



Engineering Consulting Firms in Taiwan

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 **Ministry of Economic Affairs**

Organized by

 **Bureau of Foreign Trade, MOEA**

Implemented by

 **Taiwan External Trade Development Council**
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Wintech Electric Co., Ltd.		57
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	Darcy Engineering Consultants CO., Ltd.	21
	Ding Sheng Green Energy Technology Co., Ltd.	23
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China	Metal Industries Research & Development Center—33
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Eswatini	CECI Engineering Consultants, Inc., Taiwan—9
India	CECI Engineering Consultants, Inc., Taiwan—9 \ CTCI—17
Indonesia	CECI Engineering Consultants, Inc., Taiwan—9
	Sinotech Engineering Consultants, Ltd.—43
	THI Consultants Inc.—47
Kingdom of Saudi Arabia	CTCI—17 \ THI Consultants Inc.—47
Macau	THI Consultants Inc.—47
Malaysia	CECI Engineering Consultants, Inc., Taiwan—9
	CTCI—17 \ Wintech Electric Co., Ltd.—57
Mongolia	Metal Industries Research & Development Center—33
Mozambique	Metal Industries Research & Development Center—33
Myanmar	Calvin Consulting Engineers—5
New Zealand	Newtain Consulting Ltd.—37
Philippines	Cen Cho Engineering Consulting Co., Ltd.—15
	GIBSIN Engineers, Ltd—27
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	New Control Technology Co., Ltd.—35
Sao Tome and Principe	CECI Engineering Consultants, Inc., Taiwan—9
Singapore	CTCI—17
St. Vincent and the Grenadines	CECI Engineering Consultants, Inc., Taiwan—9
Thailand	CECI Engineering Consultants, Inc., Taiwan—9
	CTCI—17 \ Calvin Consulting Engineers—5
	GIBSIN Engineers, Ltd—27
Timor Leste	Sinotech Engineering Consultants, Ltd.—43
United States of America	Cen Cho Engineering Consulting Co., Ltd.—15
	GIBSIN Engineers, Ltd—27
Vietnam	CTCI—17 \ CECI Engineering Consultants, Inc., Taiwan—9
	Calvin Consulting Engineers—5
	Darcy Engineering Consultants CO., Ltd.—21
	Liming Engineering Consultants Co.,Ltd—31
	Phototroph Engineering Consultants, Inc., Taiwan—39
	Tron Energy Technology Corp.—55
Zhu-Chang Engineering Consultants Co.,Ltd—59	

BES Engineering Corporation



Company Information

Year Established / 1950 **Annual Sales (US\$) /** 307 million dollars

Certification or Awards / **Construction Quality Awards** 2013 14th Gold Road Award
2012 13th Gold Road Award

Safety & Health Awards 2014 Nominee, Public Construction Gold Safety & Health Award
2013 Public Construction Gold Safety & Health Award

URL / https://www.bes.com.tw/index_3.php

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No. of Employees / 800

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Overseas Offices (by Country) / Dubai, Kingdom of Saudi Arabia, State of Kuwait, Republic of Costa Rica

Completed by / Anne Su **Contact info /** anne.su@bes.com.tw

Service/ Solution

Name of Service/ Solution

Descriptions

Industrial Estate

BES is commissioned by the Industrial Development Bureau, and MOEA to develop industrial parks in Taiwan. The main business consists of five areas: Fundraising and Development, Land Acquisition, Development and Construction, Market and Trade Promotion, Maintenance and Management.

Construction

BES Engineering Co. established its presence in Taiwan more than six decades ago. Since then, we've been engaged in various public works and civil construction, such as 10 major construction projects, 6-year national construction plans, 12 I-Taiwan projects, etc. Our project contracts include bridges, tunnels, harbors, airports, rapid transit, high-tech factories, hospitals and fine residences, among many others. Throughout these construction processes, we have accumulated solid technical and professional experience and nurtured many excellent engineers. After privatization, we continue to refine our competitiveness, find more new talent, and work hard. We hope to continue to set the standard of quality for the domestic construction industry for the next six decades.

Development

In addition to civil engineering, BES has a wealth of expertise and experience in construction work, including high-rise buildings, fine residences, shopping malls, office buildings, factories, hospitals, schools, stadiums, large-scale community development projects, etc. Possessing cutting-edge, solid and comprehensive capabilities, BES provides full-fledged construction services that earn the owners great reputation and trust.

Calvin Consulting Engineers

Company Information

Year Established / 2003
 Annual Sales (US\$) / 400,000
 E-mail / calvin@calvin80.com
 No. of Employees / 6
 Tel / +886-2-2885-0700
 Fax / +886-2-2885-2700
 Overseas Offices (by Country) / Myanmar

Completed by / Calvin Chang
 Contact info / calvin@calvin80.com

Service/ Solution

Name of Service/ Solution	Descriptions
Engineering Service	Civil Engineering · Structural Engineering Building · Highway · Bridge · Airport Planning · Design · Supervision

Project Records

Architectural Projects

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month
140 Town Houses Taoyuan	Structural Design	Taiwan	1999
Cardinal Tien Hospital Xindian	Structural Design	Taiwan	1999
Cardinal Tien Hospital Yung-Ho	Structural Design	Taiwan	2001
Catholic, Park Kaohsiung	Structural Design	Taiwan	2004
Tzu Chi Town Hall, Sanchong	Structural Design	Taiwan	2005
Hangar CCK Airport, Taichung	Structural Design	Taiwan	2007
1000-House Relocation after 88 Flood, Kaohsiung	Structural Design	Taiwan	2009
Tzu Chi Primary School, Kaohsiung	Structural Design	Taiwan	2010
Ching Luh Shoes Co, Ho Chi Minh	Structural Design	Vietnam	2013
AIT (American Institute in Taiwan) New Office, Taipei	Inspection	Taiwan	2014
Yangon International Airport T1 Terminal Roof	Structural Design	Myanmar	2014
KBK Office Building (12F/B1), Yangon	Structural Design	Myanmar	2014
UPG Office Building (12F/B2), Yangon	Structural Design	Myanmar	2014
MEngC (Myanmar Engineering Council) Building (8F), Yangon	Structural Design	Myanmar	2015
Shopping Mall, (3F/B1) Yangon	Structural Design	Myanmar	2015
Hlaine Tet Hotel (8F), Yangon	Structural Design	Myanmar	2017
Kian Joo Can Factory Thilawa, Yangon	Structural Design	Myanmar	2017

Architectural Projects

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month
HL Tower (12F/B1), Yangon	Structural Design	Myanmar	2017
Bird Nest Café, Tamsui	Structural Design	Taiwan	2017
Tzu Chi Donated Hospital (3F) ,Taitung	Structural Design	Taiwan	2017
MTT Factory Strengthening, Yangon	Structural Design	Myanmar	2018
Guanyin Buddha Statue (27m/B1) Shulin	Structural Design	Taiwan	2018
Thu Mingalar Apartment (8F/B1) Yangon	Structural Design	Myanmar	2019
Lab & Dormitory (9F) Pantanaw	Structural Design	Myanmar	2019
4 River Tower (18F/B2) Yangon	Structural Design	Myanmar	2019
Taichung Convention Center Taichung	Steel Construction Consultant	Taiwan	2019
Haiming Temple Structural Strengthening Shulin	Structural Design	Taiwan	2019

Bridge Projects

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month
Pedestrian Bridge Sanchong, Taipei	Bridge Design & Construction Supervision	Taiwan	1996
Pedestrian Bridge Shimen, Taipei	Bridge Design & Construction Supervision	Taiwan	1996
Ganyuan Bridge Phase 1 - Ramp Taipei	Bridge Design	Taiwan	1998
Heping Bridge Keelung, Taiwan	Bridge Design	Taiwan	2001
Pedestrian Bridges Xindian, Taipei	Bridge Design & Construction Supervision	Taiwan	2002

Bridge Projects

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month
Pedestrian Bridges Banqiao, Taipei	Bridge Design & Construction Supervision	Taiwan	2002
Rainbow Bridge Penghu	Bridge Design	Taiwan	2002
500m Underpass Kinmen	Bridge Design	Taiwan	2003
Jian-Fu Bridge Xinzhuang	Bridge Design & Construction Supervision	Taiwan	2003
2 Pedestrian Bridges Xinzhuang, Taipei	Bridge Design & Construction Supervision	Taiwan	2004
Tamkang University Bridge Yilan	Bridge Design	Taiwan	2004
High Speed Rail Station Link (1000m Four-Lane Highway), Taoyuan	Highway Design	Taiwan	2007
Ganyuan Bridge Phase 2 - Widening Taipei	Bridge Design	Taiwan	2007
Xizhou Bridge Pier Re-Construction Yunlin & Changhua	Construction Design	Taiwan	2009
East Coastal Highway Yilan	Highway Design	Taiwan	2010
Green Hill Bridge Wanli, Taiwan	Bridge Design	Taiwan	2012
Pedestrian Bridges Xindian, Taipei	Bridge Design & Construction Supervision	Taiwan	2015
Bridge Wanli, Taiwan	Bridge Design	Taiwan	2018
Pedestrian Bridge Xindian	Bridge Design & Construction Supervision	Taiwan	2018
Panyantaw Creek Bridge Mandalay	Bridge Design	Myanmar	2019

Airport Projects

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month
Airplane Arresting System Taipei, Taiwan	Design & Construction Supervision	Taiwan	2010

CECI Engineering Consultants, Inc., Taiwan



Company Information

Year Established / 2007 **Annual Sales (US\$) / 140,040,000**
Certification or Awards / • ISO 9001 certification for engineering planning, design, construction supervision, construction management and information technology and systems
 • Additional information concerning CECI's accreditations as well as award recognitions is available upon request
URL / <https://www.ceci.com.tw/> **E-mail /** ob@ceci.com.tw
No. of Employees / 1,800 **Tel /** +886-2-8797-3567
Fax / +886-2-8797-3568
Overseas Offices (by Country) /
 • Representative Offices in Indonesia, Malaysia and Vietnam
 • Subsidiary Office in Malaysia
 • Project Office in the Kingdom of Eswatini

Service/ Solution

Name of Service/ Solution

Engineering Consulting Services

Descriptions

Studies, investigations, planning, design, construction supervision and project management of all types of transportation, communications, civil engineering and related infrastructure projects, including those for:

- Highways and Freeways
- Railways and High Speed Rail
- Rapid Transit Systems
- Airports and Harbors
- Bridges and Structures
- Tunnels and Geotechnical Engineering
- Electrical and Mechanical Engineering Facilities
- Environmental Engineering Facilities
- Hydraulic and Power Engineering Facilities
- Urban Planning and Land Development
- Information Technology and Systems
- Traffic Control and Intelligent Transportation Systems
- Public-Private-Partnership (PPP) Projects

Overseas Project Records

Project Name	Type of Services	Country	Start	Finish	Participation Method	Client*	Contract Value(US\$)
Passenger Terminal and Cargo Building at the new Sikhuphe International Airport	Design and Construction Supervision	Eswatini	06/2008	04/2012	Prime	MEPD	2.187M
Rehabilitation of the Outpatient Department (OPD) of the Mbabane Government Hospital	Design and Construction Supervision	Eswatini	11/2015	on-going	Prime	MOH	3.000M
Biotechnology Park Land Development	Feasibility Study and Master Planning	Eswatini	04/2008	12/2010	Prime	RSTP	0.500M
Biotechnology Park Land Development	Design	Eswatini	07/2010	06/2011	Prime	MICT	4.000M
Biotechnology Park Land Development	Construction Supervision	Eswatini	09/2011	05/2016	Prime	MICT	3.300M

Project Name	Type of Services	Country	Start	Finish	Participation Method	Client*	Contract Value(US\$)
Service Centre of a Biotechnology Park Land Development	Design and Construction Supervision	Eswatini	02/2014	on-going	Prime	MICT	2.300M
Infrastructure Development of an Innovation Park Land Development	Master Planning	Eswatini	07/2016	03/2019	Prime	RSTP	0.650M
Innovation Park Land Development	Design and Construction Supervision	Eswatini	07/2017	on-going	Prime	RSTP	3.200M
Establishment of National Laboratories	Preliminary Planning	Eswatini	06/2019	on-going	Prime	RSTP	0.620M
Delhi Mass Rapid Transit System BC-16 Contract	Design	India	03/2007	04/2011	Designer	CEC	1.667M
Twelve Provinces Bridge Replacement and Rehabilitation Project (Team A)	Construction Supervision	Indonesia	06/1997	12/2002	Prime	MPWPH	4.865M
Regional Team (Central Region) of the Eastern	Construction Supervision	Indonesia	04/2002	06/2006	Prime	MPWPH	1.627M
Kalimantan Region Road Rehabilitation 2 Project (RR2P)	Construction Supervision	Indonesia	04/2007	12/2010	Prime	MPWPH	2.164M
Reconstruction of Calang — Meulaboh National Road Project	Construction Supervision	Indonesia	01/2012	12/2012	JV Partner	MPWPH	1.038M
Non-Metropolitan Roads of Strategic Roads Infrastructure Project (SRIP)	Construction Supervision	Indonesia	03/2009	05/2014	Prime	MPWPH	5.547M
Plant Structures and Equipment at Bogasari Flour Mill in Jakarta	Investigation and Evaluation	Indonesia	05/2013	12/2014	Prime	TTCC	0.850M
Regional Team (Central Region) of the Eastern Indonesia Region Transport Project (EIRTP)	Construction Supervision	Indonesia	11/2013	08/2018	Prime	MPWPH	4.328M
Plant Structures and Equipment at Bogasari Flour Mill in Surabaya	Investigation and Evaluation	Indonesia	06/2015	06/2017	Prime	TTCC	0.800M
Jakarta Mass Rapid Transit (MRT) CP106 Contract	Design	Indonesia	07/2013	12/2019	Designer	SMCC-HK	3.358M
Jakarta Mass Rapid Transit CP101/102 Contract	Third Party Design Verification	Indonesia	12/2013	11/2019	3PDV	Tokyu-Wika	0.735M
Cisandawu Tollroad Project (Phase II)	Construction Supervision	Indonesia	09/2016	on-going	Prime	MPWPH	4.650M
Jakarta Light Rail Transit (LRT) Corridor 1 Package P102	Independent Design Checking	Indonesia	12/2016	on-going	IDC	Wijaya	1.600M

Project Name	Type of Services	Country	Start	Finish	Participation Method	Client*	Contract Value(US\$)
Jakarta Jabodebek Light Rail Transit (LRT) Trackwork	Independent Design Checking	Indonesia	04/2018	on-going	IDC	PT Adhi Karya	0.600M
Accelerating Infrastructure Delivery through Better Engineering Services Project—PPC Package 4	Design	Indonesia	01/2019	on-going	JV Partner	MPWPH	3.030M
Kuala Lumpur Mass Rapid Transit (MRT) Line 2 DD7 Contract	Design	Malaysia	03/2017	on-going	Designer	AECOM	7.000M
Landside Facilities & Access Road and Circulation Road for Argyle International	Design and Construction Supervision	St. Vincent and the Grenadines	08/2009	01/2015	Prime	IADC	3.261M
Overall Water Resource Development Plan	Planning	Thailand	12/2007	11/2009	Prime	MNRE	0.625M
Bangkok Mass Rapid Transit Integrated Ticketing Project	Planning	Vietnam	06/2008	03/2009	Prime	ADB	0.662M
Feeder Road Component of ADB Second Road Improvement Project	Construction Supervision	Vietnam	11/1998	09/2002	Prime	PMU.1	1.260M
HCMC to Phnom Penh Highway Improvement Project (Vietnam Component)	Design and Construction Supervision	Vietnam	11/1999	06/2006	Prime	PMU.MT	7.235M
Vietnam Yen Vien to Lao Cai Railway Upgrading Project	Design	Vietnam	11/2008	12/2010	Prime	PMU.Rail	2.621M
Vietnam Vinh Phuc Ba Thien Industrial Park Development Project	Planning	Vietnam	09/2007	03/2013	Prime	Compal	1.050M
Greater Mekong Subregion (GMS) Southern Coastal Corridor Project	Design and Construction Supervision	Vietnam	05/2009	04/2014	Sub-Consultant	SMEC	0.661M
Son Duong Port for Formosa Ha Tinh Steel Mill Project	Planning and Design	Vietnam	09/2009	08/2017	Prime	FHTSP	4.843M
Track Work Engineering of HCMC Metro Line 1	Design	Vietnam	09/2016	on-going	Designer	Chan Chun	1.500M

Note

ADB: Asian Development Bank
AECOM: AECOM Perunding Sdn Bhd
CEC: Continental Engineering Corporation (Taiwan)
Chan Chun: Chan Chun Construction Co., Ltd.
Compal: Compal Electronics, Inc.
FHTSP: Formosa Ha Tinh Steel Corp
IADC: International Airport Development Company Limited, St. Vincent and the Grenadines

MEPD: Ministry of Economic Planning and Development, Kingdom of Eswatini
MICT: Ministry of Information, Communications and Technology, Kingdom of Eswatini
MNRE: Ministry of Natural Resources and Environment, Sao Tome and Principe
MOH: Ministry of Health, Kingdom of Eswatini
MPWPH: Ministry of Public Works and Public Housing, Indonesia
PMU.1: Project Management Unit No. 1, Ministry of Transport, Vietnam
PMU.MT: Project Management Unit My-Thuan, Ministry of Transport, Vietnam
PMU.Rail: Railway Project Management Unit, Ministry of Transport, Vietnam

PT Adhi Karya: PT Adhi Karya
RSTP: Royal Science and Technology Park, Kingdom of Eswatini
SMCC – HK: Sumitomo Mitsui Construction Co., Ltd. and Hutama Karya (Persero) Joint Operation
SMEC: SMEC International Pty. Ltd, Australia
Tokyu-Wika: Tokyu-Wika Joint Operation
TTCC: PT. Ting Tai Konstruksi Indonesia
Wijaya Karya: Wijaya Karya / Jakarta Propertindo

Cen Cho Engineering Consulting Co., Ltd.



Company Information

Year Established / 2011
Annual Sales (US\$) / 600,000
URL / <http://www.cencho.com.tw/about.asp>
E-mail / cc@cencho.com.tw **No. of Employees /** 20
Tel / +886-3-468-1502 **Fax /** +886-3-284-0256
Overseas Offices (by Country) / Yun-nan(China), Manila(Philippines)

Completed by / Howard Lin **Contact info /** howard940085@gmail.com

Service/ Solution

Name of Service/ Solution	Descriptions
Structural Calculation	Structural analysis of buildings and bridges, which could reduce damages to people and property.

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value (US\$)
National Library of the Philippines	Structural Calculation	Philippines	2013/08	Subcontractor	National Library of the Philippines	15,000
Philippine National Oil Co.	Structural Calculation	Philippines	2016/12	Subcontractor	Philippine National Oil Co.	15,000
EMC Chamber	Structural Calculation	USA	2018/08	Subcontractor	Chaintek Instruments Limited Structural	6,830
BFW Treatment System	Structural Calculation	USA	2019/09	Subcontractor	Taiwan Nikkiso Co., Ltd.	4,230

Company Information

Year Established / 1979 **Annual Sales (US\$) /** 2.1billion

Certification or Awards / ISO9001,ISO14001,ISO45001,CNS45001,Included in DJSI component for five years in a row,third place in the Engineering and Construction Industry category, retaining top place in the Economic and Social Dimension

URL / www.ctci.com/ **E-mail /** ctcigrp@ctci.com **No. of Employees /** 7319 **Tel /** +886-2-2833-9999 **Fax /**+886-2-2833-8833

Overseas Offices (by Country) / USA, Kingdom of Saudi Arabia, Qatar, United Arab Emirates, Oman, China, India, Japan, Thailand, Vietnam, Philippines, Malaysia, Singapore, Indonesia

Completed by / Steward Kuo **Contact info /** steward.kuo@ctci.com.tw

Service/ Solution

Name of Service/ Solution

Descriptions

Feasibility Study (FS) and Front-End Engineering Design (FEED)

FS coverage: Site investigation, Scenario assessment, Environmental impact statement/assessment (EIS/EIA), Cost and profitability forecasting, Modeling and system analysis
FEED coverage: Process flow diagrams, Material selection diagrams, Piping and instrumentation diagrams, Utilities and offsite, Process data sheets, Process descriptions, Operating manuals, Risk assessments, Plot plan, Fire protection, Hazardous area classification drawing, I/O accounts

Engineering

Project engineering management, HSE engineering, Piping engineering, Electrical engineering, Instrumentation and control engineering, Mechanical and equipment engineering, Process engineering, Civil engineering (incl.structural, geotechnical, architectural engineering), Cleanroom engineering, Nuclear engineering, System integration engineering, Landscaping

Procurement

Bidder pre-qualification, Inquiry and tender documents, Bid evaluation contract administration, Equipment and materials procurement, Expediting, inspection and testing, Shipping and insurance, Tax planning and application

Fabrication

CTCI fabrication staff are trained experts in engineering design, quality assurance and quality control, and hold the following certifications: Certified by ASME to manufacture U, U2, PP and S stamped products
Certified by the American National Board of Boiler and Pressure Vessel Inspectors to carry the 'R'stamp
Certified for pressure vessels, and nuclear products
Certified Quality NDE inspectors (Level 1, 2, 3) and AWS certified welding inspectors (CWI)

CTCI has nearly three decades of experience fabricating a range of equipment for customer specifications for hydrocarbon, industrial, and power markets, particularly the nuclear industry. Our specialist areas of knowledge include, but are not limited to: Towers and drums, Heat exchangers, Air coolers, Reactors, Thermo plates, Surface condensers, silos, cryogenic storage tanks, heaters and furnaces, ducts and stacks, cold boxes, HRSG for power plants, nuclear power plant, facilities, RPV internal components assembly and welding, portable storage tanks for nuclear spent fuel, pre-fabricated piping and installation, heavy pressure vessel lifting, large storage tanks.

CTCI

CTCI
Discover Reliable

Service/ Solution

Name of Service/ Solution	Descriptions
Construction	Construction management, civil and construction, steel structure fabrication and erection, equipment transportation, rigging and installation, equipment transportation, rigging and installation, plumbing fabrication, erection and testing, electrical installation, cabling and energizing, Instrument installation, wiring and function testing, painting and insulation, pre-commissioning
Commissioning	Commissioning management, plant inspection, test runs of rotary machinery, initial utility system start-up, chemical/ catalyst loading, functional test of emergency shutdown system/distributed control system, tight test, initial process system test run, preservation, start-up/ initial operation, performance test
Operation & Maintenance	Our plant maintenance service focuses on maintenance strategy, maintenance planning and management, maintenance implementation and repair execution to ensure production efficiency, equipment integrity, facility security and safety. Our maintenance service also includes: Installation, alignment and testing (mechanical, instrumentation, pumps and pipes) Equipment replacement (e.g. cracking furnace, pipes, bolts), corrosion wax-tape replacement and protective coating application Overhaul/ removal and installation/reinstallation (e.g. reactor upper steel and cyclones, internal parts) Safety measures (e.g. fireproofing, electrical wiring and testing).

Overseas Records

Project Records

Project Name	Type (Goods, Services, Construction)	Country	Year/Month	Prime or Subcontractor	Agency	Estimated Value (US\$)
SPP Project	EPCC	Thailand	2016	Prime Contractor	TOP SPP Company Limited	300M
Van Phong 1 Coal Fired Power Plant Project	EPCC	Vietnam	Progressing	IHI / Toshiba / CTCI / Doosan Consortium	Sumitomo Corporation	390M
Kimanis Combined Cycle Power Plant Project	EPCC	Malaysia	2014	CTCI / Synerlitz / SCHB Consortium	Kimanis Power Sdn. Bhd.	330M
Track 4A, 1440MW Combined Cycle Power Plant	EPCC	Malaysia	Progressing	CTCI and GE Consortium	Southern Power Generation Sdn. Bhd	450M
Downtown Line Stage 3 Trackwork Project	EPC	Singapore	2017	Prime Contractor	Land Transport Authority	50M
Thomson Line Trackwork Project	EPC	Singapore	Progressing	Prime Contractor	Land Transport Authority	75M
Gali Batu Depot Trackwork Project	EPC	Singapore	Progressing	Prime Contractor	Land Transport Authority	7M
Power Supply and Distribution System of Light Rail Transit Line 3 (LRT3)	EPCC	Kingdom of Saudi Arabia	Progressing	CTCI CMCE JV Sdn Bhd	Prasarana Malaysia Berhad	8.5M
YNP Ti-sponge Project	EPC	Kingdom of Saudi Arabia	2017	JV of Chiyoda & CTCI	Advanced Metal Industries	147M
Annealing and Coating Line project	EPC	India	2016	Prime Contractor	China Steel Corp. India Pvt. Ltd.	72M

Darcy Engineering Consultants Co., Ltd. *Darcy*

Company Information

Year Established / 2010

Annual Sales (US\$) / 1,643,000

Certification or Awards /

1. Yuan Ye Awards
2. Improved diversion equipment for underground flow
3. Curved watercourse intake and distilling system

E-mail / Link339@gmail.com

No. of Employees / 14 **Tel /** +886-7-215-2225

Overseas Offices (by Country) / N/A **Project Records /** N/A

Completed by / HSU HSIAO CHEN

Contact info / chcolacheng@gmail.com

Service/ Solution

DARCY provides project development, investment, consultancy, feasibility study, engineering, procurement, and construction management services for the water supply market. Our expertise extends across water resources planning, water intake engineering, plumbing engineering and water treatment plants. This reputation has been achieved by implementing more than 30 projects in Taiwan. The company is trusted by the government and Taiwan Water Corporation.

Expertise

Water resources assessments and planning

Water intake engineering

Piping engineering

Water treatment plants

Descriptions

Surface water, groundwater, hyporheic water and sea water

River intake, radial well and collecting gallery

DMA planning, cost analysis and facility design

Engineering, procurement and construction management

Ding Sheng Green Energy Technology Co., Ltd.

Company Information

Year Established / 2019 **Annual Sales (US\$) /** 6.5 million
URL / <http://www.radium.com.tw/> **E-mail /** evans0602@radium.com.tw
No. of Employees / 50 **Tel /** +886-2-7733-8888 **Fax /** +886-2-2555-3900
Overseas Offices (by Country) / N/A **Project Records /** N/A

Completed by / Evans Chen

Contact info / evans0602@radium.com.tw

Service/ Solution

Name of Service/ Solution

Descriptions

Wastewater treatment plants

Systems for various industrial wastewater treatment, reusable wastewater recycling, etc.

Sewage treatment plants

Systems for sewage treatment for cities, communities, hospitals, hotels, buildings, etc.

Air pollution control plants

System for dust collecting, flue gas desulfurization, deodorization and chemical waste gas treatment, etc.

Solid waste treatment plants

Incineration, solidification and recycling equipment for garbage, sludge and industrial waste, etc.

Wastewater and sewage treatment plants service in maintenance

Solid waste treatment plants service in maintenance

FETC International Co., Ltd.

Company Information

Year Established / 2017
Annual Sales (US\$) / 65 million
Certification or Awards / <https://www.fetci.com/en/about/10000563>
URL / <https://www.fetci.com/en>
E-mail / ellentsai@fetci.com
No. of Employees / +700
Tel / +886-2-7710-6666
Fax / +886-2-7717-0015
Overseas Offices (by Country) / TBD

Completed by / Ellen Tsai

Contact info / ellentsai@fetci.com

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Estimated Value (US\$)
Public Private Partnership for Operation and Maintenance of Highway M6 and M81	Intelligent Transportation (ETC Construction, Traffic Management)	Thailand	2019~	subcontractor	TBD
Nationwide Highway ETC Construction	Intelligent Transportation (ETC Construction)	Kazakhstan	2020~	Consortium/Prime	TBD
Selection of Vendor for Pilot of Multi-Lane Free Flow Tolling Using Radio Frequency (RFID) Technology System on Delhi-Chandigarh Project Corridor at NH-44 ON Design, Build and Operate Basis - 2nd Call	Intelligent Transportation (ETC)	India	2020/7	Consortium	TBD

Service/ Solution

Name of Service/ Solution	Descriptions
Consultancy Services	Tolling Service & Financial Planning Interoperability & Migration Planning MLFF Total Solution Planning Digital Infrastructure Planning(ETC1.0-ETC5.0) PPP Model Advisory Smart Highway & Smart City Planning Vehicle eID Policy Planning
RFID Solutions	Barrier-based Tolling Free-flow Tolling Convergent Smart Highway Road Pricing Smart Parking Fleet Management Border Control Road Tax
Products	RFID Tags RFID Reader RFID Antenna LPR Camera AI LPR Engine Lidar Detector Intelligent Lane Controller
Implementation & Operation Service	Tolling Business & Process Design End to End Technical Architecture Design System Implementation & Testing Organization Readiness Proof of Service & Business(POS & POB) Program & Project Management EPC(Engineering Procurement & Construction) Outsourcing Operation

GIBSIN Engineers, Ltd

Company Information

Year Established / 1979

Annual Sales (US\$) / 16,836,000

Certification or Awards / ISO 9001 : 2015

URL / www.gibsin.com.tw **E-mail** / gibsin@gibsin.com.tw

No. of Employees / 283 **Tel** / +886-2-2916-0061 **Fax** / +886-2-2916-0001

Overseas Offices (by Country) / N/A

Completed by / James Tseng

Contact info / cct@gibsin.com.tw

Tel / +886-2-2916-0061 Ext.: 702

Service/ Solution

Name of Service/ Solution

Owner's Engineer (OE) or Independent Engineer of the Financial Group for a fossil fuel power plant project.

Design for Equipment suppliers for fossil fuel power plant project.

Design for construction contractor (EPC) for fossil fuel power plant project.

Descriptions

Basic / Preliminary Engineering and Detailed Design

Engineering and Detailed Design

Engineering and Detailed Design

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value (US\$)
MPGC, 4 × 150MW, CFB Project	Design for Equipment Suppliers	Philippines	2019	Subcontractor	FHI	5,800,000
RECE 650MW, Combined -Cycle Project	Design for Construction Contractor (EPC)	USA	2019	Subcontractor	AECOM	664,000
South Bangkok, 1 × 1000MW, Coal-fired, Ultra -Supercritical Project	Design for Construction Contractor (EPC)	Thailand	2019	Subcontractor	Aurecon	1,787,790

HT Green Tech. Co.,Ltd

HTGreen 祥泰綠色科技有限公司
HT Green Technology Co., Ltd

Company Information

Year Established / 2013 **Annual Sales (US\$)** / 200,000

Certification or Awards / Chairman has APEC and International Professional Engineer

URL / www.htgreen.com.tw **E-mail** / frank@awg.com.tw

No. of Employees / 4 **Tel** / +886-2-8772-8122 **Fax** / +886-2-8772-7929

Overseas Offices (by Country) / N/A **Project Records** / N/A

Completed by / Frank Lin (Chairman)

Contact info / +886-9-3564-3595

Service/ Solution

Name of Service/ Solution

Ceramic membrane bioreactor (MBR) for wastewater treatment and water recycling

Innovation of Biodiagnosis Technology in Wastewater Treatment and Water Environment

Advanced UAS taking water samples and detect water quality directly

Descriptions

Five successful cases have been carried out, including oil, chemical, food industry, special chemical, detergent industry, and car manufacturing factories.

The combination of cloud data processing and IOT technology for remote control and diagnosis of wastewater treatment facilities makes good performance steady.

We have several successful cases on reservoirs and rivers.

LIMING Engineering Consultants Co.,Ltd

Company Information

Year Established / 1984
Annual Sales (US\$) / 17 million
Certification or Awards / 2018 Golden Quality Award
URL / www.limi.com.tw **E-mail /** limi@ms7.hinet.net
No. of Employees / 400 **Tel /** +886-4-2320-8051
Fax / +886-4-2320-8025
Overseas Offices (by Country) / Vietnam, Cambodia

Contact info / +886-4-2320-8051

Service/ Solution

Name of Service/ Solution

Hydraulic Engineering
 Roads and Bridges Engineering
 Sewer and Pipework Systems
 Water and Soil Conservation
 Environmental Protection Engineering
 Construction Employment and Staffing Services

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Agency	Estimated Value (US\$)
Design and construction supervision of the Taipei Economic and Cultural Office in Ho Chi Minh	Service	Vietnam	2011	Taipei Economic And Cultural Office, HCM	136,000
Formosa Ha Tinh Steel Coporation Soil Settlement Settlement Data Analysis Project	Service	Vietnam	2017	Formosa Ha Tinh Steel Corporation	330,000
Formosa Ha Tinh Steel Coporation Soil Settlement Monitoring Project	Service	Vietnam	2016/3	Formosa Ha Tinh Steel Corporation	600,000

Metal Industries Research & Development Center



Company Information

Year Established / 1963

Annual Sales (US\$) / 100 million

Certification or Awards / CNS 15233 Fixtures of roadway lighting with light emitting diode lamps(enumeration)

URL / www.mirdc.org.tw **E-mail /** scwang@mail.mirdc.org.tw

No. of Employees / 820 **Tel /** +886-7-351-3121

Fax / +886-7-352-1528

Completed by / Shi-Chin Wang, Hsuan Yeh

Contact info / +886-2-2701-3181#701, #709

Service/ Solution

Name of Service/ Solution	Descriptions
Turnkey Solution	Turnkey planning / engineering feasibility analysis / risk assessment / market surveys
Circular Economy	Waste recycling / reuse / green issues / green city planning and integration and planning of plant equipment and monitoring technologies
Natural Resources	Water resources - turnkey equipment (including pipelines) and system integration planning
Traditional Manufacturing Plant	Textile / paper / toys/ electronic components, etc.
Energy Saving and Carbon Reduction	Smart city building energy saving system / small power plant supply system / wave elimination, noise reduction, energy consumption technology solution planning and services
Industrial Zone Planning	Planning and support of port road and pile foundation in industrial zone; industrial zone management system (including monitoring system)
Alternative Energy and Components	Solar efficiency conversion / LED planning / PV + LED
Intelligent Energy	Planning and evaluation of hardware included software (including ICT) systems in petrochemical power plants.
Industrial Technical Services	Process technology: casting, forming, bonding, processing, machining and other technologies. Mold technology: design, manufacturing, processing and other technologies. Automation Technology: Institutional and Electronic Control Design and System Integration, Electronic. Detection Technology: Material,Product, System, Safety, System Verification. Management: ISO, MIS, SPC, ERP, SCM, etc.

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value(US\$)
Pilot Projects of LED Streetlight Replacement	Design services	Taiwan	6 months 2012. Jan-2012. Jun	Consultant teamwork case	Bureau of Energy, Ministry of Economic Affairs	3,353,770
Philippine Local Government Water (Water Plant) Project	Services	Philippines	2017.May	Consultant teamwork case	Aqua A-Team	
Mongolian SME Counseling	Factory diagnostic services	Mongolia	2014.Apr	Consultant	Zitop	66,500
Industrial product packaging (corrugated paper) system	Turnkey evaluation case	Mozambique	2014.Dec	Consultant	South Africa Office in Taiwan (referral agency)	4,000

New Control Technology Co., Ltd.



Company Information

Year Established / 2002
Annual Sales (US\$) / 6,700,000
Certification or Awards / ISO17025
 TAF(Taiwan Accreditation Foundation)
URL / <http://www.nctdamper.com/index.php/en/>
E-mail / service@nctdamper.com
No. of Employees / 8
Tel / +886-3-428-4741
Fax / +886-3-468-8643
Overseas Offices (by Country) / Yun-nan (China), Manila (Philippines)

Completed by / Howard Lin
Contact info / howard940085@gmail.com

Service/ Solution

Name of Service/ Solution	Descriptions
Buckling Restrained Braces	When buckling restrained braces under stress and strain, it could achieve a yield point and could not buckle, compared to a traditional steel-bound brace.
Fluid Viscous Dampers	It belongs to a speed-dependent energy dissipation device; Our dampers increase structural damping, and could effectively reduce the structural reaction (displacement, velocity, acceleration). Dampers are economical, stable and efficient passive damping devices that enable energy dissipation with less maintenance. Product maintenance is undertaken by visual inspection every 5 years. The piston-type damper-tubes, which fill into the viscosity fluid when the piston is moved in the inner tube, forcing the fluid to flow between chambers through the orifice. This back and forth movement dissipates seismic energy by converting kinematic energy to heat.
AI Structure Health Monitoring System	Through the exclusive six-axis acceleration speed sensor, real-time correct relative system information, professional system identification is carried out to calculate, and combine Big Data technology, real-time construction is provided to construct building structures that respond to parameters (frequency, damping ratio, etc.), and collaboration with the cloud website interface, allows you to know the structure condition.
Structural analysis	Structural analysis of buildings and bridges which could reduce damage to people and property.

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value (US\$)
New construction project in Kunming University of Science and Technology	Fluid Viscous Dampers	China	2014/12	Subcontractor	Kunming University of Science and Technology	95,500
New construction project in Dali hospital	Fluid Viscous Dampers	China	2014/12	Subcontractor	Dali hospital	149,000
New construction project in An-Ning hospital	Fluid Viscous Dampers	China	2014/08	Subcontractor	An-Ning hospital	97,000
National Library of the Philippines	Structural analysis	Philippines	2013/08	Subcontractor	National Library of the Philippines	15,000
Philippine National Oil Co.	Structural analysis	Philippines	2016/12	Subcontractor	Philippine National Oil Co.	15,000

Newtain Consulting



Company Information

Year Established / 2010
Annual Sales (US\$) / 330,000
URL / newtain.com **E-mail /** shinyue99@gmail.com
No. of Employees / 5
Tel /+886-2-2713-3001
Fax /+886-2-2713-3201
Overseas Offices (by Country) / New Zealand

Completed by / David Wu
Contact info / +886-2-2713-3001

Service/ Solution

Name of Service/ Solution

Structure Vibration Control

Wind Resistance Design and Seismic Design

Project Management

Descriptions

Supply and installation of structural vibration control equipment and structural monitoring system

Includes wind and seismic design of new buildings and seismic reinforcement design of existing buildings

- Client Representation
- Feasibility Analysis
- Development Management
- Consultant Selection & Engagement
- Design & Consent Management
- Tendering & Contract Management

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value (US\$)
Project management for the establishment of two in situ earthquake rapid reporting demonstration	Service	New Zealand	2019/6	Prime	National Center for Research on Earthquake Engineering	92,000

Phototroph Engineering Consultants, Inc., Taiwan



Company Information

Year Established / 2010

Annual Sales (US\$) / 3,780,000

Certification or Awards / 2019 IFLA ASIA-PACIFIC

URL/ www.phototroph.tw

E-mail / Photo.troph@msa.hinet.net

No. of Employees / 75

Tel / +886-2-2721-2456

Fax / +886-2-2721-7530

Overseas Offices (by Country) / Vietnam

Completed by / Hsu Sz You

Contact info / +886-2-2721-2456

Service/ Solution

Name of Service/ Solution

Environmental planning, urban design and planning, landscape planning and design, tourism and recreation planning, land development, industrial research, waterfront and ecological planning and design. Participation in investment, business district counseling, rural planning, non-urban land use zoning changes, activities and product design

Descriptions

Phototroph Engineering Consultants Ltd. aims to expand relevant business projects in the environmental field, including environmental planning, urban design and planning, landscape planning and design, tourism and recreation planning, land development, industrial research, waterfront and ecological planning and design. Participation in investment, business district counseling, rural planning, non-urban land use zoning changes, activities and product design. The company as a team is supported by a strong, complete, flexible organization of senior technicians and professionals, supplemented by engineering and technical experts, to provide a comprehensive solutions.

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value (US\$)
M8 Residential Parcel	Design concept, basic design, detailed design, contract book drawing	Hồ Chí Minh , City Vietnam	2018	Subcontract	Phu My Hung	40,000
CS1-2 Crescent Mall Stage 2	Design concept, basic design, detailed design, contract book drawing	Hồ Chí Minh , City Vietnam	2018	Subcontract	Phu My Hung	2,000
S18-2-1 Landscape Project	Design concept, basic design, detailed design, contract book drawing	Hồ Chí Minh , City Vietnam	2018	Subcontract	Phu My Hung	5,000
LSG Dragon Riverside	Design concept, basic design	Hồ Chí Minh , City Vietnam	2018	Subcontract	INDOCHINA CONSTRUCTION	60,000
Adjust the general planning of Chau Doc City to 2035 and vision to 2050	City planning	Vietnam	2018	Subcontract	Sở xây dựng tỉnh an giang	70,000
The Holy Mother Temple	City planning	Chau Doc, Vietnam	2019	Subcontract	SỞ XÂY DỰNG TỈNH ANH GIANG	6,000
TTG	Design concept, basic design	Hanoi, Vietnam	2019	Subcontract	Holding	19,000
Gelex	Design concept, basic design, detailed design,	Ho Chi Minh City, Vietnam	2019	Subcontract	Công ty Cổ Phần Dây Cáp Điện Việt Nam	10,000
Hoa Lam D2D3	Design concept, basic design, detailed design,	Ho Chi Minh City, Vietnam	2019	Subcontract	Hoa Lam	17,800
The HOPE Residence Hanoi	Basic design, detailed design, contract book drawing	Hanoi, Vietnam	2019	Subcontract	Công ty cổ phần Xây dựng Central	9,000

Sinotech Engineering Consultants, Ltd.



Company Information

Year Established / 1993

Annual Sales (US\$) / 109,672,314

Certifications and Awards /

Certification ISO 9001 Certificate

- Award**
- 1) Received the FIABCI-Taiwan Real Estate Excellence Awards-Golden Quality Award for 2018
 - 2) Received the Public Construction Golden Quality Awards for three consecutive years
 - 3) Received the Public Construction Golden Safety Award for two consecutive years

URL / <https://www.sinotech.com.tw/tc/index.aspx>

E-mail / sinotech@sinotech.com.tw

No. of Employees / 1,493 **Tel /** +886-2-2769-8388

Fax / +886-2-8761-1596

Overseas Offices (by Country) /

Indonesia 1) PT. Sinotech Engineering Indonesia
2) Sinotech Indonesia Office

Macau Sinomac Engineering Consultants, Ltd.

China 1) Sinotech Engineering Consultants (Fujian) Ltd.
2) Changjiang Sinotech Engineering Consultants (Pingtan) Ltd.

Timor Leste Sinomac Engineering Consultants, Ltd.

Completed by / Liew Khai Jing **Contact info /** +886-2-2769-8388

Service/ Solution

Name of Service/ Solution

Descriptions

Investigation and research services

1. Site reconnaissance and investigation
2. Program study and comparison
3. Market surveys, economic analysis and financial planning
4. Topographical, geological, hydrological, meteorological and oceanographic surveys
5. Soil and rock mechanics experiments and studies
6. Environmental impact assessment
7. Seismic analysis and evaluation
8. Inspection and assessment of bridges and structures
9. Inspection and assessment of dams and installations

Planning

1. Feasibility studies
2. Evaluation and analysis of existing designs and facilities
3. Cost estimates and evaluation of capital requirements
4. Construction planning
5. Project studies
6. Detailed planning

Design

1. Preliminary design
2. Basic design
3. Structural dynamic analysis
4. Detailed design
5. Construction specifications
6. Equipment/facilities specifications
7. Construction scheduling
8. Quantity take-off and cost estimates
9. Tenders and contract documents
10. Review of shop drawings
11. Revision of orders

Construction supervision

1. Construction supervision
2. Monitoring of site safety
3. Review of contractor's construction plans
4. Inspection of contractor setup and survey
5. Inspection of construction quality
6. Shop and material inspection
7. Witness and evaluation of material and equipment testing
8. Monitoring and reporting on progress
9. Budgeting and cost controls
10. Final acceptance and certification
11. Quality management and assessment

Service/ Solution

Name of Service/ Solution	Descriptions
Testing and trials	<ol style="list-style-type: none"> 1. Planning and inspection of equipment 2. Review of operational and maintenance manuals 3. Test runs and maintenance 4. Training of operational and maintenance personnel

Project management	<ol style="list-style-type: none"> 1. Review of planning and design 2. Preparation of tender documents 3. Preparation of specifications for equipment and facilities 4. Assistance in tendering and evaluation of tenders 5. Contract administration 6. Assistance in procurement and contract 7. Schedule control 8. Budget and cost control 9. Procurement of turnkey projects and equipment 10. Quality control and quality assurance 11. Assistance in inspection and acceptance
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Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value (US\$)
Technical Assistance Services for Supporting the Implementation of Dam Safety Assurance and Institutional Improvement (DOISP)	Engineering Services	Indonesia	2009/11	Prime	Directorate General of Water Resources- Ministry of Public Works and Housing	USD 687,527 + IDR 20,006,538,452
Consulting Services for Improvement of Participatory Irrigation Management (IoPIM), WISMP-2	Engineering Services	Indonesia	2013/04	Subcontractor	Directorate General of Water Resources- Ministry of Public Works and Housing	USD 271,393 + IDR 228,479,625
Technical Assistance Services for the Preparation for Modernization of the Management of the Jatiluhur Irrigation System Water Resources and Irrigation Sector Management P-2 (WISMP-2)	Engineering Services	Indonesia	2015	Subcontractor	Directorate General of Water Resources- Ministry of Public Works and Housing	USD 644,677 + IDR 1,365,588,928
Upper Citarum Basin Flood Management Sector	Engineering Services	Indonesia	2015	Subcontractor	Directorate General of Water Resources- Ministry of Public Works and Housing	USD 94,106 + DR 67,353,482
Flood Management in Selected River Basins Sector Project	Engineering Services	Indonesia	2017/12	Subcontractor	Directorate General of Water Resources- Ministry of Public Works and Housing	USD 507,540
Dam Operational Improvement and Safety Project Phase 2 (DOISP 2)- Technical Assistance Services for Supporting the Central Project Implementation Unit (CPIU) BOP-CS-02	Engineering Services	Indonesia	2018/11	Subcontractor	Directorate General of Water Resources- Ministry of Public Works and Housing	IDR 29,501,933,700
Consultancy Services for Project Preparation Consultant (PPC) Firm for Development of the Wadasintang Irrigation System in Central Java Province	Engineering Services	Indonesia	2019/03	Subcontractor	Directorate General of Water Resources- Ministry of Public Works and Housing	USD 93,970 + IDR 60,000,000
Preparation of Seluna River Basin Flood Management Project in Central Java Province	Engineering Services	Indonesia	2019/05	Subcontractor	Directorate General of Water Resources- Ministry of Public Works and Housing	IDR 2,371,536,800
Consulting Services for Construction Supervision of Larisula Irrigation Schemes	Engineering Services	East Timor	2014	Subcontractor	Ministry of Agriculture and Fisheries	USD 261,609
Consulting Services for Construction Supervision of Tono Irrigation Schemes	Engineering Services	East Timor	2014	Subcontractor	Ministry of Agriculture and Fisheries	USD 300,893

THI Consultants Inc.



Company Information

Year Established / 1989

Annual Sales (US\$) / 10,000,000

Certification or Awards / The National Award of Outstanding Small and Medium Enterprises (SME) in 2011

URL/ <http://www.thi.com.tw/>

E-mail / webmaster@thi.com.tw

No. of Employees / 160

Tel / +886-2-2748-8822

Fax / +886-2-2748-6600

Overseas Offices (by Country) / Shanghai, Macau

Filled out by / Lin, Chih-Hao

Completed by / +886-2-2748-8822 #507

Service/ Solution

Name of Service/ Solution

Descriptions

Intelligent Transportation Systems (ITS)

- System Architecture Planning — ITS Transportation Planning and Smart City Development.
- Advanced Public Transportation System-Planning and Design of Public Transportation Management and Real-Time Information System.
- Advanced Traffic Management System — Planning and Design of Transportation Management Strategy and Intelligent Traffic Signal Traffic Signal Control.
- Advanced Traffic Information System-Planning and Design of Traffic Information Announcement and Value-added Service.
- Electronic Toll Collection System-Planning and Design of Electronic Ticket Integration and eTag Application.
- Commercial vehicle operation construction, management and maintenance of the cross-disciplinary integration system.

Transportation Planning

- Integrated Transportation Planning-Transportation Development Planning for Nation, Region, Urban-and Special District.
- Analysis of Transportation Model Buildings-Macro and Meso Model Buildings and Analysis of Freight and Passenger Demand.
- Planning and Evaluation-of Public Transit Systems-Feasibility Study, Planning-and Benefit Evaluation of Public Transit and Multi-modal Vehicles .
- Road System Planning and Evaluation-Feasibility Study, Planning, and Benefit Evaluation of Freeway, Highway-and Urban Roads .
- Policy Study and Communication-Communication with the Public, Development and Management Policy Planning of Different Transportation Modes.
- Model Building and Analysis of Energy Consumption-Road Model Building and Application Analysis of Energy Consumption and Air Pollution.

Traffic Engineering

- Traffic Impact Assessment —Assessment of Site Development Impact and Plan for Improvement Strategy.
- Simulation and Analysis of Micro Traffic Flow — Dynamic Benefit Evaluation of 3D Simulation of Micro Traffic Flow.
- Virtual Platform of Autonomous Cars — Planning and Analysis of Autonomous Car Simulation Site and Technical Verification.
- Traffic Engineering and Control — Traffic Engineering, Traffic Signal Optimization, and Improvement of Congested Bottleneck Intersection.
- Traffic Maintenance Plan — Traffic Management and Improvement during the Period of Construction and Events.
- Parking Planning — Planning and Design of Parking Lot, Examination of Equipment Efficiency, and Planning of Traffic Flow.

**Name of Service/
Solution**
Descriptions

 Land
Development

- Private Participation in Infrastructure Projects (PIIP) — Feasibility Study, Preliminary Planning, Business Solicitation, Negotiation and Contract Signing.
- Review of Zoning Plan — National Spatial Planning, Newly Constituting or Extending Urban Areas, Overall Review, and Individual Rezoning.
- Rezoning of Non-Urban Land — Development Plan, Business Initiation, Development Permit Application, and Examination Operations .
- Urban Renewal Operations — Urban Renewal Plan, Development and Examination of Urban Renewal Business Plan.
- Land Development Planning — Market Analysis, Planning and Design of Development Alternatives, Review of Development Modes.
- Economic/Financial Planning — Financial Index Analysis, Sensitivity Analysis, Cross-Field Value-Adding, and Fundraising.

 Sustainable
Transportation

- Low-Carbon Community Planning — Integrating Ecosystem into Low-Carbon Community Planning.
- Sustainable Transportation Planning — Planning and Promotion of Green Low-Carbon Transportation and Ecological Community.
- Vehicle Carbon Emission Modeling — Construction and Application of Model of Real-life Energy Consumption and Carbon Emission of Vehicles.
- Strategy of Emission Reduction and Energy Saving — Traffic Greenhouse Gas Modeling and Evaluation of the Policy of Emission Reduction and Energy Saving.
- Assessment of Traffic-related Air Pollution — Evaluation of Vehicle Air Pollution and the Performance of Strategy of Emission Reduction.
- Adaptation for Climate Change — Mechanism for Risk Management of Transportation Equipment under Climate Change Conditions.

 Operation
and
Management

- Study of Transportation Operation Policy — Study of Operation Policy, Planning of Management Mechanism and System .
- Planning of Transit Hub — Development of Hub Equipment-Standards, and Planning of Development Models.
- Planning of Private Participation in Operation — Planning of Private Operating and Managing Transit Hub.
- Transport Operations and Management — Operation of Public Bike and City Transit Hub.
- Planning of Green Transportation Operation — Planning of Building and Operation of Public Bikes.
- Intercity Bus Route Application — Application and Improvement of Bus Routes of Freeways and City Bus Routes.

 Civil
Engineering

- Feasibility Study of Road Engineering - Feasibility Study and Study of New Roads and Existing Road Improvement Construction.
- Planning and Design of Road Engineering — Planning for Road Engineering, Basic Design, Detail Design, Budgeting, and Outsource Document .
- Planning of Interchange Improvement — Planning of New Interchange and Improvement of Existing Interchange.
- Design, Construction and Supervision of Road Engineering — Outsourcing for Government, Supervision and Management of Construction Quality and Progress.
- Construction Management — Management of Transportation Construction and Success Architecture Related Documents and Permits.
- Site Investigation and Analysis — Analysis of Bike Lane Demands and Planning the Construction of Bike Lane Networks and Connections.

 Big Data
Technology

- Application of Big Data Technology —Big Data Analysis and Data Mining of Traffic and Online Public Opinion .
- Construction of a Traffic Database — Storage, Cleaning and Construction of Real-Time Data Traffic, Weather Data, Online Public Opinion, Information and Communication Data.
- Development of Transportation Decision-Making Platform — Review and Decision to Support the Transportation Plan, Planning and Design of the Supporting Platform of Transportation Planning, and Customized Operations.
- Development of a Model for Transportation Evaluation — Big Data Integration, Evaluation Model of GIS and Transportation, Construction of Multiple Assessment Instruments.
- Application of Early Warning Mechanisms for Traffic Management — Application of Traffic Forecasting and Real-Time Information for Traffic Management, Development of Forecast Models and Data Dashboard.
- Development of Transportation Information Products — Development and Management of Transportation and Bus-related Products.

 Town and
Country Planning

- National and Regional Spatial Planning — Comprehensive Strategy Planning of National and Country Spatial Development.
- Urban Planning — Evaluation of Urban Development Strategy and Overall Review of Urban Planning.
- District Planning — Planning, Review and Evaluation of the Development of Urban, Country and Special Districts.
- Tourism Development Planning — Planning and Evaluation of Tourism Development Strategy, Tourism Transportation, Industrial Sites.
- Land Use Planning —Feasibility Study of Land Development, Evaluation of Land Planning, and Land Use Rezoning.
- Evaluation of Project Investments — Evaluation and Planning of Economic Benefits and Financial Benefits of Project Investment.



Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value (US\$)
Study of the Emergency Shelter System in Macau	Technical Services	Macau	2019/5	Prime	Land, Public Works and Transport Bureau (Direcção dos Serviços de Solos, Obras Públicas e Transportes, DSSOPT)	315,000
Study of Tourism Bus Development and Service Improvement Strategy in Xiamen, China	Technical Services	Xiamen,China	2018/10	Prime	Xiamen Transportation Bureau	42,525
Assessment of Land Use Impact on Transportation near Estr. de Dom Maria II in Macau	Technical Services	Macau	2018/6	Prime	Land, Public Works and Transport Bureau (Direcção dos Serviços de Solos, Obras Públicas e Transportes, DSSOPT)	82,656
Traffic Impact Assessment - Environmental Impact Assessment of Waste Incineration Expansion Construction Phase III in Macau	Technical Services	Macau	2018/1	Subcontractor	Directorate of Environmental Protection Bureau (Direcção dos Serviços de Protecção Ambiental, DSPA)	23,986
Environmental Impact Assessment of Waste Incineration Expansion Construction Phase III in Macau	Technical Services	Macau	2017/12	Subcontractor	Directorate of Environmental Protection Bureau (Direcção dos Serviços de Protecção Ambiental, DSPA)	7,333
Advisory services on the optimization of public bus back-end systems	Technical Services	Macau	2017/8	Prime	Transport Bureau (Direcção dos Serviços para os Assuntos de Tráfego, DSAT)	62,332
Advisory Services on Comprehensive Infrastructure Improvement-Planning and Implementation of BRT in Fuzhou, Jiangxi, China	Technical Services	Fuzhou,China	2017/7	Subcontractor	Fuzhou Investment Development Group Co., Ltd.	14,595
Research on Traffic Signal Optimization (Areia Preta & Iao Hon District)	Technical Services	Macau	2017/6	Prime	Transport Bureau (Direcção dos Serviços para os Assuntos de Tráfego, DSAT)	281,307
Evaluation System of Macau Buses in 2017	Technical Services	Macau	2017/6	Subcontractor	Transport Bureau (Direcção dos Serviços para os Assuntos de Tráfego, DSAT)	144,183
Training on Model Calibration in Planning and Forecasting in Indonesia	Technical Services	Indonesia	2017/4	Prime	PT. Mitrapacific Consulindo International	26,355

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value (US\$)
Traffic Impact Assessment and Analysis of Residential Development in R. de Entre-Campos-Coloane, Macau	Technical Services	Macau	2016/12	Subcontractor	Win Loyal Development Limited	51,205
Annual Overseas Training for Outstanding Public Bus Employees and Macau's New Era of Public Bus.	Technical Services	Macau	2016/10	Prime	Macau New Era of Public Bus (Macau Nova Era de Autocarros Públicos, SA)	26,754
Evaluation System of Macau Buses in 2016	Technical Services	Macau	2016/6	Prime	Transport Bureau (Direcção dos Serviços para os Assuntos de Tráfego, DSAT)	77,000
Traffic Impact Assessment of New Development in Ramal dos Mouros, Macau	Technical Services	Macau	2016/5	Subcontractor	Cheong Kong Concrete Co., Ltd.	9,100
Advisory Service on Environmental Protection Solutions in Service Centers and Specialist Buildings.	Technical Services	Macau	2015/9	Subcontractor	Health Bureau (Serviços de Saúde, SS)	7,000
Evaluation System of Macau Buses in 2017	Technical Services	Macau	2015/6	Subcontractor	Transport Bureau (Direcção dos Serviços para os Assuntos de Tráfego, DSAT)	73,150
Three-dimensional simulation of passenger flow and static situation of MRT system on grade and underground station, DB6 design project, Riyadh.	Technical Services	Saudi Arabia	2015/1	Subcontractor	Arriyadh Development Authority, ADA	210,140

Tron Energy Technology Corp.



Company Information

Year Established / 2011

Annual Sales (US\$) / 22,280,033

Certification or Awards /

12 meter electric bus certificate
9 meter electric bus certificate
ISO 9001

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No. of Employees / 98

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Overseas Offices (by Country)

Singapore Tron Energy Technology Corporation (SG) PTE LTD

India Twin Green Tech Private Limited / Taitron Energy International Private Limited

Malaysia Tron Energy Technology (M) SDN BHD.

Completed by / Eric Chiu

Contact info / eric_chiu@tronetek.com

Project Records

Project Name	Type (Goods, Services, Construction)	Countries (Client Reference and Contact Address)	Year/Month	Participation Method (Prime or Subcontractor)	Estimated Value(US\$)
2 units of electric buses (12 meter)	Electric Bus	Han-Cheng Bus Traffic Co., Ltd. No.123, Dingli Rd., Sanmin Dist., Kaohsiung City 807, Taiwan (R.O.C.)	2016	Prime Contractor	814,000
8 unit of electric buses (12 meter)	Electric Bus	Chung-Lu Bus Traffic Co., Ltd. No. 429, Yongchun South Road, Nantun District, Taichung City, Taiwan (R.O.C.)	2017	Prime Contractor	3,256,000
69 unit of electric buses (12 meter and 9 meter)	Electric Bus	a. Chung-Lu Bus Traffic Co., Ltd.No. 429, Yongchun South Road, Nantun District, TaichungCity, Taiwan (R.O.C.) b. Ubus Bus Co., Ltd.Taichung City, Taiwan c. Shing-Nan Bus Co., Ltd.Tainan City, Taiwan	2018	Prime Contractor	22,280,033

Service/ Solution

Name of Service/ Solution

Descriptions

EV Bus,
EV Bus Chassis,
EV Battery System
and
Energy Storage System

With its own R&D and Manufacturing, Tron-E developed a patented liquid cooling system for longer battery life, and EV Bus battery consumption is 20 percent better than competitors, Furthermore, Tron-E cloud base EV Bus's real time fleet management system offers data mining for R&D improvement. Tron-E EV buses have the best availability, our buses have a total mileage of over 6,300,000km without breakdowns since 2016 In 2018, our market share jumped to No.1 in Taiwan.

Autonomous Vehicle
and
Auto Pilot Technology Development

With autonomous driving technologies based on artificial intelligence, from deep-learning to sensor-fusion, from perception to decision-making, and from route planning to control-by-wire acumen, Tron-E developed Taiwan's first self-driving electric bus. Earlier in 2018 at Taoyuan Agriculture Expo, 4,000 passengers were onboard in 660 trips over 40 days. Today, six autonomous vehicles are operating for two Government Pilot Projects in Taiwan, One overseas autonomous development project is under way.

Product Experience

Item

Specification

12 Meter EV Bus
9 Meter EV Bus
7 Meter EV Bus
4 Meter Autonomous EV Bus

12000(L) 2500(W) 3398(H) mm
8850(L) 2450(W) 3166(H) mm
6520(L) 2120(W) 2850(H) mm
4300(L) 1600(W) 2300(H) mm

Wintech electric co., ltd. **WINTECH**

Company Information

Year Established / 2006 **Annual Sales (US\$)** / 670,000

Certification or Awards /

Certification CE/TUV / TAF / UL/MA / ilac-MRA / CNAS

- Awards**
- 1.IEEE Publication
 - 2.Ranked as second place in Platinum Prize in 2017 Taipei International Invention Show

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No. of Employees / 35 **Tel** / +886-2-8911-0833 **Fax** / +886-2-8911-0835

Overseas Offices (by Country) / N/A

Completed by / Claire Huang

Contact info / cfhuang@wintech-pd.com.tw **TEL** / +886-2-8911-0833 #605

Service/ Solution

Name of Service/ Solution

Product: Partial discharge monitoring system

Service: Partial discharge testing for medium voltage or (extra) high voltage power equipment owners

Descriptions

A Partial Discharge Online Monitoring and Testing System for Medium and (Extra) High Voltage Power Equipment. It can detect partial discharge activities "in advance" to allow power equipment owners to react to problems beforehand. It can prevent any danger and huge loss due to insulation deterioration resulting from partial discharge activities. It is also an illustration of "Internet of Things" and "Smart Grids". We also provide design, installation advice, installation(if needed), and commission to clients.

Partial discharge testing is provided for medium voltage or (extra) high voltage power equipment to see if it has any partial discharge activities.

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value(US\$)
Partial Discharge Monitoring System Installation	Goods	China	2018.04	Prime	Hefei Changxin Wafer Factory	464,080
Pilot Project	Goods	Malaysia	2019.11	Prime	Tenaga Nasional Berhad (TNB)	29,400
Pilot Project	Goods	China	2019.11	Prime	Hangzhou International Airport	9,000
Pilot Project	Goods	China	2019.11	Prime	Wore Heat-Shrinkable Material	7,000

Zhu-Chang Engineering Consultants Co.,Ltd



Company Information

Year Established / 2015 Annual Sales (US\$) / 260,000 E-mail / zhucheng.com2@gmail.com
 No. of Employees / 6 Tel / +886-4-2452-4656 Fax / +886-4-2452-6050
 Overseas Offices (by Country) / Vietnam

Service/ Solution

Name of Service/ Solution

Descriptions

Landscape design

Create the spirit of an urban open space environment, art, improve the ecological balance between people and nature, and friendly relations between people and nature

Environmental creation

Create a comfortable and happy environment, create an environmentally-friendly environment, maintain conservation and organize the environment

Engineering supervision

Plan scope, management authority and division of labor, construction essentials, quality management standards, materials and construction inspection procedures, independent checklists, control of non-conforming products, corrective and preventive measures, internal quality audit and document management system

Promote civil participation in public construction

Plan for people to have more comfortable and convenient public facilities or complete and convenient places to use

Tourism planning and professional construction management

Feasibility assessment, planning and project management of non-governmental participation in tourism, recreation, culture and educational facilities

Interior design decoration

Room interior design and decoration, altering the layout of the building, expanding the use of space and increasing the value of the building

Project Records

Project Name	Type (Goods, Services, Construction)	Countries	Year/Month	Participation Method (Prime or Subcontractor)	Agency	Estimated Value(US\$)
Sun Avenue SAV3-23.03 Decoration Project	Interior design decoration	Vietnam	2019.07	Prime	Ms.LEE SZU-CHIEH	16,930