

ABOUT UES

UES Holdings Pte. Ltd. ("UES"), is one of Singapore's leading environmental engineering companies. Its roots can be traced back to a century ago when it was a contractor to many regional governments for the construction of waterworks and other large infrastructure.

Over the past decade, UES has successfully completed more than 50 major public and private infrastructure projects worth over S$2 billion.

UES
Better Environments

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Mergers & Acquisition with China Harbour in 2023

UES has been Merged with China Harbour Engineering Company Ltd. **("CHEC")** in 2023, UES will be the flagship of China Harbour's Environmental section. Tagging along CHEC's global platform and financial capability, UES is expanding its portfolio in China, Southeast Asia and further to the world.

BUSINESS MODEL



UES is able to undertake a wide range of projects on **EPC** (Engineering, Procurement and Construction), **BOT** (Build-Operate-Transfer), **DBO** (Design-Build-Operate), **DBOO** (Design-Build-Own-Operate) and **DB**(Design-Build) basis.

- **E**ngineering **P**rocurement **C**onstruction
- **B**uild **O**wn **O**perate
- **D**esign **B**uild **O**perate
- **D**esign **B**uild **O**wn **O**perate
- **D**esign & **B**uild



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UES is capable of providing **technical and engineering solutions** for environmental projects in areas of **Water, Wastewater, Air, Waste & Renewable Energy and Building Services.**

Total Solution in Whole Range of Waterworks

Sewage Treatment	NEWater	Potable Water	Desalination	And More !
•Municipal Sewage and Industrial Wastewater Treatment (MBR)	•NEWater Production (MF + BWRO)	•Treatment of Surface and Underground Water for Potable Use	•Seawater Reverse Osmosis Desalination (SWRO)	•Pipeline / Sewer Network Diagnosis and Rehabilitation
•Industrial and Process Water Supply / Water Recovery and Recycling	•Brackish Water Reverse Osmosis (BWRO)			•Rainwater Harvesting and Treatment
•Odour Control Treatment				•Urban Flood Prevention System
				•Aquaculture Water Treatment

Transforming Waste to Energy



The Misplaced Resource

Waste management has become the subject of growing concern in many countries. Treating waste with various **waste-to-energy technologies** is now viewed as a viable and economical option.

The Misplaced Resource

- Sludge Treatment
- Biogas Generation through Anaerobic Digestion
- Conversion of Biogas into Energy
- Production of Biofuels from Municipal and
- Agriculture Waste
- Ultrasonic Sludge Disintegration

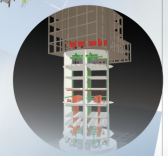
IN-HOUSE ENGINEERING CAPABILITIES

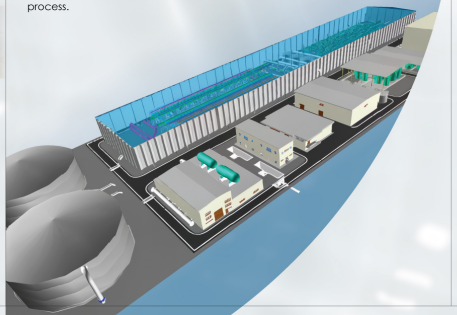


UES has licenses for process design simulation, BIM modelling, plant 3D software, etc.

Our experienced engineers are trained to operate these intelligent tools to evaluate statistical outputs in order to ensure system is well optimised and different technologies are fully integrated.

Our 4D model offers all stakeholders a detailed overview of the entire facility and its construction process.





ONE-STOP SOLUTION



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ANALYSE Preliminary & Conceptual
- *Trend Spotting and Market Analysis* ✓
- *Sourcing and Identifying Opportunities* ✓
- *Business Development and Marketing* ✓
- *Networking* ✓

DESIGN Packaging & Technology
- *Scoping and Feasibility Study* ✓
- *Technology Selection* ✓
- *Strategic Alliances and Partnership* ✓
- *Basic Engineering Design* ✓
- *Deal Structuring* ✓

DEVELOP Invest & Structuring
- *Invest and Develop Projects* ✓

BUILD Technical & Construction
- *Detailed Engineering Design* ✓
- *Engineering Services* ✓
- *Procurement* ✓
- *Construction* ✓
- *Equipment Supply* ✓

MANAGE Operation & Management
- *Services Management* ✓
- *Operations* ✓
- *Maintenance* ✓

OUR HONORS & CERTIFICATION

Asia Corporate Excellence & Sustainability Awards
Top 5 Outstanding Leaders in Asia 2014

Global Water Awards
Water Deal of the Year (2016) for DBOO of Second NEWater Plant in Changi

IAIR Award
Company of the Year for Leadership (M&E Engineering Services/ SEA) 2016

SME 100 Awards in 2018
One of the fast moving business of the SME sector in 2018

BEI Asia Asia Responsible Corporate Award
Eco-Green Outstanding Leadership Awards 2017

BCA Green and Gracious Builder
Certified (Merit)

RoSPA Health and Safety Awards
Gold Award

WSH Awards
WSH Performance(Silver) Award (2014)
WSH Risk Management Ward Recognition for projects (SHARP) (2016)(2012) (2011)

Certifications

bizSAFE STAR | ISO 9001 (2015) | ISO 14001 (2015) | ISO 45001 (2018)

KEY PROJECTS

2012
Development of a Ceramic Membrane Demonstration Plant at Choa Chu Kang Waterworks



2012
Supply of Life Support Systems to Marine Life Park in Resort World Sentosa



2014
Expansion to Digesters and Effluent Pumping Station at Changi Water Reclamation Plant



2015
Waste-to-Energy at a Poultry Farm in Singapore



2015
Design and Build Membrane Plant at Changi Water Reclamation Plant



2011
Co-Generation System at Gardens by the Bay



2018
Stamford Detention Tank



2018
Upgrading of M&E Equipment and Laying of Pipeline at Tembusu Pumping Station



2018
Jurong Water Reclamation Plant Phase 4 Expansion (Contract 1 - Liquids)



2016
Second Changi NEWater Plant (CNP2)



2007
Changi Water Reclamation Plant Contract C3C Liquid Module I



2021
Process Upgrading and Equipment Replacement at Chestnut Avenue Waterworks



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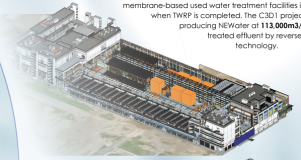


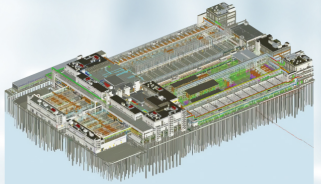
Tuas Water Reclamation Plant Contract 3D1 & Contract 3D2

Date of Completion: **2026**
Country: **Singapore**

The C3D1 and C3D2 projects provides the **Mechanical**, **Electrical**, **Instrumentation**, **Control and Automation components** for the plant's two Domestic Liquids Modules, required for the **treatment of domestic used water** using advanced physical, biological and chemical treatment processes.

The total treatment capacity for domestic used water is **650,000m3/day** which will become one of the largest and advanced membrane-based used water treatment facilities in the world when TWRP is completed. The C3D1 project also includes producing NEWater at **113,000m3/day** from treated effluent by reverse osmosis technology.



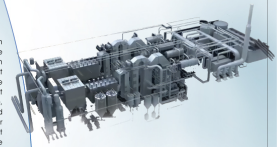


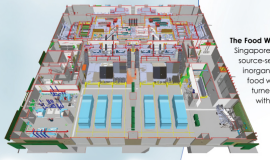


Integrated Waste Management Facility (IWMF)

Date of Completion: **2026**
Country: **Singapore**

IWMF is an integral part of NEA's long-term plan to meet Singapore's solid waste management needs. It will be equipped with state-of-the-art solid waste treatment technologies to improve energy and resource recovery from waste. It is Singapore's first integrated facility to treat incinerable waste, source-segregated food waste and dewatered sludge from Tuas Water Reclamation Plant (TWRP), as well as to sort household recyclables collected under the National Recycling Programme (NRP).





The Food Waste Treatment Facility (FWTF) will be Singapore's primary facility for the treatment of source-segregated food waste. At the FWTF, inorganic materials will first be separated from food waste. The organic fraction will then be turned into a slurry, which will be co-digested with used water sludge at the TWRP.

The Sludge Incineration Facility (SIF) at IWMF will also treat dewatered sludge generated from the TWRP. This eliminates the need for TWRP to truck the dewatered sludge to another location for treatment, thus reducing the carbon footprint. The steam produced by the SIF will be used by TWRP for its thermal hydrolysis process. The flue gas from the SIF will be treated by dry & wet scrubbing unit for clean emissions.