal of constant quality improvements.

II. Mid-term goals — 2~3 years

No major shortcomings/deficiencies detected in customer audits: SAS places high emphasis on customer audit processes and results since such audits provide a clear understanding of areas requiring improvement and may serve as a driving force for organizational progress. The company embraces the goal of zero shortcomings and deficiencies to increase the trust of customers in SAS product quality and services.

III. Long-term goals — Over 3 years

Customer satisfaction scores of over 8 points in all dimensions (extremely satisfied): The company carries out constant improvements to meet or exceed customer expectations. SAS will therefore continue to rely on various communication platforms to gain a clear understanding of customer demands and listen to the voice of its customers. It upholds the highest standards in its constant pursuit of excellence in the fields of product quality and services to ensure business continuity.

Innovation management

Current state and development trends of the solar energy industry

The solar power industry is the industry with the largest growth potential in the 21st century. Following the gradual depletion of coal, petroleum, and natural gas reserves, traditional energy sources will face irreversible changes. Renewable energy sources (solar energy in particular) will turn into key components of the energy structure. Measures of the Bureau of Energy in the field of renewable energy currently focus on photovoltaic and wind power generation. The goal is a renewable energy ratio of 20% by 2025. The 2-Year Photovoltaic Promotion Program is expected to generate an installed solar power capacity of 1.52GW within two years. Long-term planning aims to achieve a rooftop and ground-mounted solar power capacity of 3GW and 17GW, respectively. The goal is an annual power generation of 25 TWh, which is expected to attract total investments of NT$ 1.2 trillion and create 100,000 employment opportunities in solar energy related industries. High-quality wafers are a key prerequisite for the development of the Taiwanese solar energy industry, while constant enhancement of solar cell conversion efficiency is required to reduce costs per watt and increase international competitiveness.

Continued innovation and development of cutting-edge products and technologies

SAS has long-year experience in solar crystal growth and its multi crystalline products and industry-leading efficiency are unrivaled worldwide. The company also possesses strong R&D capabilities in the area of thermal field simulation. The A3+ wafer which was launched in 2011 has drawn global attention and Aegis wafer was honored with the Silicon Innovation Award, the most prestigious company earned the first patent worldwide for its high-performance wafer technology (patent number:I452185) in September 2014. The A5+ wafer with its world-leading conversion efficiency went into mass production in late 2014. The patented crystal growth technology was recognized with the 2016 National Innovation Silver Award by the Intellectual Property Office in 2017. The company has the capability to constantly develop high-quality multi crystalline solar products.

In line with the latest market developments, the adoption of diamond cutting processes for the cutting of solar wafers represents one of the major changes in the solar energy industry in 2017. SAS started adopting this technology in the fourth quarter of 2017. By the end of 2017, 51% of all processes had been converted. Diamond cutting processes do not require the use of cutting oil and therefore help decrease raw material consumption, mitigate air pollution, and reduce waste generation and environmental impacts caused by transportation.

The brilliant achievements of SAS in the field of research and development are reflected in the number of patent applications. In 2013, the Science & Technology Law Institute analyzed IPR management and achievements of TWSE/TPEx-listed companies in Taiwan in cooperation with Ocean Tomo, an authority in the field of intellectual property, ranking SAS among the top 50 Taiwanese listed enterprises in the field of US patent value. This clearly indicates that SAS has turned into a benchmark enterprise with high-value patents. The company earned a total of 251 patents in 2017.

Continued product innovation

R&D achievements in 2017

(1)DW solar multi crystalline wafer.
(2)Ultra-high efficiency silicon solar cell.
(3)Ultra-high efficiency and low lumens depreciation P-type multi crystalline Silicon Solar Cell.

Future R&D projects

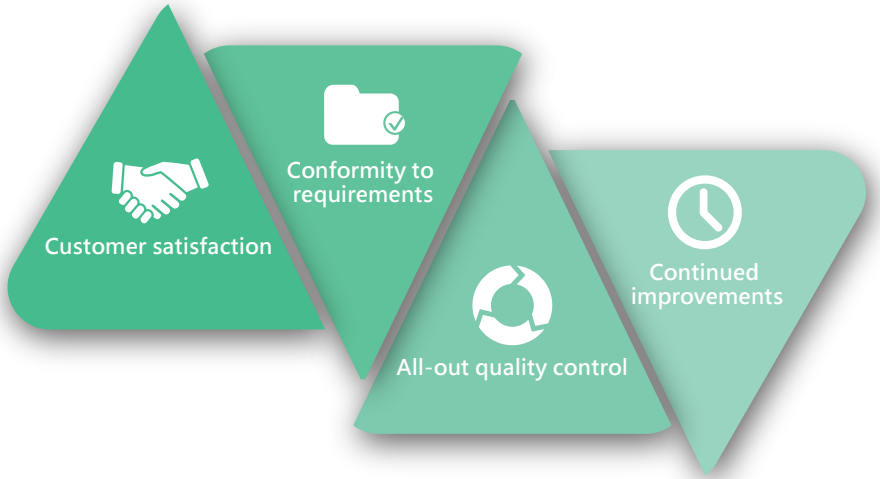
(1)DW high-strength solar wafer.
(2)Ultra-high efficiency P-type mono crystalline solar cell.
(3)High efficiency and low lumens depreciation P-type diamond-cutting multi crystalline silicon solar cell.
(4)High efficiency N-type mono crystalline silicon solar cell technology.

2.2 Customer and product services

Customer services

SAS is firmly committed to providing its customers with the best services and is deeply convinced that an excellent service quality is the key to improved customer satisfaction and consolidated customer loyalty. SAS embraces a philosophy of sustainable operations. In addition to the maintenance of business performance, the company also places high emphasis on listening to customer voices and opinions and satisfaction of customer demands to earn their long-term support and achieve the goal of sustainable operations.

SAS is a professional manufacturer of solar wafers and cells. The company provides cutting-edge process technologies and product services to satisfy customer demands. It emphasizes customer orientation and professionalism and adopts a customer perspective with customer demands as the main reference. It also aims to provide customers with comprehensive services to achieve the goals of customer satisfaction and sustainability.



Customer satisfaction

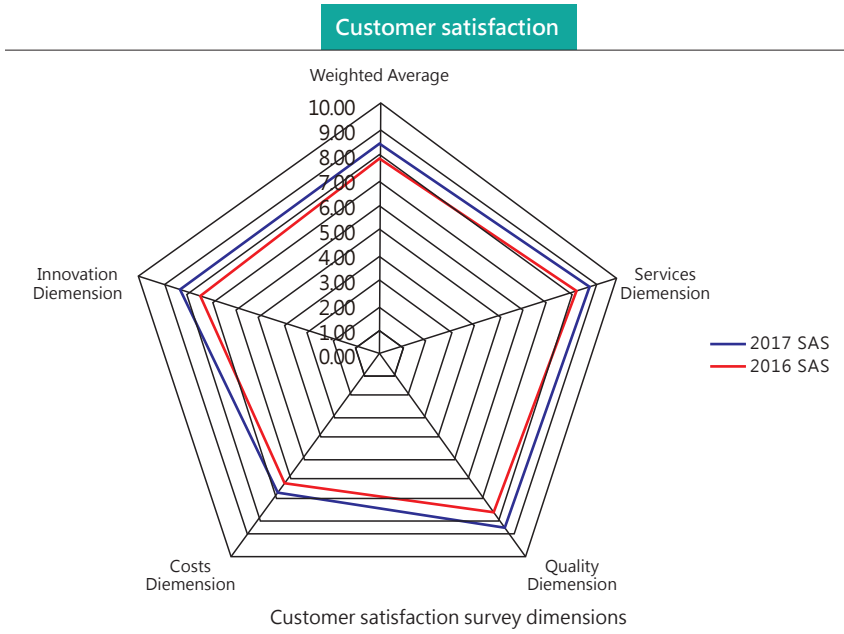
SAS is firmly committed to the goals of customer satisfaction, conformity to requirements, total quality control, and continued improvements to increase the trust of customers in SAS products and services. The provision of high-quality services and products to satisfy customers represents the core philosophy of SAS. Professional teams are in charge of product development, costs, manufacturing, quality, and customer services. Professional services are provided in response to customer problems and feedback in a rapid and active manner to assist customers in the solution of problems and earn their trust and satisfaction.

SAS schedules regular meetings with customers to maintain excellent communications with customers and conduct discussions on production and sales quality and engineering technologies. The company develops new-generation products in cooperation with its customers and enhances product power conversion through technical discussions with the supply chain. It further optimizes the usage of social resources to reduce environmental pollution. The ultimate goal is to ensure in-depth cooperative relationships with customers and higher customer satisfaction with products, technologies, and services.

SAS therefore conducts customer satisfaction surveys on a semi-annual basis. The scope of these surveys encompasses services, quality, costs, innovation. Upon collection and organization of customer opinions, dedicated teams convene meetings to determine strategies and directions of improvement with customer opinions as the main indicator. With regard to items with relatively low or too low satisfaction levels, the company conducts follow-up interviews with customers to clarify issues. Shortcomings are analyzed and improvement strategies are formulated to transform the concept of enhanced customer satisfaction into concrete action and earn the trust and praise of even more customers. The goal is turn into an ideal partner of customers and ensure sustainable operations and development together with customers.

As of 2017, the scope of satisfaction surveys for existing customers of the Chunan Plant has been converted from 10 items to 5 major dimensions (services, innovation, quality, costs, and weighted average (general evaluation). The maximum score for each dimension is 10 points (10 indicates extremely satisfied, while 6 indicates somewhat satisfied). If scores fall below 6 points, internal improvements are required. Customers score each dimension and identify shortcomings or directions for required improvements as a strategic reference for follow-up internal improvements.

In 2017, the weighted average satisfaction score reached 8.39 (extremely satisfied) with a full score of 10. This clearly indicates the positive assessment by the customers of the quality and services provided by SAS. As for individual dimensions, satisfactions levels in the dimensions of weighted average, services, quality, and innovation exceeded 8 (extremely satisfied). Compared to past surveys, satisfaction scores are improved, which indicates constant progress in the fields of products and quality and consistent performance. Despite the positive feedback from customers, SAS does not rest on its laurels. The company still aims to constantly increase customer satisfaction and provide high-quality products and services in accordance with the quality policy and goals of the company. Improvement measures are proposed and tracking of progress is implemented for unsatisfied goals through quality system management tools to clearly demonstrate the commitment of SAS to constant improvements and thereby achieve continued enhancement in the field of service quality and competitiveness.



With regard to the relatively low score of 6.85 (somewhat satisfied – no improvements required) in the cost dimension, SAS has conducted one-on-one interviews with customers to gain an in-depth understanding of the voice of its customers and facilitate the joint search for solutions through mutual cooperation. In addition to meetings and technical discussions, SAS aims to gain a better understanding of customer demands by adopting their perspective and builds a better rapport with customers through visits, phone calls, e-mails, and face-to-face interactions.

Customer satisfaction levels in 2017 strongly relied on the joint efforts of all departments. Customer satisfaction with SAS overall performance continues to rise. The company plans to invest in relevant equipment to enhance product quality and performance and is engaged in constant development of technologies to overcome challenges posed by the market and macroenvironment and thereby improve customer satisfaction.

Product services

SAS insists on the production of batteries with high conversion efficiency and constantly innovates and develops highly efficient products. SAS quickly integrates up- and downstream technology development capabilities through supply chain integration and technology exchange. Product launch times are shortened, product reliability is enhanced, and quality confidence levels are increased to bring products closer to end user demands. In the field of quality, rigorous procedures, processes, and controls are implemented in the collection of customer information, product design and development, and manufacturing processes. Outstanding and stable product quality is ensured through systematic management at each stage. SAS also convenes daily, weekly, and monthly meetings, management review meetings, and annual review meetings on a regular basis to ensure constant product improvements. PDCA is constantly carried out to enhance products and services, reduce costs and expenditures, and gain the ability to give back to society.

2.3 Protection of confidential customer information

Customer privacy

SAS is not only committed to providing excellent customer services but places even higher emphasis on protection of customer privacy and confidentiality. Relevant agreements are signed with customers to protect their classified information. At the same time, all staff members are required to strictly abide by SAS IPR policies and protect confidential information of customers during business dealings in a rigorous manner.

In recent years, allegations of customer information leakage have emerged. SAS not only formulates confidentiality agreement regulations but also invests resources in the establishment of information security systems to ensure proper protection of customer data. Scheduled and non-scheduled audits are conducted to ensure the integrity of information security system operations. At the same time, internal personnel are required to strictly abide by SAS IPR policies and protect confidential information of customers in business dealings in a rigorous manner. Relevant employee training is administered on an annual basis to emphasize the importance of confidentiality. Customer privacy is guaranteed and losses caused by information leakage are prevented through promotion of confidentiality concepts. In 2017, no relevant customer complaints were received and competent authorities did not impose any fines.

SAS Customer Service Principles

Protection of intellectual property

In 2010, SAS adopted the Taiwan intellectual property management system (TIPS). The company successively passed the basic certification (2010-2011) and advanced certification (2012-2015). In 2016, the company's efforts in this area were recognized with an AA rating. As of 2017, TIPS certifications are administered on a biennial basis. The company expects to earn another AA rating in 2018. Over the past 7 years, we have reinforced our confidentiality controls and have gradually established an information ranking system to define confidentiality levels for internal and external documents and create corresponding labels and circulation control methods. At the same time, the company has formulated usage regulations for electric equipment and has adopted virtual desktop cloud services, centralized management of backup information, and an external e-mail inspection system to limit the use of electronic storage devices. A plant surveillance management system has been adopted to prevent information security issues. Even more importantly, the company organizes regular intellectual property related training to reinforce the understanding and awareness of the importance of confidentiality management on the part of employees and integrate relevant concepts into the company's corporate culture. The goal is to safeguard the rights and interests of the company and its customers, improve customer trust, and increase the benefits of product market share through excellent intellectual property management.

TIPS certificates acquired by SAS from 2010-2016

2.4 Product liability and marketing communication

Product safety and liability

Solar wafer and cells are green products. SAS submits all products to qualified and impartial third-party units and labs for testing to ensure conformity to the EU RoHS directive (Restriction of the use of certain Hazardous Substances in electrical and electronic equipment) and customer requirements regarding hazardous substances. SAS also requires its raw material and packing material suppliers to submit regular reports on laboratory testing of hazardous substance contents certified by qualified and impartial third-party units and labs to implement product safety and toxicity requirements and strengthen environmental protection and eco-friendliness.

In addition, SAS is fully aware of the risks associated with solar cells and back-end modules such as environmental impacts of chemical substances used in manufacturing processes, risks of product use in different environments, and risks at different stages after the end of the product life cycle. Despite the fact that no international laws and norms exist for solar cell product labeling, SAS still insists on complete labeling and indication of product ingredients, harmful substances, and usage safety after careful consideration to ensure safe and worry-free use by customers. In the field of marketing, SAS provides a detailed description of potential product risks in media such as specification sheets and ensures conformity to legal, environmental, and customer requirements in all sales areas.

Marketing communication

SAS is one of the world leading solar energy businesses. Based on corporate social responsibility principles, the company conducts marketing and promotion (including advertising, sales promotion, and sponsorship) pursuant to relevant laws and regulations. Product specifications and performance information are publicly disclosed on its official website.

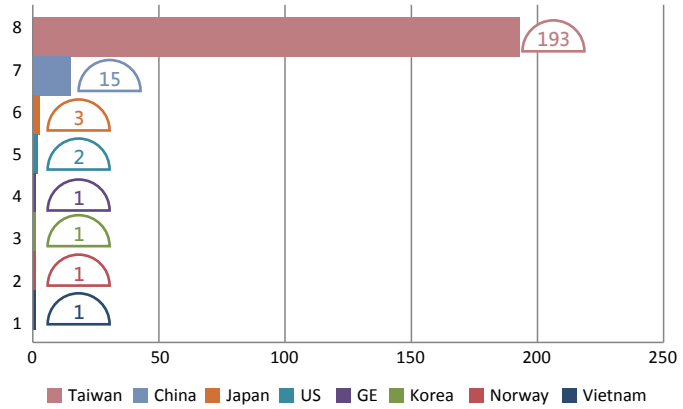
2.5 Establishment of an integrated up-, mid-, and downstream solar industry supply chain

In view of increasing requirements in the field of eco-friendliness, the demand for solar energy is growing and electricity generation costs are gradually dropping. Once solar power generation costs drop to market electricity price levels, solar power will turn into one of the most competitive options available on the energy market. This will allow further expansion of the market and thereby maximize eco-friendly effects. Based on the ultimate objective of price competitiveness, the whole solar industry chain embraces the development goals of high efficiency at minimum costs.

Localized supply chain

The main production bases of the company are located in Taiwan. SAS therefore actively cooperates with Taiwanese suppliers in the implementation of supply chain localization. The company's 193 Taiwanese suppliers currently account for 88.9% of all suppliers (a total of 217).

Supply chain localization facilitates achievement of the goal of low production costs through reduced transportation costs and cycle stock to strengthen cost competitiveness.



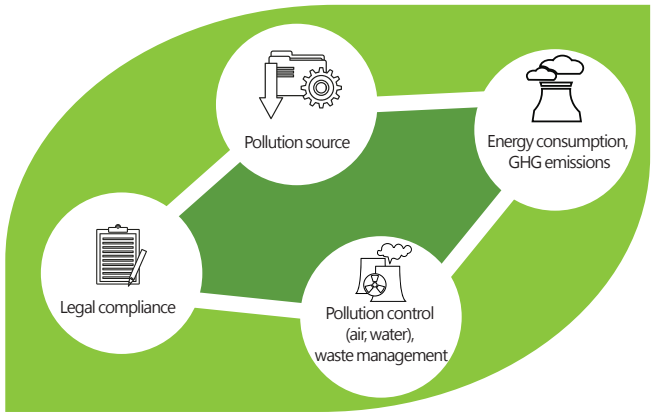
local procurement to raw material use. Local procurement helps enhance national competitiveness, stimulates local employment and economic activities, minimizes environmental impacts and harm generated by long-distance transportation of raw materials, and reduces the importance of timeliness.

In the future, SAS plans to integrate supplier evaluations. In addition to environmental and ethical corporate management requirements, labor and human right related issues will be incorporated into supplier management. Suppliers are required to sign a Letter of Commitment and SAS utilizes its influence in the industry to promote fulfillment of CSR by the whole supply chain.

3 Sustainable Environment

Material aspects

Legal compliance, pollution source, energy consumption, GHG emissions, pollution control (air, water), waste management



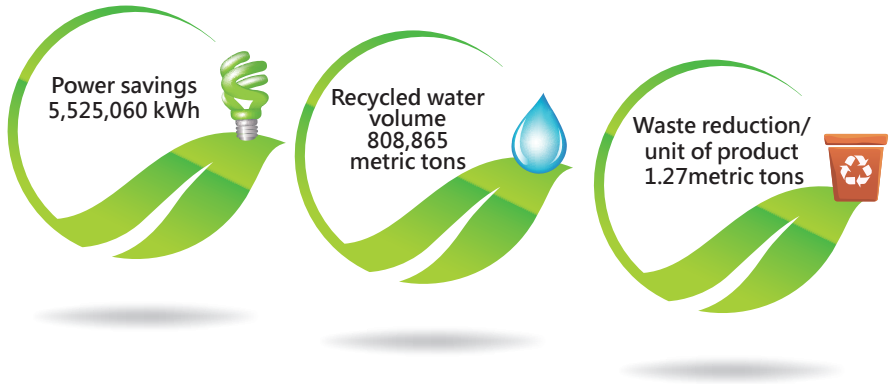
Significance for SAS

As a member of the green energy industry, SAS is firmly committed to legal compliance, air pollution control, and waste water treatment. In addition, the company implements GHG reductions and adaptation actions in response to global climate change issues. We also actively embrace cyclic economy concepts and ensure optimal use of resources through reduction, reuse, and recycling to balance economic development and environmental protection. In addition to the aforementioned three Rs, SAS has also adopted the fourth "R" (Redesign) to implement improvements at the source and thereby achieve reduction, reuse, recycling, and sustainability through product/process design planning.

Management mechanism

Through the implementation of the ISO 14001 environmental management system (2015 version) and the adoption of product life cycle concepts, SAS aims to achieve a genuine reduction of materials at the source by relying on improvements in the process and product design stages. In the field of air and water pollution control, the company formulates annual goals for energy, water, and resource conservation and waste reduction to reduce GHG emissions and the consumption of energy resources in line with the implementation of the environmental management system. In the field of waste management, traditional waste disposal concepts have been replaced with effective resource management concepts with the goal of reducing waste generation. Audits and management of waste disposal businesses have also been strengthened to ensure proper waste treatment. SAS insists on strict compliance with all relevant laws and regulations in its operations and conducts conformity assessments for all issues related to the internal and external environment. If legal risks are detected, preventive and improvement measures are adopted in a prompt manner and policy implementation is ensured through comprehensive management and actual operations.

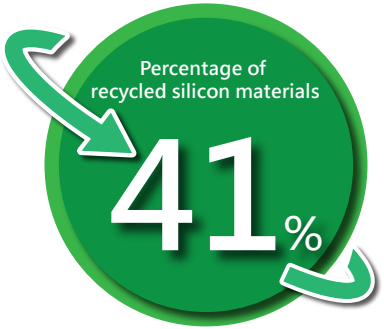
Key achievements in 2017



- 1% increase of recycled silicon materials used
- Reduction of Scope1 GHG emissions in the Chunan Plant by 73.7%
- Reduction of monthly domestic waste generation per person in the Chunan Plant by 15.3%

Future goals

3.1 Green design and clean production

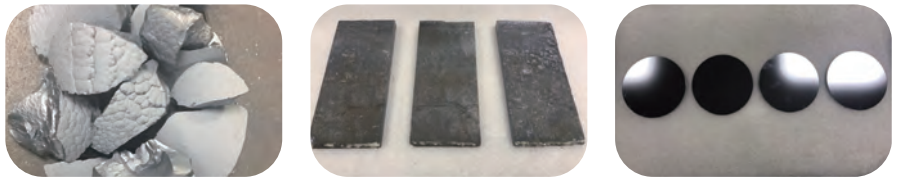


The main materials used by SAS in its production processes are silicon and silicon wafers. Although it is impossible to use recycled wafers for solar cell production processes, the company uses discarded or broken silicon wafers which are recycled in the plants for the crystal growth stage if possible. The company also uses a certain proportion of externally purchased recycled materials. This helps save material costs and reduce the generation of waste.

Usage of recycled materials in 2017

Item	Annual usage (tons)	Annual usage (tons)	Annual recycling rate
Silicon materials	6,939	2,851	41.09%
Cutting oil	3,119	2,354	75.47%

Note : 1.SAS silicon materials can be divided into the following three categories (as shown in the images below): virgin materials, foundry returns, and indirect materials. Indirect materials and foundry returns are recycled materials.
2.The percentage of recycled materials is equivalent to the ratio of indirect materials and foundry returns to the total amount of materials in 2017.



Silicon material categories - Virgin materials (left), foundry returns (center), indirect materials (right)

In addition, SAS designs and develops product processes based on ecological concepts through the implementation of the ISO 14001 environmental management system (2015 version), adoption of product life cycle concepts, and the fourth R (Redesign) of the cyclic economy concept to implement green design and clean production methods. Process design and technical improvements, enhanced production capacity, and reduced consumption of raw materials ensures reduction of energy consumption and pollutant emissions at the source as well as decreased operating costs, energy consumption, and environmental impacts.

Based on the concepts of sustainable operations and compliance with legal requirements, SAS selects primary targets for reduction in accordance with the main waste categories in the past. Various initiatives such as reduction of chemicals (propylene glycol and lactate) and packing materials are implemented in line with the environmental management system of the company. R&D teams of relevant departments assess feasible technologies and carry out advance simulation tests. Upon verification of feasibility, such initiatives are implemented simultaneously in relevant units to reduce operating costs, excessive resource consumption, and waste generation and achieve the ultimate goal of sustainability and eco-friendliness.

In line with the latest market developments, the adoption of diamond cutting processes for the cutting of solar wafers represents one of the major changes in the solar energy industry in 2017. In the past, mortar cutting was utilized for multi crystalline wafers (diamond cutting has been adopted for mono crystalline wafer in recent years) because the adoption of diamond cutting for multi crystalline products poses a significant challenge. However, due to cost and market pressures, the adoption of diamond cutting processes has turned into an inevitable trend in the solar energy industry. The replacement of mortar cutting with diamond cutting also conforms to the 4th R (Redesign) of the cyclic economy concept. Due to the high cutting speed and non-use of mortar, the adoption of the new process design helps increase unit production capacity (decrease of energy and raw material consumption). In addition, the new process does not require the use of the supporting agent (propylene glycol) and minimizes the generation of oil sludge, which represents a significant contribution to environmental protection, energy conservation, and carbon reduction. The SAS Process Development Team is fully prepared for rapid market transformations. Under the guidance of the management level, the adoption of the new process technology has been completed within a very short time. By 2018, all processes, with very few exceptions, have already been converted to diamond cutting.

Adoption of diamond-cutting processes to reduce VOC emissions (air pollution)

SAS started to adopt diamond cutting processes in the fourth quarter of 2017. By the end of 2017, 51% of all cutting processes had been converted. Since diamond cutting processes do not require the use of cutting oil, they help reduce raw material consumption, VOC (air pollutants) emissions, waste generation, and environmental impacts caused by transportation.

3.2 Response to climate change and global warming

In recent years, the issue of global warming has received growing attention. SAS has therefore actively invested in solar power plants since 2015. The company has constructed a power plant in Palo on Leyte Island, Philippines, in cooperation with its subsidiary Sunrise Energy and has made an all-out commitment to the deployment of solar power plants in Taiwan in line with the "Nuclear-Free Homeland" Policy of the Taiwanese government and the Million Rooftop PVs and the Two-Year Solar Power Promotion Program of the Bureau of Energy to assist the government in the promotion of renewable energy power generation. The total grid-connected capacity exceeded 12MW in 2017, which represents an annual reduction of CO_2 emissions by 3 metric tons. In addition, SAS embraces and implements GHG emission reductions and adaptation actions as a necessary measure in response to climate change and global warming with GHG inventories as the main task. Inventory results provide a better understanding of the current status of the company and serve as a reference for opportunities and directions for reductions, setting of goals, and implementation of improvements.

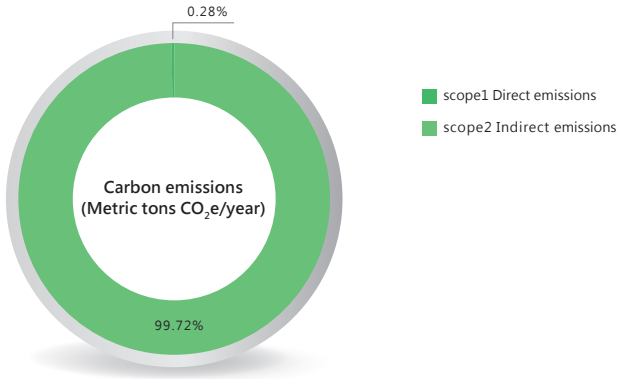
In 2016, the company commissioned the Industrial Technology Research Institute to provide guidance and carry out a product carbon footprint and organizational inventory. A pilot environmental footprint inventory was carried out in the Chunan Plant. The company also utilizes the EPA product carbon footprint calculation platform to calculate carbon emissions and selflessly contributes carbon emission coefficients in line with the EPA carbon labeling system. In 2017, the company will continue to commission the Industrial Technology Research Institute to provide assistance in the creation of an environmental and water footprint database. In the future, all plants of the Sino-American Group will be able to conduct carbon and water footprint inventories and collect environmental footprint information independently on an annual basis. At the same time, they can conduct carbon and water footprint inspections in accordance with the demands and requirements of customers and government agencies.

SAS was publicly recognized for its contributions in the field of carbon emission coefficients by EPA in November 2017

SAS Greenhouse gas emission sources can be divided into the following three categories: Scope 1 are direct emissions of each plant including GHG used for processes and GHG generated during fuel combustion (such as natural gas, gasoline, and Diesel) as well as fugitive emissions of septic tanks and fire equipment. Scope 2 are indirect emissions generated by externally purchased energy sources including electricity and steam. Scope 2 emissions of SAS plants exclusively stem from externally purchased electricity. Scope 3 encompasses other indirect emissions generated by business trips, product and material transportation, production of materials by suppliers, and waste recycling and treatment. The results of a GHG emission inventory carried out by SAS indicate that electricity and other indirect emissions account for 99.72% and 0.28% of all emissions, respectively. The main focus of the efforts of the company in the field of GHG emission reductions therefore lies on a decrease of power consumption. SAS GHG emission ratios and emission amounts for the most recent three years are shown in the chart below.

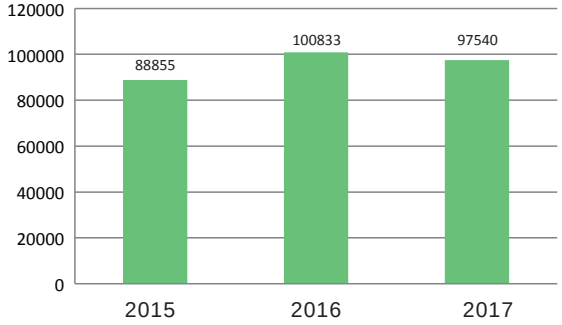
The results of the Chunan plant environmental footprint inventory indicate that the main contributions come from accumulated results of ingot manufacturing processes followed by the use of silicon carbide and cutting oil (propylene glycol) in accordance with emission hot spot analysis.

Carbon emissions (Metric tons CO_2e/year)



SAS Carbon emission ratios in 2017

Carbon emissions (Metric tons CO_2e/year)



SAS Carbon emissions 2015-2017

Note：1.Calculations until the end of 2016 based on Taipower electricity bills.
2.The Chunan Branch has two plant areas which were established in 2006 and 2010, respectively.
3.The Yilan Branch has three plant areas, plant 1 has the longest history, plant 2 and plant 3 started operations in April 2015 and March 2016, respectively.
4.Inventories are conducted based on the GHG Coefficient Management Chart (Version 6.0.1) announced by the Environmental Protection Administration.
5.Power/carbon emission coefficients are 0.521(kg CO_2 e/ kWh), 0.528(kg CO_2 e/ kWh), 0.529(kg CO_2 e/ kWh), Diesel: 2.606(kg CO_2/L), Gasoline: 2.2631(kg CO_2/L) as per public notice of the Bureau of Energy, MoE in 2014, 2015, and 2016.

3.3 Energy Management

Reduction of natural gas usage by 223,329 kWh

As indicated by the results of GHG emission inventories, electricity is the main GHG emission source of the company. The reduction of power consumption and enhancement of energy efficiency therefore represent the company's key tasks. SAS implements various energy conservation improvement measures to achieve the goal of energy conservation and carbon reduction through the adoption of an environmental management system based on the company's core philosophy. The company also strives to build innovation momentum and lower the ecological footprint through improvements in the fields of environmental protection and sustainability with the ultimate goal of enhancing the corporate image and competitiveness. In 2017, the Chunan Plant adopted an energy management system to optimize the management of energy consumption. The system is currently being implemented and will be certified together with the other management systems of the company in early 2019.

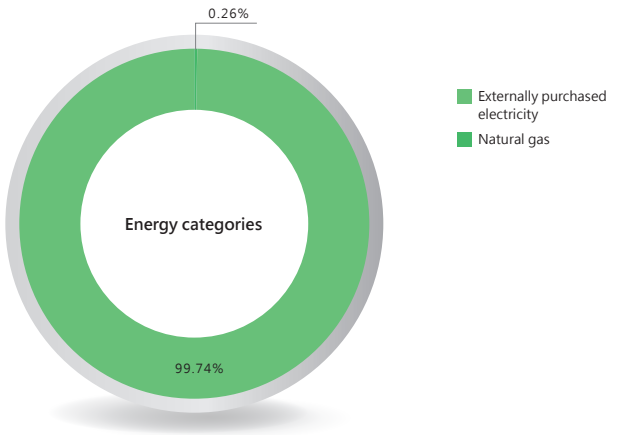
In the field of energy consumption, SAS, a manufacturer of solar cells, constantly reviews internal energy consumption conditions to reduce energy waste. The company also actively promotes renewable energy sources. However, due to the small usable area, the company still mainly relies on externally purchased electricity. Annually consumed power accounts for 99.74% of total energy consumption. Natural gas is the second most important energy source. The consumption of natural gas has been greatly reduced due to the adoption of an air compressor waste heat recovery system which was put into operation in 2017. The annual gas consumption dropped by 223,329 kWh in 2017. Upon full operation of the recycling system, the Chunan Plant will no longer need a significant amount of natural gas. In the context of this project, an application for the EPA Greenhouse Gas Emission Offset Program was submitted. The Assurance Statement acquired in December of 2017 certifies that estimated total carbon reductions for the covered period (2019-2028) amounts to 8,620 metric tons CO_2e (average annual reduction of 862 metric tons CO_2e).

SAS energy consumption 2015-2017

Unit：Million Joule

Item	2015	2016	2017
Externally Purchased Electricity	767,054,261	885,406,896	666,304,246
Renewable energy(Solar power)	120,654	228,722	1,711,381
Natural gas	18,924,450	15,280,838	192,074
Diesel	264,802	360,004	196,962

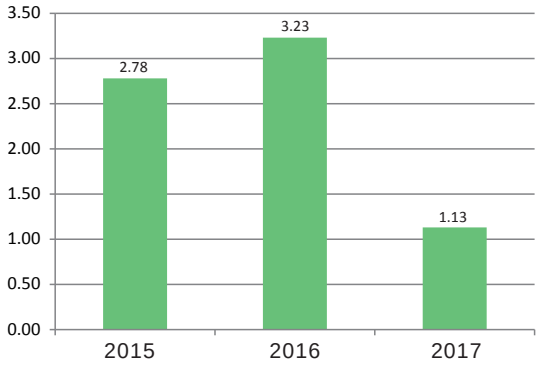
Energy categories



Ratios of the two main energy categories prior to 2017

Notes:
1. Calculations until the end of 2017 based on Taipower electricity bills.
2.The Chunan Branch has two plant areas which were established in 2006 and 2010, respectively.
3.The Yilan Branch has three plant areas, plant 1 has the longest history, plant 2 and plant 3 started operations in April 2015 and March 2016, respectively.
4.Energy resource conversion coefficients are as follows: Electricity, renewable energy, natural gas, gas.
5.SAS annual power consumption is derived by adding up monthly amounts as indicated on monthly electricity bills (excluding gas plants), the conversion formula is 1 kWH = 3.6 million Joule; natural gas consumption is derived by adding up monthly amounts as indicated on monthly gas bills, the conversion formulas are 1 cubic meter of natural gas = 47.7 million Joule and 1 liter of Diesel=31.524 million Joule.
6.Total Diesel and renewable energy consumption accounts for less than 0.0005% of total energy consumption (not shown in the chart above).

Energy Intensity



Note: Energy intensity is defined as consumed energy per unit of sales.

Energy conservation measures

The SAS Chunan plant has implemented smart energy conservation in cooperation with BENQ ESCO Corp. and has successfully applied for the Model Plant Subsidy Project in the context of the MoEA Energy Conservation Efficiency Guarantee Program. The Chunan plant has been designated a Model Plant by the Ministry of Economic Affairs. Energy conservation performance and experiences were shared in a meeting for observation of successful examples of energy conservation efficiency held in the Chunan plant.

All energy conservation measures and relevant achievements in 2017 (including achievements in the context of the Energy Conservation Performance Efficiency Guarantee Program) are shown in the table below:

SAS energy conservation measures and achievements in 2017

Type	Factory	Measures	Total power savings	Converted CO_2 emission reductions ($kgCO_2e$)
Lighting sources	SSY1	Plant lighting improvements	112,323 KWh/yr	59,419
	SSY2	Installation of LED lighting in the clean room and dorm		
	SSY3	Replacement of T5 lighting in 24H lighting areas with energy-saving T8-LED lighting		
Air conditioning system	SAS1+SAS2	1. Variable frequency conversion for AHU and cooling water pumps	4,425,426 KWh/yr	2,341,050
		2. Control of AC system energy consumption per unit		
	SSY1	1. Conversion of the heat recovery type dryer condensation system to a water-cooled system		
		2. Installation of inverters for the cooling water fan motors		
		3. Shutting down of one pump in the AC area		
	SSY2	1. Shutting down of RCU4		
		2. Increase of the outlet water temperature of chiller units from 7℃ to 8.5℃		
Renewable energy sources	SAS1+SAS2	Installation of solar panels on the rooftops of plant buildings for power generation; the solar panels also provide shade for roof plates, thereby reducing temperatures and air conditioning loads with the goal of decreasing total power consumption	56,326 KWh/yr	29,796
Air compressor system	SAS1	1. Decrease of start/stop frequency of air compressors through control system regulation and management of load/unload which effectively reduces high current energy consumption generated during compressor startup	811,043 KWh/yr	429,042
		2. Decrease of unnecessary power consumption of air compressors through energy conservation control system regulations		
		3. Stable supply of air to demand units through control of IFC and linkage systems		
		4. Effective energy conservation through constant output pressure achieved by supply of optimal compressed air flow		
	SSY2	1. Air compressor energy conservation improvements		
	SSY3	1. Replacement of the original 350HP compressor with a 200HP fixed-frequency and a 200HP variable-frequency compressor to minimize unnecessary power consumption during idle operation		
		2. General exhaust is based on ventilation demand, operational frequency of 55Hz, backup machines will be included in parallel operations to achieve energy conservation effects		
Heat recovery	SAS2	1. SAS2 has a total of 6 compressors (4 ZR275 oil-free compressors, 1 ZR145, and 1 ZR145 VSD)	223,329 M^3	422,985
		2. 3 compressors are usually in operation (2 ZR275 and 1 ZR145 VSD); waste heat recovery has not been implemented		
		3. Partial use of boiler hot water for heat exchange- mainly used to meet the demand for process hot water		
		4.Installation of a plate heat exchange and recovery system		
		5.Air compressor equipment conversion and modification of nearest return pipeline		
		6.Replacement of the hot water boiler heating system with an air compressor waste heat recovery system to improve, short-term measurement of the supply water flow and temperature of process hot water, return water, and RO chilled water entering and exiting the boiler to supply the hot water tanks prior to improvement, recording of natural gas consumption of boilers, and calculation of EUI prior to improvement		
		7.Daily measurement of the supply water flow and temperature of process hot water, return water, and RO chilled water entering and exiting the boiler to supply the hot water tanks after improvement, estimate of natural gas consumption based on calorie values (assumed Miura boiler combustion efficiency of 95%), calculation of EUI after improvement with the ultimate goal of energy consumption reduction		

Note: Natural gas emission coefficient 1.894 $KgCO_2/M^3$

Air compressor energy conservation

Work in progress

Work in progress

Energy conservation through heat recovery

Work in progress

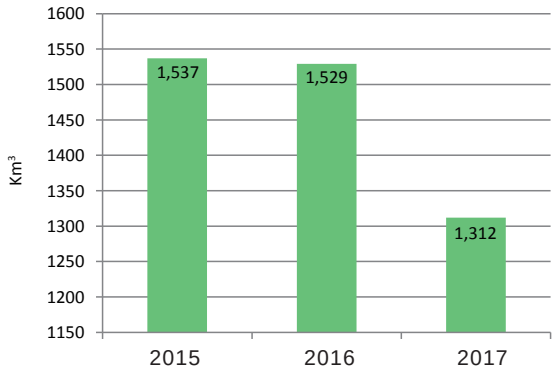
Work in progress

3.4 Water resource management

In recent years, global climate change has caused extreme precipitation patterns in Taiwan which underscores the importance of water resource management. SAS mplants mainly uses running water supplied by the Taiwan Water Corporation (total water withdrawn is shown below). Rain water and AC condensed water represent another (albeit minor) water source. The company does not use ground water and therefore does not cause damage to ecosystems through excessive pumping and resulting ground subsidence. The water supply and raw water sources of the Chunan Plant and Yilan Plant are Dongxing Water Purification Plant /Yongheshan Reservoir and Longde Water Purification Plant/Xincheng River, respectively. The raw water source areas have not been designated national or international natural reserves or sensitive water bodies (related areas, special functions, rare, threatened, endangered systems, or habitats of endangered species as determined by experts). In the field of water resource conservation, SAS plant employees are fully committed to recycling (including rainwater and process water recycling) and reuse. Preservation of precious water resources has been incorporated as a key link of water recycling operations.

Due to dropping production capacities between 2014 and 2017, water consumption and recycled water amounts have decreased accordingly.

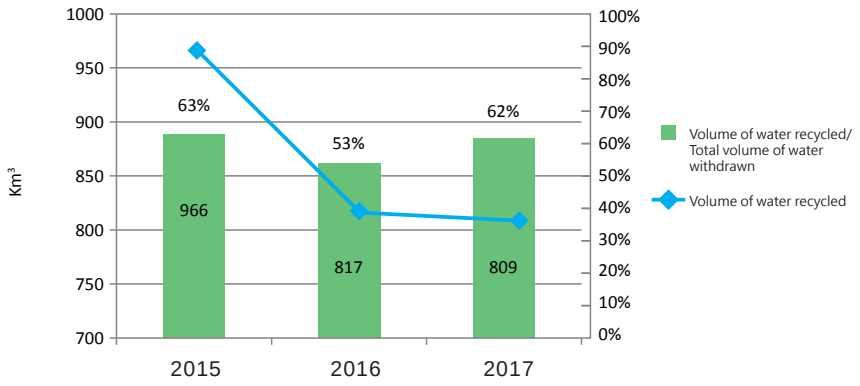
Total volume of water withdrawn



SAS total volume of water withdrawn 2015-2017

Note:
1. Based on Taiwan Water Corporation statistics until the end of 2017.
2.The Chunan Branch has two plant areas which were established in 2006 and 2010, respectively.
3.The Yilan Branch has three plant areas, plant 1 has the longest history, plant 2 and plant 3 started operations in April 2015 and March 2016, respectively.

Water recycled



SAS Volume of water recycled 2015-2017

Note: Water recycling rate=Amount of water recycled/Total volume of water withdrawn; the Chunan and Yilan plants strictly comply with local regulations (the Chunan plant also abides by the regulations of the Hsinchu Science and Industrial Park Administration). The recycling rate exceeded 85%.

Water conservation measures

The management of the water conservation measures of SAS plants is divided into plant affairs system and process equipment management. The company successively replaces old machinery that consumes large quantities of water with new water-saving equipment and machinery. Internal discussion meetings on water conservation improvement measures are convened on a regular basis and staff members are educated on the importance of water saving to build a consensus regarding water conservation among all employees. The following water conservation measures are currently implemented:

Results of water conservation measures in place in different plants in 2017

Type	Measures	Water savings (tons/year)
Plant affairs system	1.Use of alternative water sources (rainwater collection, OAC condensed water recycling). 2.Replacement of water-saving equipment 3.Reduction of unit water use (extended regenerative cycle of water purification systems).	546,974
Process equipment	1.Reduction of equipment water consumption 2.Improved water recycling rate ·Installation of a water recycling system ·Installation of treatment facilities to increase the number of water cycles ·Step-by-step discharge 3.Reduction of pure water consumption by process equipment 4.Modification of the water discharge pipeline system; upon prior filtering water is channeled to a temporary storage tank for reuse	261,891
Total		808,865

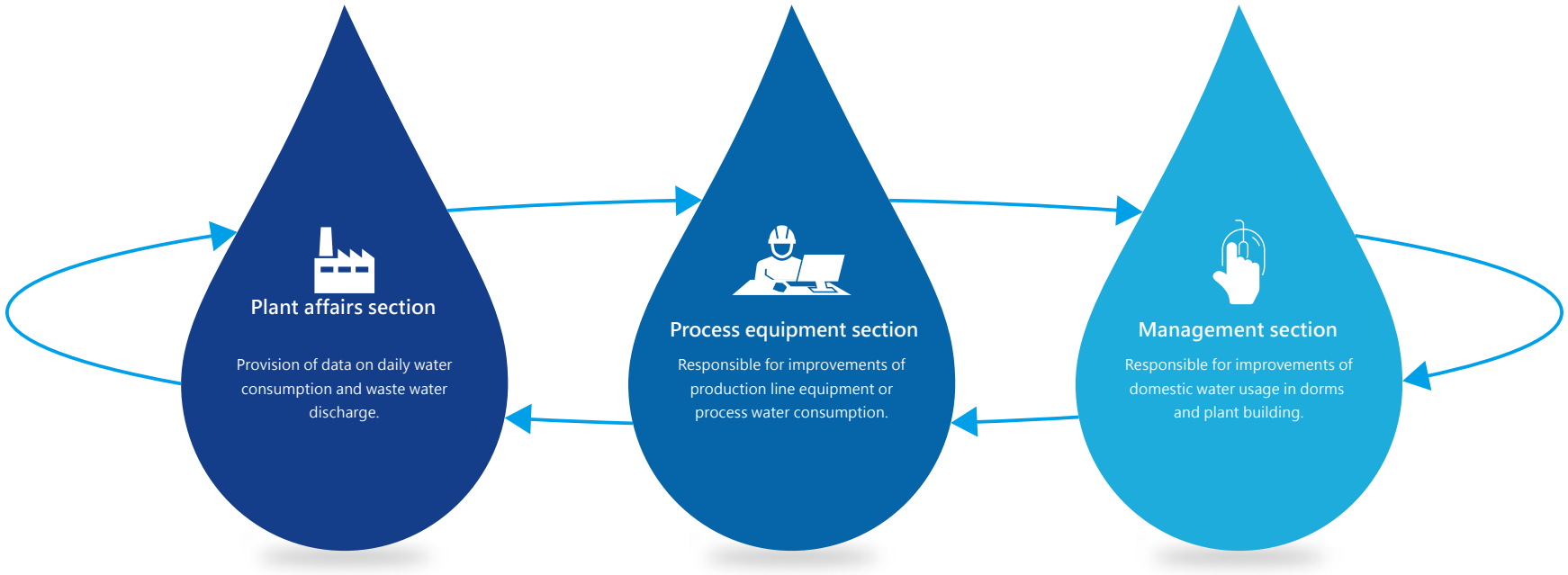
Results of SAS water conservation measures

Replacement of water-saving equipment
(Installation of aerators)

Installation of treatment facilities to increase the number of water cycles (Backflush-type rinsing tanks reduce water consumption and increase wafer cleanliness, supplied water can be recycled and reused)

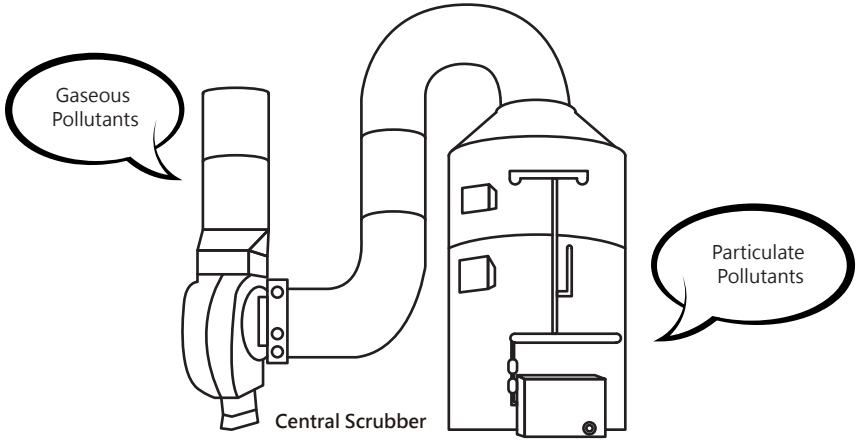
Step-by-step discharge
(Reuse of process waste water)

Installation of a water recycling system
(Modular water tank recycling system)



3.5 Pollution and emissions

SAS installs adequate pollution control equipment with corresponding treatment capabilities to maintain the efficiency of treatment operations. Every piece of equipment is maintained and inspected on a regular basis. Relevant operations are conducted by dedicated professional personnel in accordance with relevant regulations to reduce pollutant emission concentrations, ensure compliance with legal standards, and minimize environmental hazards and impacts with the ultimate goal of realizing the vision of environmental protection and sustainability.



Air pollution control

Process waste gas generated by the Chunan and Yilan plants are divided into the following categories based on different production processes and properties: acid exhaust, alkali exhaust, VOC exhaust, and particulate exhaust and acid exhaust, alkali exhaust, and VOC exhaust, respectively. Acid and alkali exhaust is treated in central waste gas scrubbers, while VOC exhaust is treated in waste gas scrubbers and activated carbon adsorption towers. Particulate exhaust is treated with bag-type dust collectors.

The functions of SAS air pollution control equipment conform to relevant requirements set forth in environmental laws and regulations. A legally registered testing organization is commissioned to conduct annual inspections in order to determine the emission concentration of controlled substances in accordance with relevant laws. The goal is to ensure that the pollutant content which is emitted into the atmosphere meets or exceeds government regulations. Since 2015, the SAS Chunan plant has cooperated with the Industrial Technology Research Institute and other businesses of the solar photovoltaic industry to formulate a VOC factory coefficient exclusively for the solar energy industry. Relevant processes and results are actively discussed with the Environmental Protection Administration and local environmental protection bureaus to ensure that the coefficient for the solar wafer industry conforms to relevant requirements set forth in air pollution laws and regulations. The project was approved by the Environmental Protection Administration of the Executive Yuan on November 11, 2016.

Results of air quality monitoring in each plant

Unit: (ton/year)

Inspection items	Chunan plant	Yilan plant
Particulate pollutant (Par)	1.589	-
Nitric acid (HNO_3)	0.019	-
Hydrofluoric acid (HF)	0.002	-
Hydrogen chloride (HCl)	0.003	-
Volatile organic compounds (VOC)	2.303	1.12

Notes :

1.Emission estimates are based on the following formula: Data provided in test reports composed by qualified third-party laboratories x usage amounts of target materials in the respective year.

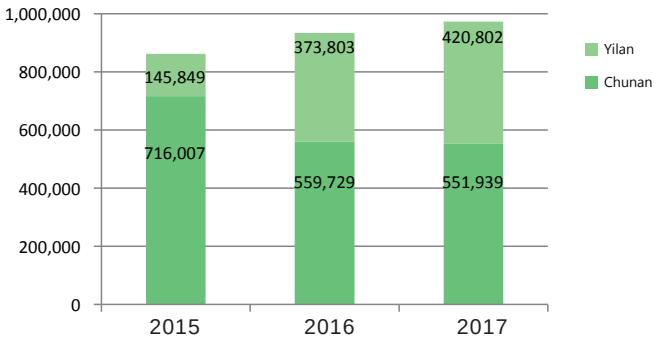
2.The Chunan plant conducts tests for five different pollutants in accordance with the regulations of the Hsinchu Science and Industrial Park Administration; the Yilan plant is required to conduct annual VOC testing in accordance with the .

Water pollution control

Due to the different locations of the plants, waste water is discharged and treated in the Wastewater Treatment Plants of the Hsinchu Science and Industrial Park Administration in Chunan and Li Ze Industrial Zone. Pre-discharge water quantity and quality monitoring facilities (tracking of PH values and fluoride concentrations) have been established to facilitate real-time monitoring, control, and response. Furthermore, wastewater testing reports are submitted on a regular basis in accordance with relevant laws and the quality of the discharged water meets or exceeds relevant regulations. Industrial Zone Administrations also dispatch personnel to conduct spot checks at the discharge outlets on a non-scheduled basis which ensures two tiers of water quality control. No major instances of leakage or overflow were reported in 2017.

The primary focus of SAS in the field of water pollution control strategy is source reduction, waste liquid segregation, and sorting and treatment principles. Upon sorting in accordance with individual properties, waste water is treated by plant treatment facilities. Chunan Plant 2 features chemical and biological treatment facilities (treatment by aerobes and anaerobes) ensuring optimal wastewater treatment results. In 2017, the pH values of wastewater discharged by plants ranged from 6 to 9 (the required standard for both areas is 5-9), while SS concentrations were maintained below 250mg/l (the required standards of the Hsinchu Science and Industrial Park Administration and Li Ze Industrial Zone Service Center are < 300mg / l and < 320mg/l, respectively) COD was maintained below 250mg/l (the required standards of the Hsinchu Science and Industrial Park Administration and Li Ze Industrial Zone Service Center are < 500mg / l and < 480mg/l, respectively), and fluoride concentrations were kept below 11mg/l (the required standard for both areas is <15 mg / l). This clearly indicates that the SAS wastewater treatment facilities are characterized by high performance and stability.

SAS Wastewater discharge 2015-2017



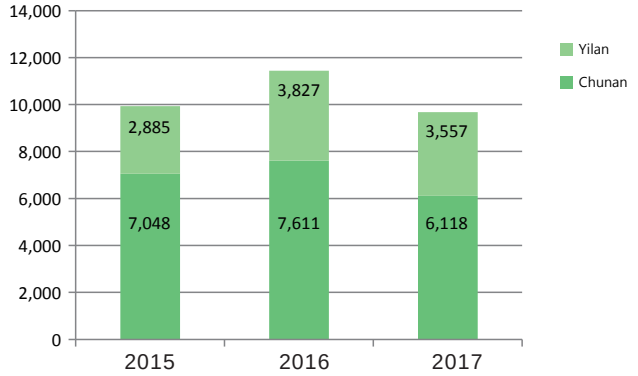
Notes:
1.Based on Taiwan Water Corporation statistics until the end of 2017.
2.The Chunan Branch has two plant areas which were established in 2006 and 2010, respectively.
3.The Yilan Branch has three plant areas, plant 1 has the longest history, plant 2 and plant 3 started operations in April 2015 and March 2016, respectively.
4.Tests and inspections are conducted in accordance with the regulations of the Hsinchu Science and Industrial Park Administration and the Long Te (with Letzer) Industrial Park Service Center attached to the Industrial Development Bureau, MOEA, respectively.

3.6 Waste management

SAS waste management strategies mainly focus on source reduction from process design improvements and reduced use of materials to in-plant recycling and reuse to decrease the amount of new material purchases and thereby minimize waste generation and environmental impacts. Furthermore, the recycling and reuse of external resources helps increase the salvage value of waste. Finally, external waste treatment businesses are commissioned to incinerate, bury, or treat waste with physical or chemical methods. All generated waste is currently processed domestically without any instances of overseas treatment.

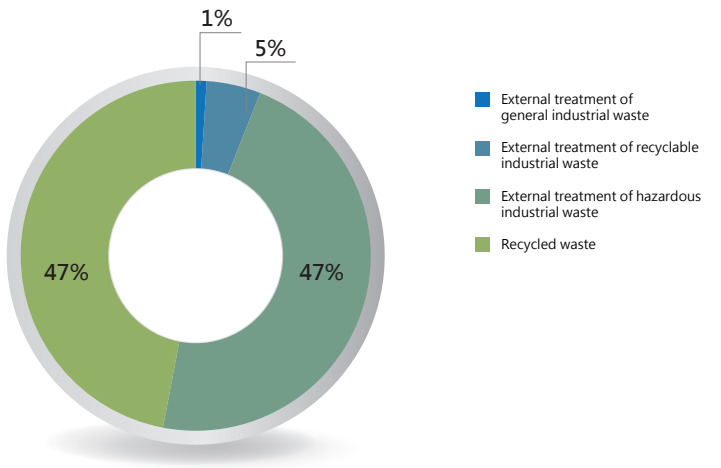
The generate waste quantity in 2017 was lower than in 2016. The average monthly quantity of domestic waste per employee in the Chunan plant was 15.3% lower than in 2017. No major instances of leakage or violations by commissioned waste treatment and recycling businesses were reported in 2017.

SAS Waste quantities 2015-2017



Note: Data reports are submitted via the Industrial Waste Report and Management System of the Environmental Protection Administration.

SAS Waste distribution in 2017



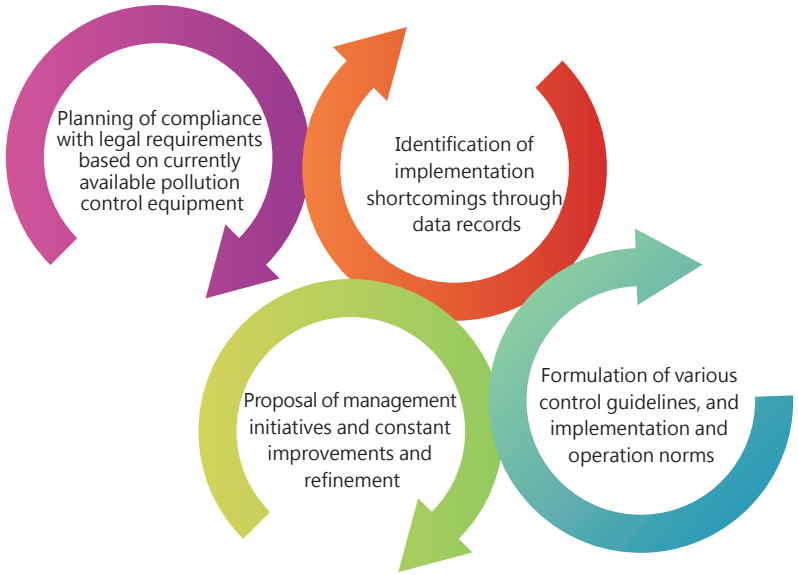
Note: Waste data reporting is handled in accordance with relevant regulations of the Industrial Waste Report and Management System of the Environmental Protection Administration.

3.7 Sustainable environmental management and legal compliance

SAS has always embraced Strict Fulfillment of its Responsibility in the field of Environmental Protection and Green Operations as key corporate goals. The company is firmly committed to constant environmental improvements to realize these goals. The following tasks have been accomplished:

1. Compliance with national environmental laws and regulations and other requirements and active response to global environmental and ecological movements.
2. Active communication and organization of adequate educational training to raise awareness of the fact that environmental protection is the joint responsibility of all employees, customers, and contractors.
3. Establishment and implementation of an environmental management system to enhance environmental management performance.
4. Strengthening of environmental management and pollution prevention and minimization of impacts on personnel and the environment.
5. Promotion of industrial waste reduction and conservation of resources to achieve optimal resource use.

SAS strictly complies with environmental laws and regulations, proposes various targets for eco-friendly improvements, and adopts various environmental management measures and initiatives such as carbon and environmental footprint inventories, recycling and reuse of packing materials, wastewater recycling and reuse, and power conservation initiatives through the implementation of an environmental management system. The company also pursues reinforced and enhanced air pollution management, wastewater pollution management, and adequate and efficient use of resources in accordance with the environmental management system framework. Waste is recycled and reused to reduce waste generation, pollution, and emissions and achieve the goal of eco-friendliness. SAS acquired the ISO 14001:2015 certificate in March 2016 and plans to adopt the ISO 50001 energy management system in 2017 to make further progress toward the green industry goal, synchronize corporate development and environmental protection, and realize true corporate sustainability.



SAS ISO14001Environmental Management System Framework

The company formulates management norms in accordance with the environmental management system, has set up a legal regulation inspection system and platform, and carries out legal compliance reviews to ensure that all SAS operating activities fully conform to environmental laws and regulations. The inspection results are publicized among all staff members. In 2017, didn't commit any violations of air pollution, wastewater, and waste related laws and did not incur any fines as a result of such violations.

4 Social care and concern

Material aspects

Significance for SAS

SAS has always viewed its employees as its key asset. The company therefore provides an excellent and comprehensive benefit system and a friendly work environment for its employees to guarantee workplace safety. It places strong emphasis on the physical and mental health and work-life balance of its employees. Relevant laws and regulations are strictly observed and work systems and management norms are defined pursuant to labor laws and regulations. The willingness of employees to provide labor services is fully respected and forced or compulsory labor is strictly prohibited.

Management mechanism

1. Establishment of an Employee Welfare Committee and active pursuit of more welfare measures for employees such as a group insurance, monitoring of meals, staff trips, and year-end banquets.
2. Promotion of various KPIs including prevention of repeated mistakes, autonomous safety management, concern for employee safety, creation of a friendly workplace, raising of employee safety awareness, and strengthening of employee literacy, which in turn results in lower accident rates and safeguards employee workplace safety.
3. Revision of the leave system and management mechanism in accordance with the Labor Standards Acts, signing of labor contracts with employees, and strict prohibition of forced or compulsory labor.

Key achievements in 2017

- Personal interviews to show concern >10 employees/month.
- 100% Tracking of abnormal health check findings and groups with special needs.
- Occupational accident rate reduced by 22%.

Future goals

- Direct personnel recruitment and hiring rate >70%.
- Health promotion courses>10 courses.

4.1 Recruitment and human resources

SAS embraces a spirit of respect for the labor rights of its employees and equal employment opportunities. During the recruitment and hiring process, the company does not adopt any discriminatory decisions that have a negative impact on employment, salaries, promotions, and rewards based on ethnicity, skin color, age, gender, sexual orientation, gender identity and expression, race or nationality, disability, pregnancy, religious beliefs, political affiliation, group background, veteran status, protected gene information, or marital status. The company also provides fair, equal, and safe employment opportunities and environments and widely recruits professional talent of different gender, age, experience, and expertise with the goal of stimulating creativity and increasing competitiveness.

In 2017, SAS employed a total of 1,601 full-time employees.Male and female employees accounted for 75.39% and 24.61% of the total workforce, respectively. Employees under 30, between 30 and 50, and over 50 made up 35.98%, 62.21%, and 1.81% of the total workforce, respectively. The average age of employees was 35-36.

The majority of the company's employees (60.17%) work in the Yilan Branch, followed by Chunan (37.27%) and Hsinchu (2.56%).

Based on work characteristics, employees can be further divided into direct personnel (75.7%) and indirect personnel (25.3%). SAS solely employs full-time personnel. The company does not hire any part-time or temporary workers. Employees on fixed-term contracts and non-fixed term contracts account for 13.8% and 86.2% of the total workforce, respectively. 64.4% of all employees had a junior college or higher degree.

2017 Current workforce

Age	Male(number)	Percentage	Female (number)	Percentage
<30	449	28.04%	127	7.93%
30~50	739	46.16%	257	16.05%
>50	19	1.19%	10	0.62%
Total	1207	75.39%	394	24.61%

2015~2017 Staff structure analysis

Staff structure		2015	2016	2017
Average age		31.8	32.8	33
Average years of service		2.8	4.9	4.2
Broken down by gender	Male	1331	1173	1207
	Female	412	394	394
	Total	1743	1567	1601
Full-time/Part-time (SAS solely employs full-time personnel)	Full-time	1743	1567	1601
	Part-time	0	0	0
	Total	1743	1567	1601
Broken down by contract type	Non-fixed term	1467	1430	1380
	Fixed term (Contracted, interns, foreign workers, seasonal)	276	137	221
	Total	1743	1567	1601
Broken down by work characteristics	Direct	1320	1158	1212
	Indirect	423	409	389
	Total	1743	1567	1601
Broken down by education level	PhD	7	7	7
	MA	124	135	131
	Junior College	1021	840	892
	High school/vocational school	519	517	499
	Below high school	72	68	72
	Total	1743	1567	1601

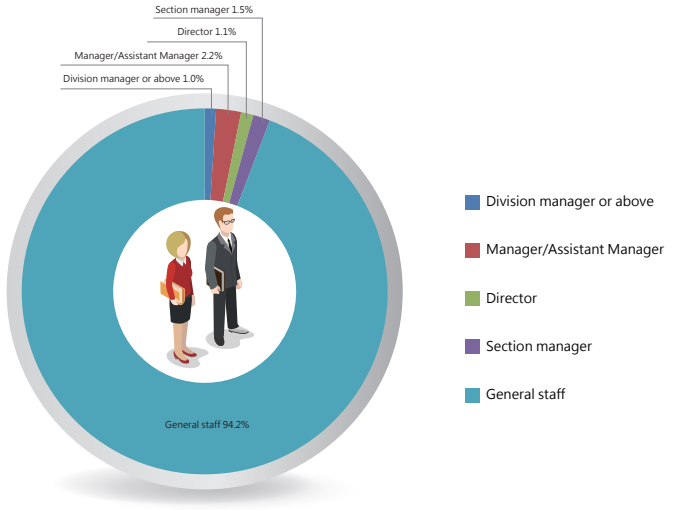
Hiring of disabled persons

Based on social concern principles, SAS supports employment of the mentally and physically disabled. In 2017, the company employed a total of 19 mentally and physically handicapped employees, accounting for 1.19% of the total workforce. SAS strictly abides by all national laws and regulations governing the hiring of the mentally and physically disabled. In addition, SAS provides employment opportunities for local citizens. At the end of 2017, local residents accounted for 57.2% of the company’ s workforce.

Hiring of local personnel and female executives

In 2017, the company employed a total of 93 executives. 98.9% of all managers were local citizens (ROC nationals). 77.42% of all managers were male and 22.58% were female. Broken down by management positions, the company employed 16 top executives (division level and above), 35 managers and assistant managers, 18 directors, and 24 section chiefs.

	Division manager or above	Manager/Assistant Manager	Director	Section manager	General staff	Total
Male	14	27	14	17	1135	1207
Female	2	8	4	7	373	394
Total	16	35	18	24	1508	1601
Percentage	1.0%	2.2%	1.1%	1.5%	94.2%	100.0%



In 2017, incoming employees amounted to 546 (75.27% male and 24.73% female). 365 of these employees were still in active service in 2017. The turnover rate of 33.11% was 7.96% below the rate of the previous year and significantly lower than the average rate of the manufacturing industry. When employees submit their resignation letter, the HR unit immediately schedules an exit interview to gain a better understanding of the reasons for the resignation. This also enables the HR units to provide active assistance in adjustments and detailed explanations with regard to work contents, personal characteristics, and identified problems to achieve the goal of talent retention.

2015~2017 Incoming employee statistics

Outgoing employee	2015				2016				2017			
Age	Male (number)	Percentage	Female (number)	Percentage	Male (number)	Percentage	Female (number)	Percentage	Male (number)	Percentage	Female (number)	Percentage
<30	478	46.73%	117	11.44%	230	41.37%	70	12.59%	273	50.00%	87	15.93%
30~50	312	30.50%	111	10.85%	187	33.63%	66	11.87%	138	25.27%	48	8.79%
>50	5	0.49%	0	0.00%	2	0.36%	1	0.18%	0	0.00%	0	0.00%
Total	795	77.71%	228	22.29%	419	75.36%	137	24.64%	411	75.27%	135	24.73%

2015~2017 Outgoing employee statistics

Outgoing employee	2015				2016				2017			
Age	Male (number)	Percentage	Female (number)	Percentage	Male (number)	Percentage	Female (number)	Percentage	Male (number)	Percentage	Female (number)	Percentage
<30	239	41.57%	67	11.65%	320	45.07%	75	10.56%	181	34.94%	70	13.51%
30~50	206	35.83%	57	9.91%	240	33.80%	69	9.72%	198	38.22%	63	12.16%
>50	6	1.04%	0	0.00%	4	0.56%	2	0.28%	6	1.16%	0	0.00%
Total	451	78.43%	124	21.57%	564	79.44%	146	20.56%	385	74.32%	133	25.68%

4.2 Salary & benefits

Compensation policy

SAS offers competitive salaries (including fixed salaries and holiday bonuses) to attract and retain outstanding talent. Annual salary adjustment standards are formulated based on operating conditions, salary adjustment range of the whole industry, consumer price indices, and employee performance. In addition, compensation is provided in accordance with the profitability of the company to increase employee cohesion, motivate employees to exceed annual business goals, create profits, and share joint achievements. Promotion recommendations are submitted on an annual basis based on work performance and contribution appraisals.

Leave system

SAS has created a leave system and defined work systems and management norms in accordance with the regulations set forth in the Labor Standards Act. In the field of working hour policies, the company strictly abides by the requirement of a minimum of one rest day in every period of seven days. The company also signs contracts with its employees and respects the willingness of employees to provide labor services. Workers are not coerced or forced to provide labor services through any illegal means. In addition, the HR Department provides co-workers with attendance and remaining leave day records to allow supervisors to safeguard working time and leave related rights and interests of employees.

Insurance and pension system

In addition to the statutory labor and health insurance system, SAS also provides group insurance for every employee which exceeds requirements set forth in labor laws. Insurance types include term life and accident insurance, aviation accident insurance, burn injury insurance, injury claim limits, and hospitalization coverage. The goal is to provide sound safeguard measures and minimize personnel losses.

For workers who conform to the regulations of the old labor pension system, the company makes monthly contributions of 2% deposited in a pension fund account of the Bank of Taiwan. In March 2017, pension fund deposits were sufficient to pay pensions for retired personnel until the end of the year pursuant to relevant laws to safeguard the rights and interests of employees. For employees who meet the criteria of the new pension system monthly contributions of 6% are deposited in employee labor pension accounts.

Unpaid child care leaves

SAS employees are entitled to unpaid child care leaves. Employees with a minimum of six months of service may apply for unpaid child care leaves if they have to take care of children under the age of three. A total of 99 staff members applied for such leaves between 2015 and 2017.

Childbirth subsidy implementation results

Item	Gender	Total/ratio		
		2015	2016	2017
Number of employees eligible for unpaid child care leaves	Male	197	201	182
	Female	99	92	66
Number of employees who applied for such leaves	Male	9	9	13
	Female	21	24	23
Number of reinstated employees upon the expiration of child care leave periods	Male	8	7	13
	Female	14	11	16
Number of employees who resumed their duties	Male	4	2	10
	Female	13	7	13
Ratio of employees who resumed their duties (reinstatement rate)	Male	50.00%	28.57%	76.92%
	Female	92.86%	63.64%	81.25%
Number of employees still in service 12 months upon expiration of unpaid child care leaves	Male	3	2	1
	Female	10	5	7
Ratio of employees still in service 12 months upon expiration of unpaid child care leaves (retention rate)	Male	100.00%	50.00%	50.00%
	Female	83.33%	38.46%	100.00%

Employee meals

SAS provides free meals for its employees during working hours in staff restaurants. The goal is to provide a comfortable dining environment and diverse meal choices to satisfy individual culinary demands. A restaurant monitoring task force has been established to ensure the quality and nutritional value of meals and implement culinary controls.

Welfare Committee

The SAS Employee Welfare Committee which was established in 1988 actively strives for the adoption of more welfare measures for the benefit of our staff including emergency relief or assistance for employees who face drastic changes or hardship, marriage, childbirth, and funeral allowances, birthday and festival cash gifts, scholarships, hospitalization subsidies, discounts in designated stores, regular trips, year-end banquets, sponsorship of events organized by social welfare units, and family day activities. In addition to SAS employees, their family members are also invited to participate in these activities to increase the emotional attachment and identification with the company.

4.3 Education and training

All-around learning environment

SAS organizes annual training courses and provides an all-around and diversified learning environment to enhance employee skills and literacy, optimize the use of human resources, and ensure continued personal development. Training plans for the following year are formulated by different departments in consideration of the business goals of the company, department KPI, and competency demands. At the end of each quarter, reviews and assessments of goal achievement status are conducted with regard to courses offered in the respective quarter. The results of these reviews and assessments serve as a key reference for improvements for the next courses. The SAS training system encompasses the following five categories: competency training for new employees, professional competency training, general management competency training, intellectual property training, and health and safety management training. This system provides suitable training courses for employees during different stages of career development.

All-around and diversified learning environment

SAS has established an E-Library Academy to give employees an opportunity to read and review training materials at any time. The stored data cover a wide range of topics and can be read by busy co-workers in a relaxed manner, thereby creating a reading culture in the company. The academy features training materials for every professional field. This gives employees who are interested in different fields an opportunity for self-study and rapid personal growth. SAS is firmly convinced that constant learning also leads to constant improvements in the field of overall business performance. In 2015 and 2017, total training hours amounted to 70213.8 hours. These efforts in the field of training and development enable employees to accomplish their tasks in a more effective manner.

2015~2017 Trainee numbers and total training hours

Training categories	2015				2016				2017			
	Sessions	Trainees	Courses	Total training hours	Sessions	Trainees	Courses	Total training hours	Sessions	Trainees	Courses	Total training hours
Competency training for new employees	514	2684	4,046	5,402	255	1309	1,967	7,696	124	548	815.5	3,609.0
Professional training	800	7033	1937	5,736	523	5559	2,137	8,430	1,673	30,865	3,546.0	29,156.0
General competency training	399	4436	778	3,262	239	2446	597	5,094	134	1,396	253.5	1,829.5
Total	1,713	14,153	6,760.5	14,399.3	1,017	9,314	4,700.5	21,220.0	1,931	32,809	4,615.0	34,594.5

Talent cultivation

SAS highly values research and development and is firmly committed to the cultivation of industry and academic talent. In addition to the organization of campus lectures with the goal of introducing current and future trends of the solar energy industry and providing assistance for students in the planning of their future careers, the company also offers internship opportunities and plans factory visits for related departments and institutes. These activities allow students to gain an early understanding of workplace environments and career planning through shared experiences and exchanges with active workers. An industry-academia collaboration mechanism enables us to provide internship opportunities which give students real workplace experience and allow them to combine theoretical knowledge with practical work prior to graduation with the goal of strengthening the links between the company and university campuses, ensuring long-term cultivation of future talent, and increasing the future competitiveness on the job market.

4.4 Friendly workplace

SAS firmly embraces the concept of Workplace Health and Safety. In addition to strict compliance with occupational health and safety laws and other relevant legal requirements, the company is firmly committed to organizational operations and staff participation. The company also continues to provide optimized resources for improvements of the health and safety facilities of plant areas in accordance with the nature and risks of the organization to prevent injuries and dangers. The ultimate goal is to safeguard the health and safety of employees, contract workers, and relevant third parties.

Safe work environment

Occupational health and safety management system

All SAS plants have established OHSAS 18001 occupational health and safety management systems to implement risk management, prevent accidents and diseases, raise the health and safety awareness of employees, and create a safe and comfortable work environment. A pledge has been made to constantly improve occupational health and safety (OHS) performance. In addition, internal and external audits are carried out on a semi-annual and annual basis, respectively, to ensure an effective assessment of system implementation results. Management methods and implementation strategies are constantly revised based on the audit results to achieve constant improvements of OHS performance.

Occupational health and safety organization

All SAS plants convene quarterly meetings of OHS committees. These meetings are hosted by the President or Vice President and attended by all department supervisors and labor representatives. Discussions cover OHS related matters including OHS management plans, operational environment monitoring, improvements, and strategies, OHS training, audits, and performance, prevention and education on accidents as well as and health management and promotion. Meeting deliberations are recorded and implementation of improvements is constantly tracked. OHS meeting attendance and labor representative ratios in 2017 are shown in the table below:

OHS committee labor representative ratios

Chunan Plant	
Number of labor representatives	11
Number of committee members	26
Ratio	42 %

Yilan Plant	
Number of labor representatives	6
Number of committee members	18
Ratio	33 %

Joint responsibility for work safety and safety culture

SAS is fully aware of the importance of workplace safety. Since 2015, the company has been organizing work safety and safety culture activities to raise employee safety awareness and strengthen employee literacy and discipline with the goal of minimizing the incidence of accidents. The second stage of these activities was launched in 2017 to achieve various KPIs including prevention of repeated mistakes and strengthening of autonomous safety management and employee safety concern to emphasize the importance of discipline and autonomous management. Employees are encouraged to actively report false alarm incidents and remind each other of the importance of safety concern. The goal lies in the continued strengthening of employee safety awareness and enhancement of workplace safety.

Occupational accident management

SAS constantly organizes training activities and has established an accident reporting and investigation mechanism to maintain a safe and healthy workplace. Accident causes must be analyzed and adequate preventive measures must be adopted. We utilize Disabling Frequency Rate (FR) and Disabling Severity Rate (SR) as defined by the Ministry of Labor as key indicators for the assessment of safety and health management efficiency to achieve constant improvements in the field of safety and health performance.

2015~2017 SAS Disabling Frequency Rate (F.R) and Disabling Severity Rate (S.R):

	2015		2016		2017	
	Male	Female	Male	Female	Male	Female
Disabling Frequency Rate (FR)	4.25	0.00	2.04	0.00	4.38	0.00
Disabling Severity Rate (SR)	22.96	0.00	8.97	0.00	180.02	0.00
Occupational disease rate (ODR)	0.00	0.00	0.00	0.00	0.00	0.00

Disabling Frequency Rate (FR) = Number of disabling injuries *10^6 / Total man-hours worked
Disabling Severity Rate(SR) = (Number of disabling injuries *Number of lost work days)*10^6 / Total man-hours worked
Occupational disease rate (ODR) = Number of occupational disease cases*200,000 /Total working hours

No fatal occupational accidents or diseases were reported in 2017. Occupational injuries (excluding traffic accidents) that occurred in 2017 can be divided into the following categories: Injuries caused by broken objects, cuts and abrasions, impact, contact with hazardous materials, improper operations, and other causes. Occupational injury related data is presented in the table below:

2015~2017 Absence statistics

Year	2015		2016		2017	
Gender	Male	Female	Male	Female	Male	Female
Number	1326	410	1173	394	1207	394
Days of absence-A	5032.01	2028.19	6102.2	4009.6	3316.3	2007.8
Working days-B	328848	101680	291480	97880	264572.6	88135.6
Absence rate(AR)=A/B	1.53%	1.99%	2.09%	4.10%	1.25%	2.28%

·Absence rate (AR)= Total days of absence / Total working days * 100%
·Definition of absence: Sick leaves (menstrual leaves), personal leaves, occupational injury leaves, and absenteeism excluding granted vacations, maternity and paternity leaves, and bereavement leaves

Accident response drills

SAS inspects emergency response plans and organizes accident response drills on a regular basis to reinforce accident prevention concepts and enhance the crisis awareness and emergency response capabilities of assigned personnel with the goal of ensuring effective control of occurred accidents and preventing personnel injuries and asset losses. The following four emergency response and accident prevention drills were conducted in 2017:

Item	Category	Drill type	Date
1	Fire	Fire caused by forklift charging	March 24, 2017
2	Fire	Fire caused by overheating of crucible baking heaters	June 30, 2017
3	Chemical leakage	Chemical leakage caused by pipe rupture	September 28, 2017
4	Chemical leakage	Spilling caused by careless blending of chemicals	December 25, 2017

Operation area accident prevention drills

Contractor management

SAS cooperates with numerous contractors in an effort to spur industry development. We have formulated clearly defined contractor management guidelines to safeguard the health and safety of our partners and fulfill our pledge to provide a safe and healthy work environment.

When signing contracts with contractors, we request that they comply with OSH related laws and regulations and abide by relevant requirements of the company in the fields of personnel qualifications, construction work, machine tools and materials, and safety equipment. Accident incidence rates are minimized through a series of management measures including pre-contracting and pre-construction hazard notices, construction application management by responsible units, access controls for contractors, management of construction operations, and post-construction verification in addition to non-scheduled on-site audits by health and safety management personnel in plant areas.

In addition, we convene coordination meetings on a semi-annual basis to exchange improvement suggestions and establish an excellent platform for mutual communication, coordination, and exchanges. The ultimate goal is to guarantee that employees work in a safe environment in a worry-free manner.

Convening of coordination meetings

Healthy workplace

The physical health of employees is a key factor for the maintenance of work-life balance. SAS has established health management centers and employs dedicated nursing personnel inside its plants. Medical specialists are hired to provide monthly on-site services including health consultation, guidance, and assessment, tracking of employee health issues, and referral and medical services. In addition, SAS is firmly committed to the three pillars of maternal health protection, prevention of injuries caused by human factors, and prevention of burnout. The physical and mental health of co-workers is maintained through various health care initiatives, health lectures, and health promotion activities in an effort to create a blissful and healthy work environment.

The three pillars of health protection

The three pillars of health protection

Concept	Implementation	Achievements in 2017
Maternal health protection	Assessment of health risks is conducted for female employees during pregnancy, after childbirth, and prior to return to the workplace. The mental and physical health of pregnant, postpartum, and breastfeeding employees is guaranteed through counseling and concern.	First-level management: 55 Second-level management: 8 Health risk assessment completion rate: 100%
Prevention of burnout	Diagnosis and health guidance by professional physicians and continued tracking and concern are provided in accordance with employee health check data, Framingham risk scores, and high-risk groups identified through burnout scale screening. At the same time, unit supervisors are notified to control overtime work in a rigorous manner to prevent employee burnout.	Number of tracked employees: 31
Prevention of injuries caused by human factors	Surveys of hazards and risks associated with human factors including observation of operations, employee interviews, and medical record surveys are carried out for each department to identify priority targets for improvement. Risk levels are quantified (KIM) based on operation times, workload, postures, and work conditions. Process and operational improvements are gradually implemented to prevent injuries caused by human factors.	Storage and distribution of foundry returns /Crystal growth feedstock improvements Risk level 4→1 Life time ingot transportation improvements Risk level 4→2

Health promotion and reinforcement of health concepts

SAS embraces the concept of diversified employee health care. Analysis of health data is carried out on a biennial basis based on employee health check reports and annual health management plans that meet relevant needs and cover planning of improvements are formulated to maintain the physical health of employees.

In addition, SAS carries out customized health checks in consideration of the physique of different operating personnel groups. Health check items and frequency exceed legal requirements and are combined with free cancer screening (colon cancer, cervical cancer, mammography, and oral cancer) provided by hospitals to maintain a firm grasp of employee health conditions without any oversights. Upon completion of health check operations, professional nursing personnel create statistics of abnormal results and analyze health trends. This data is discussed with visiting physicians and serves as a key reference for health improvement activities and health promotion initiatives.

SAS organizes a large variety of health promotion activities. A total of 3,941 employees participated in vision care activities, blood donation drives, first aid courses, bone mineral density tests, and health lectures organized between 2015 and 2017. In addition, information related to health and major diseases is shared via EDM to raise employee health awareness, enhance their weight management knowledge, and give them a clear understanding of a wide range of health information. The company also provides free influenza vaccination services and comprehensive inoculation consultation services for its employees to protect them from communicable (influenza etc.) and other diseases. Convenience of employee vaccination inside plants is enhanced and a safety protection network is established to guarantee employee health.

In addition, the health center utilizes annual health check and incoming employee data in combination with job burnout questionnaire and working time analysis results to identify medium- and high-risk groups. Case-by-case management measures such as one-on-one counseling by physicians, individual health education guidance, and work pattern adjustments are adopted to minimize risks for identified groups. Furthermore, convenient blood pressure check stations have been established in the company to allow employees to measure their blood pressure in a convenient manner. Health education related information is posted in offices to reinforce self-health care concepts among employees.

Participation in health promotion activities

Friendly workplace	2015	2016	2017
Health lectures	329	412	466
Influenza vaccination	324	314	479
Blood donation drives	256	149	175
Bone mineral density tests	0	99	65
Smoking cessation activities	20	0	0
Betel nut cessation activities	0	16	0
First aid courses	0	0	234
Total	929	990	1419

Tracking and concern for special groups

The SAS health center aims to gain a better understanding of groups with abnormal results in physical exams for incoming employees or regular health checks, high-risk groups, and maternity health protection groups. In addition, consultations with physicians to show concern are arranged based on individual needs on a case-by-case basis to provide mental support.

Concern and mental support is shown for co-workers who sustained occupational injuries or have been involved in traffic accidents. Counseling is provided by visiting professional physicians on a case-by-case basis to facilitate an early return to their posts. For lingering cases, RNs provide continued tracking and concern through phone calls and report the recovery state of each case to unit supervisors.

Number of service recipients and tracked individuals

Number of service recipients	Yilan plant	Chunan plant	HQ
	Number	Number	Number
2015	247	1674	45
2016	868	1317	24
2017	366	1077	29
Total	1481	4068	98

Number of tracked individuals	Yilan plant	Chunan plant	HQ
	Number	Number	Number
2016	162	417	0
2017	112	419	8
Total	274	836	8

Safe and healthy workplace

SAS is firmly committed to provided safe and health workplaces for its employees. Designated parking spaces for expectant mothers have been created to provide a convenient and safe work environment for female SAS employees during pregnancy. The company also strongly supports breastfeeding and has therefore established special rooms in its plants to provide breastfeeding mothers with a worry-fee and comfortable space. SAS also offers childbirth subsidies and special discounts for SAS employees at designated child-care centers and kindergartens to provide worry-free care for children of SAS employees while they are at work. SAS designs smart healthy eating slogans for its staff restaurants to direct the attention of its employees to dietary health. An E-Health Academy has been established to provide employees with first aid, health management, and disease prevention knowledge and information on relevant activities in a real-time and rapid manner.

E-Health Academy

ID Badge for expectant mothers

·Helps co-workers identify pregnant employees and provide assistance at the workplace.

"Happy pregnancy" Manual

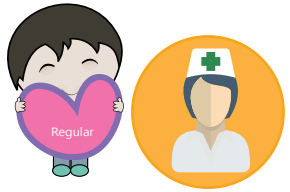
·Contents include rights and interests, leave policies, benefits, and health guidance.

Plant breastfeeding rooms

·These rooms provide an ideal environment for breastfeeding at the workplace.

Free parking spaces for pregnant employees

·Thoughtful provision of convenient parking spaces for pregnant co-workers.



Regular care provided by RNs

·Provision of regular health guidance and care as well as information on young children.

Special discounts at designated kindergartens

·Contracts guaranteeing discounted tuitions for SAS employees are signed with kindergartens in vicinity of plants.

Ergonomic improvements

Muscle and bone injuries represent an invisible hazard since timely detection and immediate improvements with regard to such hazards is much more difficult than identification of physical or chemical dangers. SAS is highly concerned about potential hazards at the workplace that may cause muscle or bone discomfort. KIM Manual Material Handling (MMH) Check Lists have therefore been adopted to quantify ergonomic risks for work stations involving manual transportation. Ergonomic improvement initiatives are formulated in accordance with work station types, operation patterns, pain, and injury location. Brainstorming is conducted through formation of teams. Gradual improvements are implemented through utilization of aids, adjustment of operating procedures, and work space setup in an effort to create a more comfortable work environment, minimize operational risks, and enhance productivity.

The following ergonomic improvements were carried out in 2017:

1. Foundry return and feedstock transportation improvements: The frequency of bending and lifting has been reduced and the workload of relevant personnel has been eased though improvement of in-plant feedstock procedures and the conversion to a "one ingot per trolley" transportation method for foundry return storage and distribution as crystal growth feedstock.

2. Life time ingot transportation improvements: Rollers have been attached to transport racks and special hoists are utilized to save arm strength and ensure that ingots don’ t touch the ground during transportation. Ingots are conveyed to machinery horizontally for measurement and manual transportation to trolleys has been replaced with mechanical equipment.

This has greatly eased the workload and minimized the risks for relevant personnel since it is no longer necessary to manually load and unload the trolleys. In the future, the Health and Safety Management Department will continue to observe the characteristics of operations carried out at different work stations and carry out regular assessments of risks associated with different work stations. Successful cases are made public to reinforce relevant concepts and minimize ergonomic hazards with the ultimate goal of creating a superior and more comfortable work environment.

Foundry return and feedstock transportation improvements

Life time ingot transportation improvements

Physical and mental balance and a blissful workplace

SAS views its employees as a key asset. The physical and mental health of employees is a key prerequisite for enhancement of corporate productivity. In addition to a firm commitment to the provision of a safe and healthy workplace, the company therefore organizes multiple staff trips through its welfare committee on an annual basis. These trips replenish the energy of employees and build team cohesion. Family members are encouraged to participate in these trips to build a strong rapport between employees, show concern for family members after work hours, and enhance work-life balance.

SAS listens to the voice of its employees. Various channels such as labor-management meetings, employee suggestion boxes, OSH committees, meetings on the old pension system, and a welfare committee allow employees to freely express their views and opinions. Employees are able to fully express their opinions via meeting exchanges and discussions. This creates an effective bi-directional communication channel between labor and management, resulting in a win-win scenario for both sides. In addition, the HR Department sends out weekly newsletters with articles, columns, English learning sections, and event and health information. These newsletters provide employees with new knowledge and an opportunity to participate in internal and external events. This also enables employees to achieve work -life balance and maintain their physical and spiritual health while performing their work duties.

SAS also appoints dedicated management personnel who provide assistance to facilitate the work and daily lives of foreign migrant workers. Annual activities and monthly meetings are organized and an Internet communication platform has been established to gain a better understanding of the needs and problems of foreign co-workers and allow real-time communication and assistance. The goal is to ensure that foreign workers experience joy in their work and enjoy their life in Taiwan.

Christmas activity for foreign co-workers

4.5 Social concern

Since 2003, compassionate manufacturers of the Hsinchu Science Park have been organizing Christmas gift collection activities on Christmas Eve to fulfill the dreams of underprivileged children. SAS continues to promote this Dream Fulfillment Activity in cooperation with Accton Cultural & Educational Foundation. These little gifts help fulfill the dreams and desires of these children. We are all Santa Clauses and spread hope and love to these children. SAS has participated in a total of nine activities and its employees take part in the gift subscription activities with great enthusiasm. Over the years, a total of 3,256 children in remote areas and social welfare organizations have received Christmas gifts in the context of this activity.

Since 2010, SAS has served as a sponsor for the heartwarming and compassionate fair activity organized by a family support center in Hsinchu. This activity aims to show concern for disadvantaged families in the Hsinchu area and abused children in foster care. In addition to this sponsorship, the company also actively promotes resource recycling by conducting charity sales of second hand materials on the day of the activity to financially support the center. The goal of this joint activity is to promote charity and spread love and joy to these underprivileged groups. In addition, the health center organizes annual blood donation drives. These activities enable employees to demonstrate social concern. Every bag of blood saves a life and represents the passion and love of the donors.

Tidbits of the compassionate blood donation activities

Based on a passionate commitment to social welfare and assistance for underprivileged groups, SAS employees donate their moon cakes in a show of compassion and love for these groups. The moon cakes are donated to charitable organizations under the company's name to demonstrate the amalgamated spirit of compassion of all employees. The following underprivileged groups are the beneficiaries of this activity.

Yilan plant charity moon cakes are distributed as follows

Blissful Children´s Home (5 boxes)

Zenan Homeless Social Welfare Foundation (24 boxes)

Home of God´s Love (5 boxes)

Taiwan Fund for Children and Families, Luodong Office (37 boxes)

GRI G4 content index table

Index	Description	Corresponding chapter	Page	Note/ Reasons for non-disclosure	External Assurance
Strategy and Analysis					
G4-1	Provide a statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability	Message from the Chairman	7		◎
G4-2	Provide a description of key impacts, risks, and opportunities	1.4 Risk management	30		◎
Organizational Profile					
G4-3	Name of the organization	Company Overview	13		◎
		Company Profile	13		◎
G4-4	Primary brands, products, and services	Company Overview	13		◎
		Company Profile	13		◎
		2.1 Innovation management	40		◎
G4-5	Location of the organization's headquarters	Company Overview	13		◎
		Company Profile	13		◎
G4-6	The number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	Company Overview	13		◎
		Company Profile	13		◎
		Market and product services	16		◎
G4-7	Nature of ownership and legal form	Company Overview	13		◎
		Company Profile	13		◎
G4-8	The markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	Company Overview	13		◎
		Company Profile	13		◎
		Market and product services	16		◎
G4-9	Scale of the organization	Company Overview	13		◎
		Company Profile	13		◎
G4-10	Report the total number of employees by employment type/contract/region/and gender	4.1 Recruitment and human resources	59		◎
G4-11	Percentage of total employees covered by collective bargaining agreements	–	-	Labor unions have not been established	◎
G4-12	Describe the organization's supply chain	2.5 Establishment of an integrated up-, mid-, and downstream solar industry supply chain	44		◎
G4-13	Any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	Company Overview	13		◎
G4-14	Report whether and how the precautionary approach or principle is addressed by the organization	1.4 Risk management	30		◎
G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses.	–	-	Non-participation in relevant charters	◎
G4-16	List memberships of associations and national or international advocacy organizations	Company Overview	13		◎
Identified Material Aspects and Boundaries					
G4-17	List all entities included in the organization's consolidated financial statements or equivalent documents	About this Report	1		◎
G4-18	Explain the process for defining the report content and the Aspect Boundaries. Explain how the organization has implemented the Reporting Principles for Defining Report Content	Stakeholder engagement and analysis	9		◎
G4-19	List all the material Aspects identified in the process for defining report content	Stakeholder engagement and analysis	9		◎
G4-20	For each material Aspect, report whether the Aspect is material within the organization	Stakeholder engagement and analysis	9		◎
G4-21	For each material Aspect, report the Aspect Boundary outside the organization, report any specific limitation regarding the Aspect Boundary outside the organization	Stakeholder engagement and analysis	9		◎

Index	Description	Corresponding chapter	Page	Note/ Reasons for non-disclosure	External Assurance
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements	About this report	1		◎
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries	About this report	1		◎
Stakeholder Engagement					
G4-24	Provide a list of stakeholder groups engaged by the organization	Stakeholder engagement and analysis	9		◎
G4-25	Report the basis for identification and selection of stakeholders with whom to engage	Stakeholder engagement and analysis	9		◎
G4-26	Report the organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	Stakeholder engagement and analysis	9		◎
G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns	Stakeholder engagement and analysis	9		◎
Report Profile					
G4-28	Reporting period (such as fiscal or calendar year) for information provided.	About this report	1		◎
G4-29	Date of most recent previous report	About this report	1		◎
G4-30	Reporting cycle	About this report	1		◎
G4-31	Provide the contact point for questions regarding the report or its contents	About this report	1		◎
GRI CONTENT INDEX					
G4-32	Report the 'in accordance' option the organization has chosen, the GRI Content Index for the chosen option, the reference to the External Assurance Report, if the report has been externally assured	GRI G4 content index table	75		◎
ASSURANCE					
G4-33	External assurance for the report	Verification Statement	83		◎
Governance					
G4-34	Report the governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	Company Overview 1.1 Sustainability organization 1.2 Corporate Governance Corporate governance framework	13 24 24		◎
G4-35	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees	Company Overview 1.1 Sustainability organization	13 24		◎
G4-36	Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body	Company Overview 1.1 Sustainability organization	13 24		◎
G4-37	Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics. If consultation is delegated, describe to whom and any feedback processes to the highest governance body	Company Overview 1.1 Sustainability organization	13 24		◎
G4-38	Report the composition of the highest governance body and its committees by type	1.2 Sustainability organization 2017 Annual Report of the company	24	Not classified by underprivileged social groups, economic, social, and environmental impacts, relevant capabilities, and stakeholder representatives	◎
G4-39	Report whether the Chair of the highest governance body is also an executive officer	1.2 Sustainability organization 2017 Annual Report of the company	24		◎

Index	Description	Corresponding chapter	Page	Note/ Reasons for non-disclosure	External Assurance
G4-40	Report the nomination and selection processes for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members	1.2 Corporate Governance Please see the company's official website: Guidelines for the Corporate Governance	24		◎
G4-41	Report processes for the highest governance body to ensure conflicts of interest are avoided and managed. Report whether conflicts of interest are disclosed to stakeholders	1.2 Corporate Governance Please see the company's official website: Guidelines for the Corporate Governance	24		◎
G4-42	Report the highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts	Company Overview 1.1 Sustainability organization	13 24		◎
G4-43	Report the measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social topics	2017 Annual Report of the company	-		◎
G4-44	Report the processes for evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics including, as a minimum, changes in membership and organizational practice. Report whether such evaluation is independent or not, and its frequency. Report whether such evaluation is a self-assessment	–	-	Relevant assessment procedures are currently not available	◎
G4-45	Report the highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities. Include the highest governance body's role in the implementation of due diligence processes and whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks, and opportunities	Company Overview 1.1 Sustainability organization 1.4 Risk management	13 24 30		◎
G4-46	Report the highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics	Company Overview 1.1 Sustainability organization 1.4 Risk management	13 24 30		◎
G4-47	Report the frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities	Company Overview 1.1 Sustainability organization 1.4 Risk management	13 24 30		◎
G4-48	Report the highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered	About this report Company Overview 1.1 Sustainability organization	1 13 24		◎
G4-49	Report the process for communicating critical concerns to the highest governance body	Company Overview 1.1 Sustainability organization	13 24		◎
G4-50	Report the nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them	Stakeholder identification and communication Company Overview 1.1 Sustainability organization	9 13 24		◎
G4-51	Report the remuneration policies for the highest governance body and senior executives and how performance criteria in the remuneration policy relate to the highest governance body's and senior executives' economic, environmental and social objectives	1.2 Corporate Governance	24	Performance standards in the field of economic, social, and environmental targets are currently not linked to compensation policies	◎
G4-52	Report the process for determining remuneration. Report whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Report any other relationships which the remuneration consultants have with the organization	1.2 Corporate Governance	24	No consultant involved	◎
G4-53	Report how stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals	–	-		◎

Index	Description	Corresponding chapter	Page	Note/ Reasons for non-disclosure	External Assurance
G4-54	Report the ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country	–	-		◎
G4-55	Report the ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country	–	-		◎
Ethics and Integrity					
G4-56	Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	1.3 Ethics and integrity	28		◎
G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines	1.3 Ethics and integrity	28		◎
G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.	1.3 Ethics and integrity	28		◎
CATEGORY: ECONOMIC					
Aspect: Economic Performance					
G4-DMA	Disclosure of specific indicators and management approaches	Stakeholder identification and communication Chapter 1 DMA	9 22		◎
G4-EC1	Direct economic value generated and distributed	1.6 Operational Performance	35		◎
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	1.4 Risk management	30	Other risks for the organization's activities due to climate change has been described, but the financial impact of climate change on organizational activities has not been calculated	◎
G4-EC3	Coverage of the organization's defined benefit plan obligations	–	-		-
G4-EC4	Financial assistance received from government	–	-	Has not received any financial assistance from government in 2017	◎
Aspect: Market Presence					
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	–	-		-
G4-EC6	Report the percentage of senior management at significant locations of operation that are hired from the local community	4.1 Recruitment and human resources	59		◎
Aspect: Indirect Economic Impacts					
G4-EC7	Development and impact of infrastructure investments and services supported	–	-	Immaterial issues are not disclosed in this report	-
G4-EC8	Significant indirect economic impacts, including the extent of impacts	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Procurement Practices					
G4-EC9	Proportion of spending on local suppliers at significant locations of operation.	–	-	Immaterial issues are not disclosed in this report. Only ratio of local suppliers is disclosed.	◎
CATEGORY: ENVIRONMENTAL					
Aspect: Materials					
G4-DMA	Disclosure of specific indicators and management approaches	Stakeholder engagement and analysis Chapter 3 DMA	9 46		◎
G4-EN1	Materials used by weight or volume	3.1 Green design and clean production	47		◎
G4-EN2	Percentage of materials used that are recycled input materials	3.1 Green design and clean production	47		◎
Aspect: Energy					
G4-EN3	Energy consumption within the organization	3.3 Energy management	49		◎

Index	Description	Corresponding chapter	Page	Note/ Reasons for non-disclosure	External Assurance
G4-EN4	Energy consumption outside of the organization	–	-		-
G4-EN5	Energy intensity	3.3 Energy management	49		◎
G4-EN6	Reduction of energy consumption	3.3 Energy management	49		◎
G4-EN7	Reductions in energy requirements of products and services	2.1 Innovation management	40		◎
Aspect: Water					
G4-EN8	Total water withdrawal by source	3.4 Water resource management	52		◎
G4-EN9	Water sources significantly affected by withdrawal of water	3.4 Water resource management	52		◎
G4-EN10	Percentage and total volume of water recycled and reused	3.4 Water resource management	52		◎
Aspect: Biodiversity					
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	–	-	Immaterial issues are not disclosed in this report	-
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	–	-	Immaterial issues are not disclosed in this report	-
G4-EN13	All habitat protected areas or restored areas	–	-	Immaterial issues are not disclosed in this report	-
G4-EN14	Report the total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Emissions					
G4-EN15	Direct greenhouse gas (GHG) emissions (scope 1)	3.2 Response to climate change and global warming	48		◎
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (scope 2)	3.2 Response to climate change and global warming	48		◎
G4-EN17	Other indirect greenhouse gas (GHG) emissions (scope 3)	–	-	Figures of Scope 3 are not disclosed in this report	-
G4-EN18	Greenhouse gas (GHG) emissions intensity	–	-	Greenhouse gas (GHG) emissions intensity has not been calculated	-
G4-EN19	Reduction of greenhouse gas (GHG) emissions	Message from the Chairman 3.3 Energy management	7 49		◎
G4-EN20	Emissions of ozone-depleting substances (ODS)	–	-	Immaterial issues are not disclosed in this report	-
G4-EN21	Nox, Sox, and other significant air emissions	3.5 Pollution and emissions	54		◎
Aspect: Effluents and Waste					
G4-EN22	Total water discharge by quality and destination	3.5 Pollution and emissions	54		◎
G4-EN23	Total weight of waste by type and disposal method	3.6 Waste management	55		◎
G4-EN24	Total number and volume of significant spills.	3.5 Pollution and emissions 3.6 Waste management	54 55		◎
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex i, ii, iii, and viii, and percentage of transported waste shipped internationally	3.6 Waste management	55		◎
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	3.5 Pollution and emissions	54	Waste water was discharged into sewage system in the science-based industrial park, therefore water bodies and related habitats were not affected by the organization's discharges of water and runoff	◎
產品和服務					
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	2.2 Customer and product services	41	No digitized information available, qualitative description only	◎
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category		-	Immaterial issues are not disclosed in this report	-

Index	Description	Corresponding chapter	Page	Note/ Reasons for non-disclosure	External Assurance
Aspect: Compliance					
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	–	-	No penalty	◎
Aspect: Transport					
G4-EN30	Report the significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Overall					
G4-EN31	Total environmental protection expenditures and investments by type	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Supplier Environmental Assessment					
G4-EN32	Percentage of new suppliers that were screened using environmental criteria.	–	-	Immaterial issues are not disclosed in this report	-
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Environmental Grievance Mechanisms					
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	–	-	No grievances have been filed	◎
CATEGORY: SOCIAL					
SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK					
Aspect: Employment					
G4-DMA	Disclosure of specific indicators and management approaches	Stakeholder engagement and analysis Chapter 4 DMA	9 58		◎
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	4.1 Recruitment and human resources	59		◎
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	4.2 Salary & benefits	61		◎
G4-LA3	Return to work and retention rates after parental leave, by gender	4.2 Salary & benefits	61		◎
Aspect: Labor/Management Relations					
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Occupational Health and Safety					
G4-LA5	Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs	4.4 Friendly workplace	64		◎
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	4.4 Friendly workplace	64	Related suppliers data not calculated	◎
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	4.4 Friendly workplace	64		◎
G4-LA8	Health and safety topics covered in formal agreements with trade unions	–	-	No relevant agreements exist (labor unions have not been established)	◎
Aspect: Training and Education					
G4-LA9	Average hours of training per year per employee by gender, and by employee category	4.3 Education and training	63		◎
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	4.3 Education and training	63		◎
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	4.2 Salary & benefits 4.3 Education and training	61 63		◎
Aspect: Diversity and Equal Opportunity					
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	4.1 Recruitment and human resources	59	Information about board meetings Information are not disclosed in this report	◎
Aspect: Equal Remuneration for Women and Men					
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	4.2 Salary & benefits	61	No gender pay gap	◎

Index	Description	Corresponding chapter	Page	Note/ Reasons for non-disclosure	External Assurance
Aspect: Supplier Assessment for Labor Practices					
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	–	-	Immaterial issues are not disclosed in this report	-
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Labor Practices Grievance Mechanisms					
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	–	-	No grievances have been filed	◎
SUB-CATEGORY: HUMAN RIGHTS					
Aspect: Investment					
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	–	-	Immaterial issues are not disclosed in this report	-
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Non-Discrimination					
G4-HR3	Total number of incidents of discrimination and corrective actions taken	–	-	No instances of discrimination have been reported	◎
Aspect: Freedom of Association and Collective Bargaining					
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Child Labor					
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	–	-	The company does not employ child labor; supplier conditions are not disclosed in this report due to immateriality	◎
Aspect: Forced or Compulsory Labor					
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	–	-	Immaterial issues are not disclosed in this report	◎
Aspect: Security Practices					
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Indigenous Rights					
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Assessment					
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Supplier Human Rights Assessment					
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	–	-	Immaterial issues are not disclosed in this report	-
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Human Rights Grievance Mechanisms					
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	–	-	No grievances have been filed	◎
SUB-CATEGORY: SOCIETY					
Aspect: Local Communities					
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	–	-	Immaterial issues are not disclosed in this report	-
G4-SO2	Operations with significant actual and potential negative impacts on local communities	–	-	Immaterial issues are not disclosed in this report	-

Index	Description	Corresponding chapter	Page	Note/ Reasons for non-disclosure	External Assurance
Aspect: Anti-corruption					
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	1.3 Ethics and integrity	28		◎
G4-SO4	Communication and training on anti-corruption policies and procedures	1.3 Ethics and integrity	28		◎
G4-SO5	Confirmed incidents of corruption and actions taken	1.3 Ethics and integrity	28		◎
Aspect: Public Policy					
G4-SO6	Total value of political contributions by country and recipient/beneficiary	1.3 Ethics and integrity	28	No political contributions and donations made	◎
Aspect: Anti-Competitive Behavior					
G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	–	-	The company was not involved in lawsuits due to anti-competitive behavior	◎
Aspect: Compliance					
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	–	-	No legal violations	◎
Aspect: Supplier Assessment for Impacts on Society					
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	–	-	Immaterial issues are not disclosed in this report	-
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	–	-	Immaterial issues are not disclosed in this report	-
Aspect: Grievance Mechanisms for Impacts on Society					
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	–	-	No grievances have been filed	◎
SUB-CATEGORY: PRODUCT RESPONSIBILITY					
Aspect: Customer Health and Safety					
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	–	-	Immaterial issues are not disclosed in this report	-
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	2.4 Product liability and marketing communication	44	No violations of relevant laws or voluntary principles	◎
Aspect: Product and Service Labeling					
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	2.4 Product liability and marketing communication	44		◎
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	2.4 Product liability and marketing communication	44	No violations of relevant laws or voluntary principles	◎
G4-PR5	Results of surveys measuring customer satisfaction	2.2 Customer and product services	41		◎
Aspect: Marketing Communications					
G4-PR6	Sale of banned or disputed products	2.4 Product liability and marketing communication	44	No sale of banned or disputed products	◎
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	2.4 Product liability and marketing communication	44		◎
Aspect: Customer Privacy					
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	2.3 Protection of confidential customer information	42		◎
Aspect: Compliance					
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	2.4 Product liability and marketing communication	44	No violations of relevant laws or regulations	◎

Remark: The third party verification institute only offers guarantee on the verified 2016 and 2017 statistics.

Verification statement issued by independent third-party

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Independent assurance statement

Scope and approach

Sino-American Silicon Products Inc. ("SAS" or the "Company") commissioned **DNV GL Business Assurance Taiwan** ("DNV GL") to undertake independent assurance of the 2017 Corporate Social Responsibility Report (the "Report") for the year ended 31 December 2017

We performed our work using DNV GL's assurance methodology VeriSustain™[1], which is based on our professional experience, international assurance best practice including International Standard on Assurance Engagements 3000 (ISAE 3000) and the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines.

We understand that the reported financial data and information are based on data from SAS's Annual Report and Accounts, which are subject to a separate independent audit process. The review of financial data taken from the Annual Report and Accounts is not within the scope of our work.

We planned and performed our work to obtain the evidence we considered necessary to provide a basis for our assurance opinion. We are providing a 'moderate level' of assurance.

Responsibilities of the Directors of Sino-American Silicon Products Inc. and of the assurance providers

The Directors of SAS have sole responsibility for the preparation of the Report. In performing our assurance work, our responsibility is to the management of SAS; however, our statement represents our independent opinion and is intended to inform all of SAS stakeholders. DNV GL was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement.

We have no other contract with SAS and this is the 2'nd year that we have provided assurance. DNV GL's assurance engagements are based on the assumption that the data and information provided by the client to us as part of our review have been provided in good faith. DNV GL expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

Basis of our opinion

A multi-disciplinary team of sustainability and assurance specialists performed work at headquarters and site level. We undertook the following activities:

- Review of the current corporate responsibility issues that could affect SAS and are of interest to stakeholders;
- Review of SAS approach to stakeholder engagement and recent outputs;
- Review of information provided to us by SAS on its reporting and management processes relating to the Principles;
- Interviews with selected Directors and senior managers responsible for management of corporate responsibility issues and review of selected evidence to support issues discussed;
- Site visits to the major production site at Chunan, Ilan and include HQ to review process and systems for preparing site level corporate responsibility data and implementation of corporate responsibility strategy;

[1] The VeriSustain protocol is available on dnvgl.com

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- Review of supporting evidence for key claims and 2017 data in the report. Past two years' data reported in the report are not within the scope of our work. Our checking processes were prioritised according to materiality and we based our prioritisation on the materiality of issues at a consolidated corporate level;
- Review of the processes for gathering and consolidating the specified performance data and, for a sample, checking the data consolidation.
- An independent assessment of SAS's reporting against the Global Reporting Initiative (GRI) G4 Guidelines.
- The verification was conducted based only on the Chinese version Report.

Opinion

On the basis of the work undertaken, nothing came to our attention to suggest that the Report does not properly describe SAS's adherence to the Principles. In terms of reliability of the performance data, nothing came to our attention to suggest that these data have not been properly collated from information reported at operational level, nor that the assumptions used were inappropriate.

Observations

Without affecting our assurance opinion we also provide the following observations.

- The supply chain risk assessment covering the value chain partners will help evolving appropriate sustainability strategies to manage the risks.
- Strengthening of the materiality by considering the life cycle perspective i.e., to include the GHG reduction effect of solar power plant business.
- To incorporate environmental, social and economic performance indicators into management processes where they can be routinely reported, monitored and optimised.

Materiality
The process developed internally has not missed out any significant, known material issues, and these issues are fairly covered in the Report. A methodology has been developed to evaluate the priority of these issues.

Completeness

The Report covers performance data against the GRI G4 core indicators that are material within the Company's reporting boundary. The information in the Report includes the company's most significant initiatives or events that occurred in the reporting period.

Accuracy and Reliability

The Company has developed the data flow for capturing and reporting its CSR performance. In accordance with Moderate level assurance requirements, we conclude that no systematic errors were detected which causes us to believe that the specified CSR data and information presented in the Report is not reliable.

For and on behalf of DNV GL Taiwan
Date: 17 April, 2018

Chun-Nan Lin
Lead Verifier
DNV GL – Business Assurance Taiwan

David Hsieh
Sustainability Service Manager,
Greater China

Statement Number: 00003-2018-ACSR-TWN

DNV GL Business Assurance Taiwan is part of DNV GL – Business Assurance, a global provider of certification, verification, assessment and training services, helping customers to build sustainable business performance.

This Assurance Statement is based on the information made available to us and the engagement conditions detailed above. Hence, DNV GL cannot guarantee the accuracy or correctness of the information. DNV GL cannot be held liable by any party relying or acting upon this Assurance Statement
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