

---

## New submission from 2020 Shared Value Awards application - Shared Value Collaboration of the Year

---

Fri, Sep 25, 2020 at 12:50 PM

### Primary contact

---

#### Contact name

Peggy Lee

#### Email

[peggy.lee@suez.com](mailto:peggy.lee@suez.com)

#### Phone

+852 2590 5609

#### Address

Room 701, 7/F, Lee Garden Two,  
[28 Yun Ping Road](#)  
Causeway Bay, Causeway Bay Hong Kong  
Hong Kong  
[Map It](#)

#### Where did you hear about the Shared Value Awards?

SVP Email

### About your organisation

---

#### Organisation name

SUEZ NWS Limited

#### Organisation type

Corporate

#### Website

<https://www.suez-nws.com/en-cn>

#### Overview

The Shanghai Chemical Industry Park (SCIP) is one of the largest chemical industrial parks in the world. SUEZ NWS collaborates with the park administrative committee to provide holistic water and hazardous waste management solutions to its clients. This project not only achieves 100% compliance with EU standards for off-gas emissions, our energy recovery system, wastewater treatment and demineralized water plants also help mitigate climate change and water scarcity. As a company with innovation at our heart, we built the first industrial water research centre in China. Our advanced technology and service reliability supports SCIP to be a local role model.

### What is your shared value partnership or collaboration?

---

#### Name of project/initiative

Reconciling economic and green growth at SCIP industrial park in China

#### List the organisations involved in this partnership/collaboration

1) Operational basis: Shanghai Chemical Industry Park (SCIP) Administrative Committee (AC); Industrialist in SCIP (Customers). 2) Innovation basis: i) Tongji University; ii) East China University of Science and Technology; iii) East China Normal University; iv) Shanghai Jiao Tong University; v) Shanghai University; vi) National Tonghua University; vii) Donghua University

### What makes your project or initiative a leading example of a shared value collaboration?

---

### What economic opportunity does your shared value project/initiative deliver?

SUEZ NWS provides hazardous waste management, municipal water supply, industrial water supply and industrial wastewater treatment services to SCIP through two joint ventures companies – Sino French Water Development (SFWD) Company and Shanghai Chemical Industry Park Sita Waste Services (SCIP SWS). We offer effective solutions that help our customers to become more competitive.

We build and operate a hazardous waste incinerator which meets EU standards for off-gas emissions and operate a wastewater treatment plant that could fulfill the new and more stringent effluent discharge standards published by local government in 2019. To provide integrated management services, we tailored a smart online platform – NOSE, which visualizes data collected for timely analysis and monitoring of air borne pollutants. Through user-friendly interface, early warning system and innovative dynamic diffusion model, operators can intervene and make proper decision timely. Our JV also monitors the quality of effluents online along the treatment lines on 24/7 basis.

As an environmental leader, SUEZ NWS is committed to supporting customers to save 3.46 million tonnes of CO<sub>2</sub> emissions from 2014. To achieve this ambition, our JV creates circular economy through energy recovered in the form of steam from incineration and demineralization of treated wastewater. The initiatives help save 55,000 tons of standard coal /year and produce 200,000 m<sup>3</sup> of industrial water per day. It is estimated that these initiatives could save our customers approximately \$265M a year from their energy and water bills.

Innovation is at the heart of SUEZ NWS and its JV, we partnered with local universities to enhance technology on waste-to-energy recovery, wastewater reuse and put forward new processes. We've been awarded with 6 innovation patents and 33 utility model patents. We are awarded as the "Innovative Enterprise" and the "National Petroleum and Chemical Industry Environmental Protection Advanced Unit" in the 12th "Five-Year Plan".

### What social issue(s) does your shared value project/initiative address?

**Reduce Health and Safety Impact to the Public:**

Hazardous waste treatment is a hot topic in China due to incident caused by illegal custody in recent years. China's government has devoted great efforts to secure the wellbeing of the public and have therefore consistently issued and strengthened regulations. Safety is the top priority at SUEZ. We invest in upgrading our environmental health and safety system at our facilities to ensure every customer at the park can operate in a safe environment. Our system could keep up with the latest regulatory standards.

**Mitigating Climate Change:**

We have seen climate change happening and there is an urgent need to step up the mobilization against climate change. The Paris Agreement sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C. SUEZ strengthened our commitments to comply with the 1.5°C trajectory. Amid the large carbon and water footprint at SCIP, SUEZ provides sustainable solutions that would help reduce emissions and freshwater use, and drive low-carbon circular economy, starting from the design stage.

**Reduce Volume of Sludge to Landfill:**

Land is a valuable resource. Landfill, which is an essential element of any sustainable waste management chain, need notable land resource. Amid landfill in China are reaching their capacity decades ahead of schedule, we need to develop solutions that support waste minimization. At SCIP, sludge is a major by-product of the treatment process and a potential risk of pollution. SUEZ JV make use of its advanced technology to minimise the bulk volume of sludge for cost effectiveness and create social benefits to the community.

**Accelerate Development of Innovative Solution:**

Innovation is an important factor in providing smart and sustainable solutions to customers. We foster innovation through our research centres as well as external platforms through partnerships.

### Shared value solution description

**Reduce Health and Safety Impact to the Public:**

SUEZ NWS provides holistic water and hazardous waste management solutions to our customers at SCIP. Currently we are running three incineration lines, which are equipped with off-gas treatment system (removal of halogen, sulfur, heavy metals, dust) to strictly comply with the EU emission standard. We also operate 7 wastewater treatment lines which could handle wastewater with high salts content. For emergency preparedness, a 35,000 m<sup>3</sup> tank was built for spill/overflow contingency. This will ensure no untreated water would be discharged to the environment and safeguarding the well-being of the community.

**Mitigating Climate Change:**

SUEZ NWS builds and operates a hazardous waste incinerator which is equipped with energy recovery devices. The heat generated is used to produce steam and supply to industrial companies in the park, thereby saving 55,000 tons of standard coal each year, maximizing energy recovery. The water comes from industrial processes is reused and it feeds the demineralised water production plant which can produce 200,000 m<sup>3</sup> of industrial water per day.

**Reduce Volume of Sludge to Landfill:**

SUEZ NWS provide dewatering service at SCIP for sludge from industrial water production plant. With the implementation of our advanced technology, Dehydri<sup>TM</sup> Twist, the bulk volume of sludge cake reduces by as high as

35%, which would significantly reduce the burden to landfill.

#### Accelerate Development of Innovative Solution:

We partner with local universities to establish research centers for water and hazardous waste treatment. In addition, we support the launch of "SCIP+Green Chemistry and Chemical Engineering Innovation and Entrepreneurship Contest". SUEZ NWS act as an "enterprise mentor" to coach the winning teams to transform their ideas into reality. In 2019, SFWD adopted the Narrowband IoT technology in the design of its water meter which could transmit data for longer distance with higher efficiency.

### Market segment and potential for scaling the solution

This share value project is beneficial to the SCIP Administrative Committee (AC), customers (industrialists), university partners and the community.

#### SCIP AC:

SCIP SWS and SFWD are two prestigious companies in Shanghai. SCIP SWS is the first corporate licensed by the municipal authority to provide hazardous waste incineration services. Both JVs leverage our expertise to ensure the park operates in a safe and environmentally-friendly manner. We provide integrated management services to improve environmental quality and also enhance the capacity of the park to handle various types of hazardous waste and industrial wastewater.

#### Industrialists:

Industrialists at the park are our customers. We thrive because of them. To ensure synergy between both parties, we offer training, seminars and site visit to keep them up-breast of the latest technology. We organize meeting with the industrialists to understand their needs. In bid of cost effectiveness, our circular economy model of energy recovery and water reuse also help our customers to reduce their expenses on electricity and water tariff.

#### University Partners:

We connect academic and entrepreneurship towards the goal of greening the chemical industry. We developed strategic partnerships with 7 universities and built platforms for innovation that could improve operational effectiveness and reduce environmental impacts. Students would have an opportunity to develop skills while SUEZ help accelerate innovation at SCIP and inject new vitality into the development of green chemistry. Today, we have already invested in 80 R&D projects.

#### Community:

SUEZ invests in a wide range of community partnerships and sponsorships that make a profound difference to the environment. We arrange environmental awareness programme, open up our facilities to schools and community groups, helping them to understand the processes we use to recover valuable resources. In 2019, SFWD was awarded by the municipal authority as "Shanghai Municipal Educational Base" to reward our contribution to the society.

### Key activities and resources including a basic development plan

To better communicate with our key stakeholders - SCIP AC, customers (industrialists), university partners and the community, we have arranged:

#### SCIP AC and Industrialist:

As a routine practice, we organise meeting with SCIP AC and industrialists to discuss about development of the park, safety, fire and security and business continuity. The latest meeting was arranged in July 2020 to discuss about latest development of the park.

We understand that well-informed customers are crucial to the development of our products and services. We therefore offer our customers opportunities to understand the latest technology. In 2019, our JVs have collaborated with SCIP AC committee to co-organise the "2019 Environment Technical Seminar of SCIP", which aims to facilitate discussion on how to build a greener, innovative and smart SCIP. There has been plenty of dialogues on the latest development of environmental policies, industrial process technique advancement and results of some latest scientific research. Our JVs aim to arrange more seminars of this kind to accelerate the development of SCIP for the benefit of the environment.

#### University Partners:

Our JVs have developed strategic partnerships with 7 universities. Today, we have already invested in 80 R&D projects for both water and waste, 10 of which are on-going. We will continue to contribute to our society by providing engineering students with internship opportunities, training, helping them to complete their studies and enrich their experience.

#### Community:

We will continue to arrange environmental awareness programme, open up facilities to public and sending love and care to the underprivileged. Every year, we arrange around 10 community engagement activities benefiting 200 people. We also facilitate 600 people to visit our facilities every year. We plan to extend our services to communities located further from the site and will collaborate with relevant branches of the Communist Party to serve our community.

## Measurability

We develop Key Performance Indicators (KPIs) to ensure our operation at SCIP meet both the expectation of our customers and fulfill the legislative requirements.

SCIP SWS sets KPIs to ensure we are on the right track of reducing our energy consumption and improving the quality of our air emissions. It measures the consumption of natural gas and electricity as well as the level of sulphur dioxide, nitrogen oxides and volatile organic compounds in the emissions as per legislative requirements. SFWD measures the energy required for raw water collection. The lower the value, the less energy used for pumping water. In 2020, both JVs have met all KPIs listed above.

For collaboration with universities and the community, we have assigned budgets to support the up and running of the programmes.

## Tangible results to date

This project demonstrates a great success of SUEZ NWS operation in Greater China. From the operational perspective, we have achieved 100% compliance with EU standards for off-gas emissions, which secures the health and safety of the people stationed in the park and the community nearby, as well as safeguarding the environment from pollution. Our energy recovery system and demineralization plant support the circular economy model and mitigate climate change by saving 55,000 tons of standard coal and 2Mm3 of freshwater every year. We reduce burden from landfill by minimizing the volume of sludge cake by up to 35% through our Dehydri<sup>TM</sup> Twist technology. Our ISO accredited services give confidence to our customers and have received compliments from our clients, namely, Covestro, Shanghai Industry Zhentai Chemical Industry Limited, Jihui Remondis (Shanghai) Environmental Protection & Science & Technology Co., Ltd. While we offer excellent services to our customers, we have also secured our reputation as an industrial leader in our business.

From the innovative and community perspectives, we embrace latest technology and innovate for better services (e.g. Narrowband-IoT). We partner with well-known universities to accelerate chemical engineering innovation and provide internship opportunities to students. Meanwhile, those students support our two research centres achieved 6 innovation patents and 33 utility model patents. We are committed to contribute to the community where we operate and are granted with the titles of "Shanghai Municipal Educational Base", "Innovative Enterprise", "the Most advanced Environmental Protection Unit in National Petroleum and Chemical Industry" under the 12th "Five-Year Plan".

## Please provide relevant documentation to support claims made in this application.

---

### Upload any supporting documentation

- [SVP-Award-Document-Proof.zip](#)

## Official endorsement

---

### Endorsement

- I am authorised to submit this application on behalf of my organisation and confirm that all required approvals have been sought and received.
- I acknowledge that in order to finalise this application I will pay the relevant administration fee.