

COMPANY PROFILE

Promoting the concepts
of Electricity Energy
Management and
providing Energy Saving
Solutions since 1993



CENTRAL CAPACITORS (M) SDN BHD

www.centralcapacitors.com.my





CENTRAL CAPACITORS (M) SDN BHD

Head Office:

22A, Jalan Kemuning Prima D33/D
Kemuning Utama
40400 Shah Alam Selangor

Tel: 03-5879 9040 / 9041 / 9042

Ofc Mobile: 016-228 5117

Email: pfactor@centralcapacitors.com.my

Web Site: www.centralcapacitors.com.my

BRIEF HISTORY

Incorporated in 1987 as Central Power Factor Company in Kuala Lumpur, **CENTRAL CAPACITORS (M) SDN BHD** is a Registered Electrical Management Company providing services in Energy Efficiency Management through various means of power management. In particular Power Factor improvement, Energy Management and Consumer Power Analysis. In October 1994, the Penang Branch was set up to service the Northern region of Penang, Kedah, Perak and Perlis. In 2000, the Company expanded into the area of Energy Efficiency Management through the introduction of energy saving devices and software.

OUR MISSION

To promote the concept of Electricity Management in order to provide energy saving resolutions helping Companies become more energy efficient. To deliver systems and solutions specifically matched to the individual requirements and characteristics of each Customer. To promote the concept of electrical energy saving for cost reduction, conservation of natural resources and environmental preservation.

OUR OBJECTIVE

To achieve customer satisfaction and long-term business relationships through ethical and professional practices in the delivery of optimum solutions, quality products and reliable services. To use our experience and the technology available to help companies manage the change from reactive through to preventative and predictive. Energy and Maintenance Management through implementation, training, education, and coaching.

LOCAL AUTHORITIES REGISTRATION

REGISTRAR OF COMPANIES

- Company No: 248144-U

SURUHANJAYA TENAGA (ENERGY COMMISSION)

- (TKL)KE/248144U/2015 KELAS C

KEMENTERIAN KEWANGAN MALAYSIA

- 357-02039284
- Kod Bidang 130201, 130202, 140101, 140102, 140201, 140202, 140301, 140302, 140503, 220301, 220501, 220503, 220504

SIJIL PEROLEHAN KERJA KERAJAAN (CIDB)

- 1961127-WP017244
- Gred: G2 Kategori: ME.
- Gred: G5 Kategori: B CE ME

LEMBAGA PEMBANGUNAN INDUSTRI PEMBINAAN MALAYSIA (CIDB)

- Gred Berdaftar: G2 Tidak melebihi RM500,000
- G2 ME. E04
- G5 B B04
- G5 CE CE21
- G5 ME E02 E03 E06 E09 E10 E11 E16 E17 M15

TENAGA NASIONAL BERHAD

- 3008536

MALAYSIA ASSOCIATION OF ENERGY SERVICE COMPANIES (MAESCO)

- Secretary (2003-2011)
- Ordinary member (2011-present)

AUTHORISED CAPITAL

- RM500,000

PAID-UP CAPITAL

- RM400,000

ORGANISATION STRENGTH -

14 permanent staff

PRODUCTS AND SERVICES - GENERAL:

- Design, assembly, supply, rental and commissioning of Power Factor Correction Equipment
- Consultants and Contractors for Turnkey projects for upgrading work for conversions from Low Voltage to High Voltage
- Power Analysis of Commercial and Industrial Tariffs
- Design and build of Low Voltage Switchboards
- Emergency Breakdown and Repair Works for High and Low Voltage Switchgear
- Energy Saving LED Lighting design and thermal management for optimal LED performance and LUX levels
- Electrical Energy Audits and Energy Management for Industrial and Commercial users
- Preventive Maintenance & Recalibration Services LV & HT
- Thermographic Test Power System & Equipment
- Power Quality and Energy Usage Metering using PA3000 ARCHMETER Smart Power Analysers
- Energy Management using i3 EnMS software
- Electrical Safety Equipment and Safety Audits
- Design and implementation of Maintenance Management Database Software
- EV Charger Electrical Supply and Installation

SPECIALIST SERVICES:

- Providing full Project Management services and delivery of *Turn Key* Low Voltage to High Voltage conversion projects
- Providing advice and consultation to Industries from design through to approval, installation and commissioning Design selection and supply of Transformers, Vacuum Circuit Breakers and Cabling
- Advising and consulting on all Power Factor related issues. Designing, assembling and installing automatic Power Factor Correction (capacitor) boards
- Using Central Capacitors proprietary software (*developed over 10 years*) giving a unique advantage in the ability to efficiently and specifically to Customer needs and requirements .Accurate design reduces unnecessarily over sizing of component parts that can lead to higher capital costs and higher energy consumptions
- Instigating and carrying out a wide range of electrical installation, servicing and maintenance as well as Maintenance Management. We are able to design Maintenance Management Software specifically to meet the needs and requirements of our customers
- Providing Energy Management services enabling companies to comply with Regulation 6 of 'Efficient Management of Electrical Energy Regulations' (EMEER 2008)
- Providing Electrical Safety Equipment in order that companies can fully comply with 'THE ELECTRICITY SUPPLY ACT 1990(ACT 447)' and the 'ELECTRICITY SUPPLY (SUCCESSOR COMPANY) ACT 1990 (ACT 448) & REGULATIONS'

SOME OF OUR GOVERNMENT CLIENTS:

- Bank Negara Malaysia
- Arkib Negara Malaysia
- Dewan Bandaraya Kuala Lumpur
- Jabatan Ukur Dan Pemetaan
- Kementerian Tanah Dan Pembangunan Koperasi
- Pusat Sains Negara
- Stadium Merdeka Kuala Lumpur
- Perbadanan Air Melaka
- Perbadanan Muzium Melaka
- Perbadanan Perpustakaan Awam Negeri Sembilan
- Perbadanan Kemajuan Kraftangan Malaysia
- Puncak Niaga (M) Sdn Bhd
- Fama
- Jabatan Pengangkutan Jalan Negeri Sembilan
- Hospital Kuala Pilah
- Hospital Port Dickson
- Hospital Jabatan Orang Asli
- Jabatan Pengairan Dan Saliran
- Setiausaha Kerajaan Pulau Pinang Bhg Perumahan
- Kolej Jururawat Hospital Melaka
- Kumpulan Wang Simpanan Pekerja
- Jabatan Penerbangan Awam
- Pulau Pinang
- Muzium Negara
- Muzium Sejarah
- Maktab Rendah Sains Mara
- Maktab Perguruan Ilmu Khas
- Majlis Perbandaran Petaling Jaya
- Majlis Perbandaran Shah Alam
- Majlis Perbandaran Ampang Jaya
- Majlis Agama Islam Wilayah Persekutuan
- Lembaga Getah Malaysia
- Universiti Kebangsaan Malaysia
- Jabatan Bekalan Air Negeri Sembilan
- Jabatan Pertanian
- Perbadanan Putrajaya Kompleks Kerajaan Parcel C
- Pibg Sekolah Rendah Jenis Kebangsaan (T)
- Smk Seri Indah Serdang
- Smk Cheras Perdana
- Smk Seri Selayang
- Smk Taman Seraya Ampang
- Suruhanjaya Koperasi Malaysia
- Pusat Matrikulasi Ukm
- Jkr Elektrik Wilayah & Selangor
- Jkr Elektrik Negeri Sembilan
- Jkr Elektrik Pahang
- Lembaga Tabung Haji

These are just some of our satisfied customers, for further information and testimonials from all our customers, please visit our website at www.centralcapacitors.com.my

SOME OF OUR COMMERCIAL AND INDUSTRIAL CLIENTS:

- Kian Joo Can Factory Bhd
- Boustead Petroleum Marketing Sdn Bhd
- Box-Pak (Malaysia) Berhad
- Adabi Consumer Industries Sdn Bhd
- Puncak Niaga Sdn Bhd
- Techvance Industries Sdn Bhd
- Hume Fibreboard Sdn Bhd
- Keretapi Tanah Melayu Bhd
- Mn Koll Sdn Bhd
- Renaissance Kota Bahru Hotel
- Renaissance Hotel
- Legend Hotel
- Istana Hotel
- Mandarin Pacific Hotel
- Hotel Mirama Kuala Lumpur
- Hotel Nikko Kuala Lumpur
- Puteri Park Hotel Kuala Lumpur
- Public Bank Berhad
- Metrojaya Berhad
- Item Industrial Engineering Sb
- Siang Poh Knitting Sdn Bhd
- Bhs Book Printing Sdn Bhd
- Cycle & Carriage Bintang Sdn Bhd
- Dewina Food Industries Sdn Bhd
- Eon Bank Bhd
- Etika Dairies Sdn Bhd
- Parkson Corp Sdn Bhd
- Precision Bearing Sdn Bhd
- Personic Sales & Services S/B
- Hong Leong Trading Sdn Bhd
- Jones Lang Wooton Sdn Bhd - Wisma Ibi
- Yamaha Music (M) Sdn Bhd
- Standard Confectionery Sdn Bhd
- Delifrance Sdn Bhd
- Shakey's Restaurants Sdn Bhd
- Mex Plaza Toll
- Cadbury Confectionery Malaysia
- Carlsberg Brewery Malaysia Bhd
- Linattech Rubber Factory
- Berjaya Coffee Company Sdn Bhd
- Courts Mammoth Sdn Bhd
- Etika Dairies Sdn Bhd
- Padini Holdings Bhd
- Personic Sales & Services Sdn Bhd
- Kuwait Embassy
- Thai Embassy
- Austrian Embassy
- Pantai Medivest Sdn Bhd
- Radicare Sdn Bhd
- Safeguard Malaysia Bhd
- Siemens Power Generation Sdn Bhd
- Siemens Malaysia Sdn Bhd
- Segi College Kuala Lumpur
- Telawi Street Bistro Sdn Bhd
- Malaysian Resources Corpn Bhd
- Network Foods Industries S/B
- Notion Venture Sdn Bhd
- Naza Properties Sdn Bhd
- TT Resources Bhd
- The Store Malaysia Sdn Bhd
- HSBC Bank Berhad
- General Packaging Sdn Bhd
- GCB Court Management Corporation
- Ga-Seng Paper Industries Sdn Bhd
- Great Eastern Life Assurance
- MYMYDIN Mohamed Holdings Bhd
- Mymydin Sdn Bhd
- Inovar Industries Sdn Bhd
- Vasatech Sdn Bhd
- Synergy Health Sdn Bhd
- F&N Ice Cream Manufacturing (M) S/B
- Epson Precision (M) Sdn Bhd
- Kdu Smart School
- Boustead Wellcourt Sdn Bhd
- UTP Tronoh Plant
- NMB Quay Crane
- Seremban Terminal One Complex
- Lumut Port Quay Crane

Customer References For Conversion Of Low Voltage Intake To High Tension Supply (1/2)

COMPANY NAME	LOCATION	CONFIRMED	COMPLETED	SIZE
Ace Edible Oil Sdn Bhd	KLANG	Oct-03	Mar-04	1000 KVA
King's Creameries Sdn Bhd	SHAH ALAM	Apr-04	Sep-04	1000KVA
Crestronic Sdn Bhd	KLANG	May-04	Oct-04	1500 KVA
Bina Plastics Sdn Bhd	BANGI	Nov-04	Mar-05	2000 KVA
Lee Rubber Co. Pte Ltd	BENTONG	Dec-04	Jul-05	2000 KVA X2
Clipsal (M) Sdn Bhd	SHAH ALAM	Dec-05	Apr-06	2000 KVA
Atlas Edible Ice Sdn Bhd	SG BESI	Oct-06	Jun-07	3000 KVA
Sato Chemifa Sdn Bhd	SHAH ALAM	Mar-07	Sep-07	2000 KVA
Network Foods Sdn Bhd	SHAH ALAM	Oct-07	Feb-08	2000 KVA
Etika Dairies Sdn Bhd (LS3)	KLANG	Sep-08	Mar-09	2500 KVA
Seacera Tiles Berhad	BATU CAVES	Sep-08	Jul-09	1500 KVA X2
Deluxe Food Services Sdn Bhd	KLANG	Apr-09	Sep-09	2000 KVA
Cheong Meng Paper Boxes (M) Sdn Bhd	SG BULOH	Jul-08	Dec-09	1250 KVA
Polyworld Sdn Bhd	SEMENYIH	Dec-08	Feb-10	1000 KVA
Polyworld Sdn Bhd	SEMENYIH	Dec-10	Mar-11	2000 KVA
Etika Dairies Sdn Bhd (Plant 2&3)	KLANG	Sep-11	Dec-11	2000 KVA
F&N Ice Cream Manufacturing (M) Sdn Bhd	SHAH ALAM	Jan-12	Jul-12	2000 KVA
Inovar	BESTARI JAYA	Jan-15	May-15	2500 KVA
Kum Hoi Engineering	SUBANG	Oct-15	Jan-16	3000 KVA

Customer References For Conversion Of Low Voltage Intake To High Tension Supply (2/2)

COMPANY NAME	LOCATION	CONFIRMED	COMPLETED	SIZE
Aik Hong Heat Treatment Sdn Bhd	JOHOR	Jan-18	Oct-19	1500 KVA
Schattdecor Sdn Bhd (FKA Vasatech)	Bestari Jaya	Oct-19	Aug-20	2500 KVA
Adabi Consumer Industries Sdn Bhd	Rawang	June-22	Ongoing	2000 kVA

Design, Supply and Installation of Energy Saver For Small & Medium Premises



CENTRAL



Introducing Central Capacitors New Range of Compact and Efficient '**Energy Saver**' Power Factor Correction Boards

Features & Benefits

- Eliminates your Power Factor Penalty Charges
- Compact, Space Saving Design, using High Quality Component Parts
- Ready for Immediate Installation
- Timer Controlled to match Hours of Operation
- One Year Warranty on all Component Parts
- Prompt Payback and good 'Return on Investment'
- Ideally suited for small to medium size businesses
- Manufactured to comply with National Electrical and Safety regulations.

LATEST
Over One Hundred Units
already successfully
installed in Malaysia saving
Customers Thousands of
Ringgit Every Month!

**Eliminate your Power Factor Penalty and
start Saving NOW!**



SLA – Tnb & Central Capacitors on Power Factor Correction Board –Capacitor Bank



"Service Level Agreement" TNB dan Central Capacitor – Kempen Penggunaan Tenaga Yang Efisien Melalui Pembaikan Angkadar Kuasa.

Kuala Lumpur – Majlis menandatangani perjanjian untuk 'Service Level Agreement' di antara TNB dan Central Capacitors (M) Sdn. Bhd. telah diadakan di Aras 2, Bilik Negeri Sembilan, PWTC pada 4 Mei 1999. TNB telah diwakili oleh Naib Presiden Perkhidmatan Pengguna Datuk Ir. Md Sidek bin Ahmad dan Pengurus Besar (Pengurusan Bisnes) Bahagian Perkhidmatan Pengguna Ir. Aishah bt. Dato' Haji Abdul Rauf, manakala Central Capacitor diwakili oleh Managing Director Pn. Emy Yap Abdullah dan Director En. Nik Ryan Daud.

Dalam perjanjian ini, TNB akan bergabung dengan Central Capacitor untuk mengadakan kempen 'energy efficiency' dengan cara memperbaiki angkadar kuasa untuk pelanggan komersil dan industri. Dengan ini juga, anggota kerja TNB dapat mendalami kemahiran dalam pembaikan angkadar kuasa dan memberi khidmat nasihat kepada pelanggan sambil menjimatkan kos operasi TNB, manakala pelanggan pula dapat berjimat dan menambahkan tahap efisien penggunaan peralatan mereka.



SEALED Sidek exchanging the agreement with Central Capacitors managing director Amy Yap Abdullah.

Tenaga finds solution to 'power factor'

TENAGA Nasional Bhd has found a solution to address the "power factor" problem after having collected a total of RM8 million in surcharge a month from customers last year.

"Under the current tariff, those with a power factor of below 0.85 per cent will be penalised.

"This is because we had to generate re-active or useless power which is also costly," said vice-president of Tenaga's customer services division Datuk Md Sidek Ahmad.

He told reporters this after signing a service level agreement in Kuala Lum-

pur with Central Capacitors (M) Sdn Bhd for power factor enhancement at the customers' end for improved energy efficiency.

A high power factor means that electrical power is being utilised effectively while a lower power factor indicates poor power utilisation.

Sidek said solving this problem meant potential cost savings for Tenaga in terms of a reduction in operating cost and system losses, and a more efficient utilisation of installed capacity.

For customers, it meant lower electricity bills by

eliminating power factor penalty charges, he said.

Under the tie-up, Central Capacitors will provide consultancy as well as market their products (capacitors) and install them for customers who have been identified as needing power factor correction.

Throughout the country, there are about 12,000 customers having a power factor of below 0.85 per cent and Sidek said they need to be educated and to invest in improving the power factor.

Most of the customers liable for power factor surcharge are in the commer-

cial and industrial sectors while for domestic and residential customers, those using low voltages are not chargeable.

For a power factor of between 0.85 and 0.75 per cent, the surcharge is one-and-a-half times that of the bill.

In the case of a subsequent one per cent drop in power factor, the surcharge will be three times that of the bill.

He said office buildings as well as industries using a lot of motors were the ones identified as having this problem. — Bernama

NEWS RELEASE

ENERGY EFFICIENCY CAMPAIGN



- KUALA LUMPUR, 4 May – TNB today signed a Service Level Agreement (SLA) with Central Capacitors (M) Sdn Bhd to boost the energy efficiency campaign specifically targeted for the Industrial & Commercial Large Power Customers through the improvement of power factor at the customer's end.
- TNB was represented by Datuk Ir. Md. Sidek Ahmad and Ir. Aishah Dato' Hj. Abdul Rauf, while Central Capacitors by Managing Director Emy Yap and Encik Nik Ryan Daud.

- Under the agreement, Central Capacitors provide TNB with the following services:
- Quick Survey Report
- Preliminary comprehensive board check, inclusive of inspection report and recommendations
- Evaluation and troubleshooting of existing power factor correction boards for all types of industries and buildings, complete with inspection report and recommendations
- Design, assemble, supply and install complete units of automatic power factor correction boards for new and/or existing buildings
- Re-design and upgrade existing power correction boards to suit individual type of industry for optimum performance
- Rental of existing power factor correction boards for temporary usage at construction sites
- Preventive maintenance of existing power factor correction board with documented maintenance reports.

Beyond that, the company offers three follow-up services for the first three months after installation of the new boards, and free re-evaluation of future new equipment or machinery for customers who come under the purview of its maintenance contract.

All queries or requests for these services can be directed to 03-9284 4399 or addressed to save@centralcapacitors.com.my

For TNB, the agreement means:

- Potential cost savings in terms of reduction of operating cost, system losses and efficient utilisation of installed capacity.
- Opportunity for TNB personnel to learn new skills in power factor enhancement
- Introduction of advisory service to Industrial & Commercial Customers to enhance customer loyalty.

Its benefits to customers include:

- Lower electricity bills by eliminating power factor penalty charges
 - Lower equipment loading capacity means increased efficiency of equipment and electricity usage as well as longer life of equipment
 - Efficiency in electricity usage.
-

Our Ref : TNBD/BMD.MKTG 1/5/33D
Date : 22 February 2000



To Whom It May Concern:

Dear Sir/Madam,

RE : ENERGY EFFICIENCY CAMPAIGN

*Tenaga Nasional Berhad/Central Capacitors (M) Sdn. Bhd.
Tie-up for Power Factor Enhancement for Improved Energy Efficiency*

As part of its Marketing Plan to enhance customer loyalty through the provision of advisory service for customers' benefit, our Marketing Unit is implementing a campaign to assist our Industrial and Commercial customers to improve their power factor to 0.85 and above. Power factor has significant effects to both TNB's system and the equipment at the customers' end. A high power factor means that electrical power is being utilised effectively, while a low power factor indicates poor utilisation of electrical power. Low power factor means TNB need extra capacity to supply the customer and the customer needs to pay for that cost through penalty charges. Thus this campaign actually has benefit to both TNB and the customer.

Benefits to the Customer

This campaign will benefit the Customer in the following areas:

- Lower electricity bills by eliminating **power factor penalty charges**.
- Lower equipment loading capacity will result in increased efficiency of equipment and electricity usage and longer life of equipment.
- Efficiency in electricity usage.

Prospective Partner

Our Marketing Unit had received and vetted an application from **Central Capacitors (M) Sdn. Bhd.**, a company that is able to provide the services TNB desires. As such the Marketing Unit has made Central Capacitors (M) Sdn. Bhd. our partner in the said campaign.

Central Capacitors is a company registered with JBE&G, Kementerian Kewangan Malaysia, Pusat Khidmat Kontraktor, Lembaga Pembangunan Industri Pembinaan Malaysia, The Electrical And Electronics Association of Malaysia, Tenaga Nasional Berhad and Telekom Malaysia Berhad.

Central Capacitors is a specialist contractor with over 10 years of experience in power factor correction services. This is its core business. Through their vast experience, professionalism and specially trained staff in this particular field, Central Capacitors will ensure customer satisfaction. This augurs well for TNB's new image as a customer-oriented organisation, looking not only into profits but also into the Customers' interest in helping them reduce their electricity costs.

TNB DISTRIBUTION SDN BHD (386965-A)
(wholly-Owned Subsidiary of Tenaga Nasional Berhad)

Registered Office : No. 129, Jalan Bangsar, P.O. Box 11003, 50732 Kuala Lumpur, Malaysia. Tel: 03-282 5566, 282 2121 Fax: 03-283 3686
Business Address : Marketing Unit, Level 3, Distribution Building, TNB HQ, Jalan Bangsar, P.O. Box 11003, 50732 Kuala Lumpur. Tel: 03-282 1501 Fax: 03-282 2497

Services Offered

Central Capacitors shall provide the following services:

- ◆ Preliminary comprehensive board check inclusive of inspection report and recommendations;
- ◆ Evaluation & troubleshooting of existing power factor correction boards for all types of industries and buildings, complete with inspection report and recommendations;
- ◆ Design, assemble, supply and install complete units of automatic power factor correction boards for new and/or existing building;
- ◆ Re-design and upgrade existing power factor correction boards to suit individual type of industry for optimum performance;
- ◆ Rental of existing power factor correction boards for temporary usage at construction sites;
- ◆ Preventive maintenance of existing power factor correction boards with documented maintenance reports.

After-Sales Service

Central Capacitors shall provide the following services:

- Three follow-up services for the initial three months after installation of new boards;
- One follow-up service for upgrade or rectification works;
- Free re-evaluation for new equipment or machinery added in the future for customers under our maintenance contract.

Product Warranty

Central Capacitors provides imported as well as locally "Made In Malaysia" products. The CENTRAL power factor regulator provides 3 years in Warranty period. Central Capacitors also provides 1 year Warranty period for all other components.

Their contact numbers and addresses on both the internet and mail are as follows:

KL Office

16-G & 16-1A Jalan Pandan 3/10
Pandan Jaya
55100 KUALA LUMPUR
Tel : 03-984 4399; Fax : 03-985 7579

Penang Office

13, 1st Reservoir Garden
Jalan Air Putih Air Itam
11500 PENANG
Tel: 04-826 6225; Fax: 04-826 6227

Web sites: www.centralcapacitors.com.my & www.angelfire.com/ma/CenCap/index.html
E-mail: pfactor@centralcapacitors.com.my

Yours sincerely,



(Raja Ahmad Nizam Raja Razali)
Head of Marketing
Business Management Department
TNB Distribution Sdn. Bhd.

Installation, Checking & Services of Energy Saver and Automatic Power Factor Correction Boards





Servicing, Checking, Calibration Services & Testing Relays & MSB

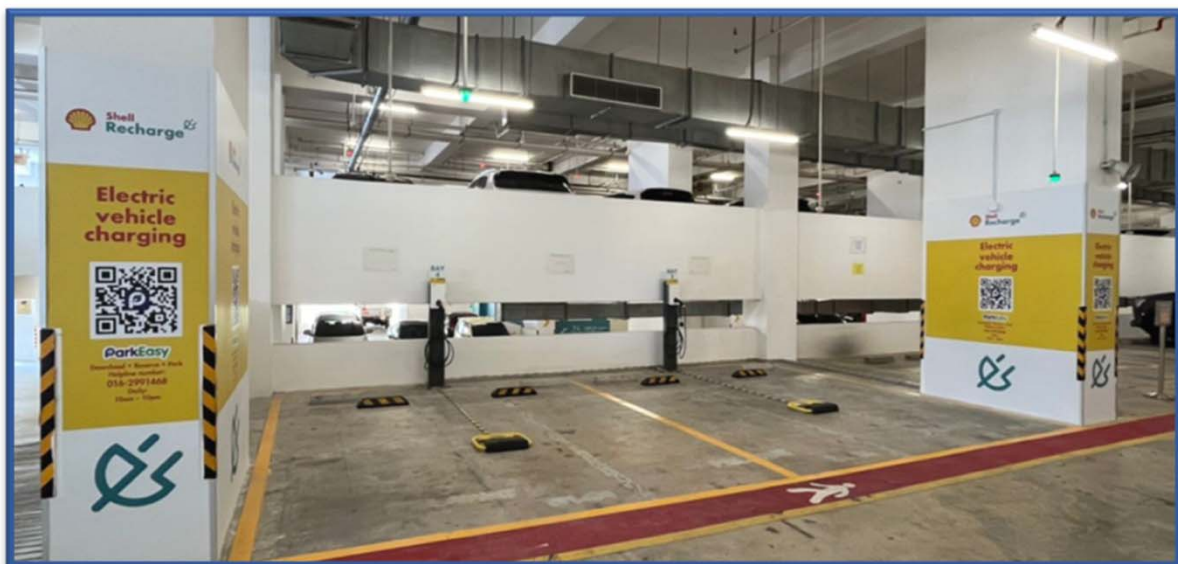


EV Charger Electrical Installation

Location: **KPJ Damansara 2**

No of bays: **4 bays**

Size: **11kW ABB Charger**

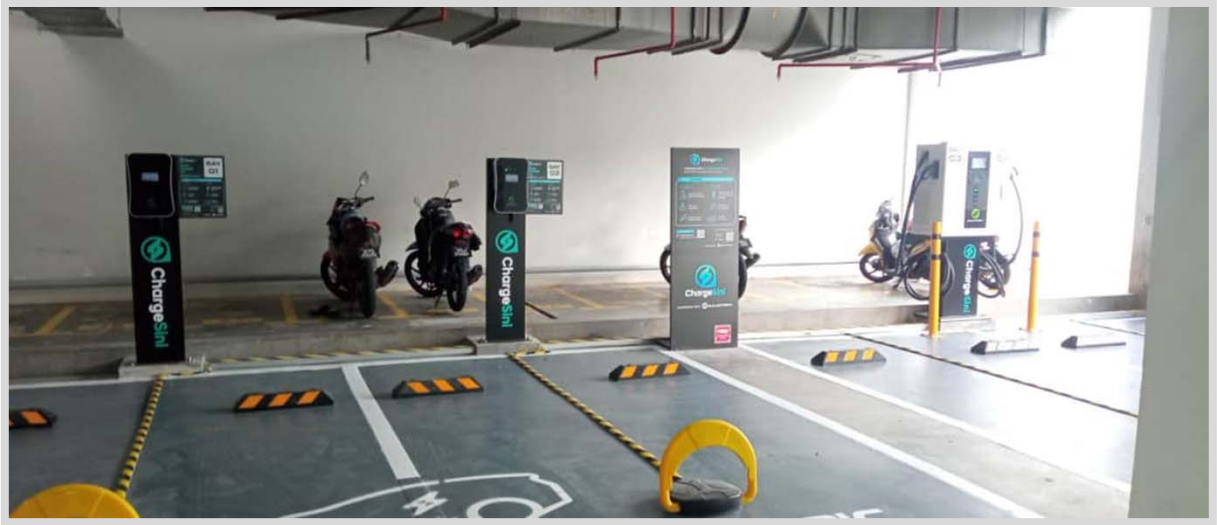


EV Charger Electrical Installation

Location: **Columbia Asia Bukit Rimau**

No of bays: **4 bays**

No of Charger: 1 unit DC 40kW & 2 unit AC 22kW



EV Charger Electrical Installation

Location: **Aeon Big, Wangsa Maju**

No of bays: **2 bays**

No of Charger: 1 unit DC 47kW



EV Charger Electrical Installation

Location: **Aeon Mall, Kinta City Ipoh**

No of bays: **2 bays**

No of Charger: 1 unit DC 47kW



EV Charger Electrical Installation

Location: **Aeon Mall, Taiping**

No of bays: **2 bays**

No of Charger: 1 unit DC 47kW

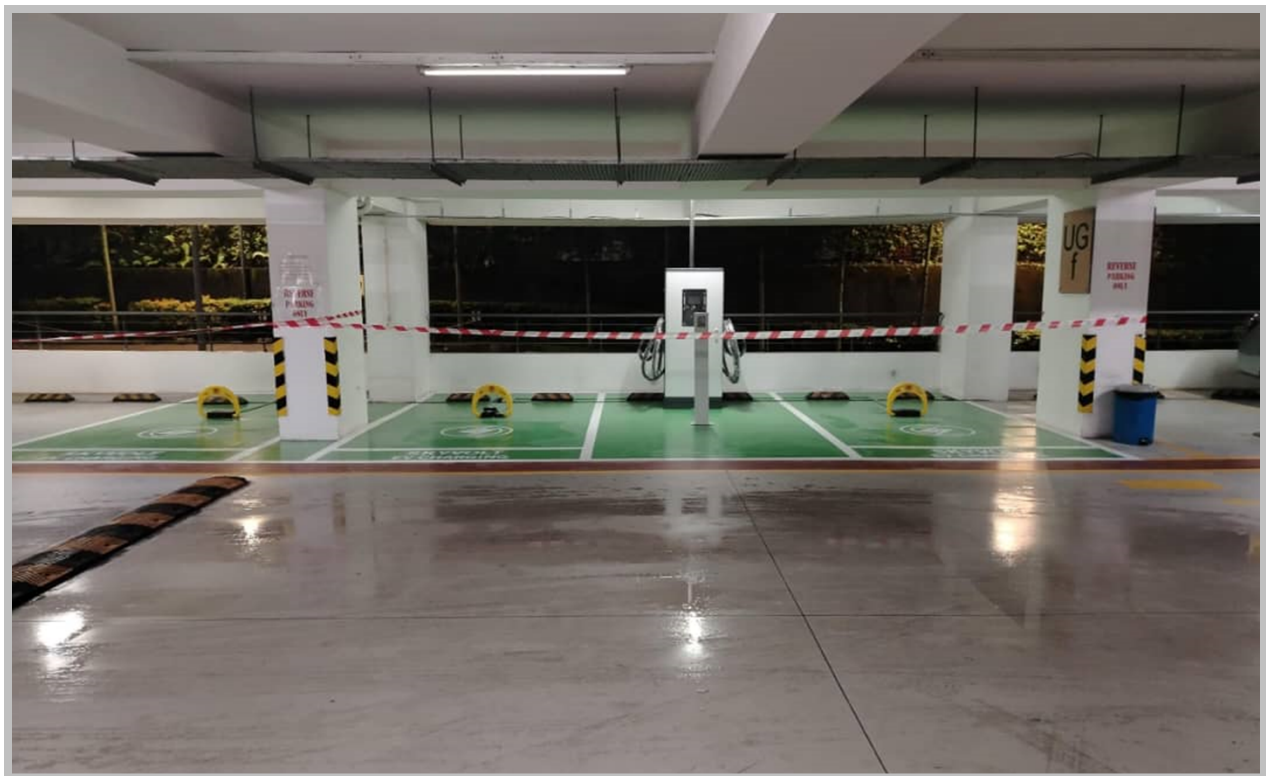


EV Charger Electrical Installation

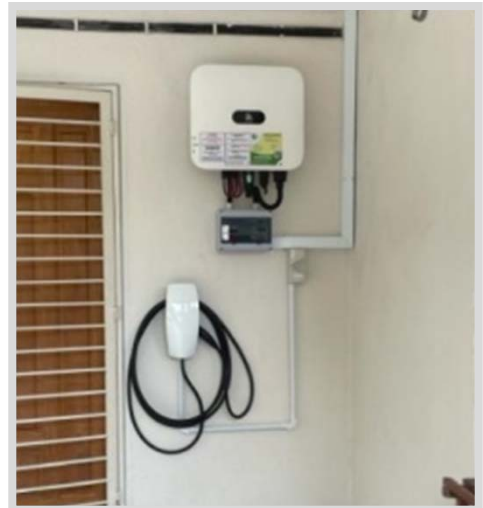
Location: **Parkcity Medical Centre**

No of bays: **3 bays**

No of Charger: 1 unit DC 60kW &
2 unit AC 22kW



**TESLA Wallbox
EV Charger Installation
1-phase & 3-phase**



Home EV Charger Installation

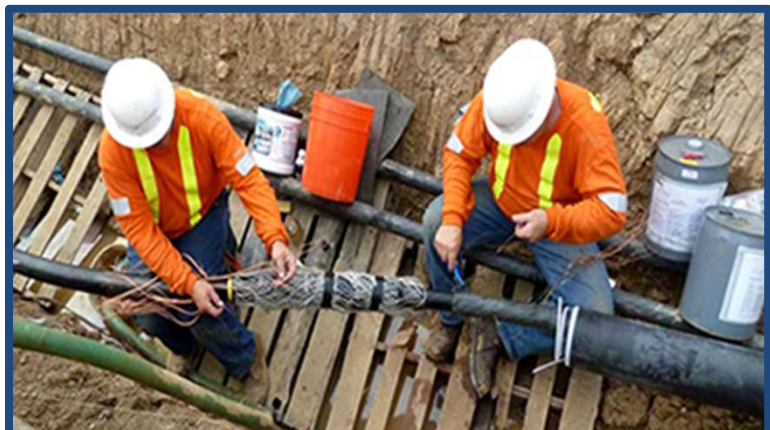
7kW, 11kW, 22kW



Design, Supply and Installation of New Switchboards 3000A



11kV High Voltage Cable Excavation, Laying, Splicing and Jointing



**FAT of new 2000kVA 11/433kV
Transformer & VCB before delivery**



Liaising and Co-ordinating with TNB during High Voltage Conversion Projects



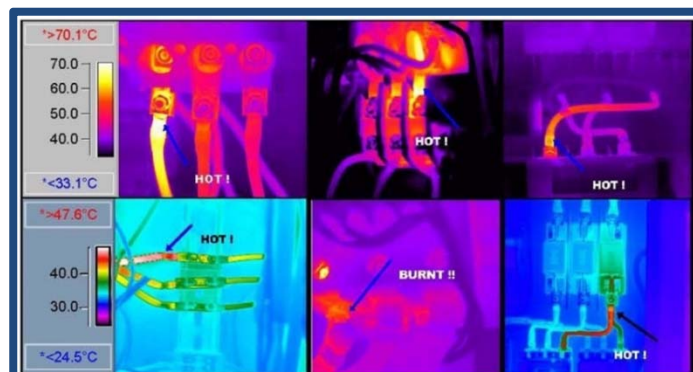
Reticulation of Electrical Works in TNB & Consumer Room during High Voltage Conversion Projects



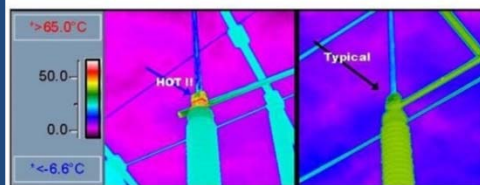
Installation of Power Analyser to High Voltage Vacuum Circuit Breaker



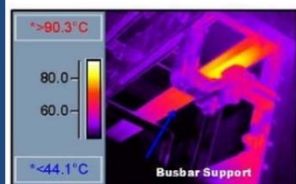
Infrared Thermographic Services



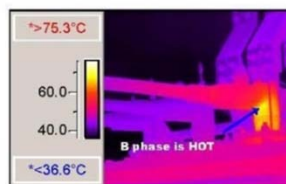
All the above Infrared Scans show Hotspots on Electrical equipment caused by loose connections. Maintenance work can be planned for a scheduled shutdown to carry out the rectification work before failure occurs, thus saving time and money.



On overhead lines, Hotspots can be located with ease. The Thermogram on the right shows a HOT termination compared to the one on the left.



This busbar support in the Main Switchboard is being heated up by the eddy current from the surrounding busbars.



Notice the B phase of this Transformer is HOT when compared to the other phases.

Thermographic Inspection Report

THERMOGRAPHY INSPECTION REPORT

Location: LG 5 LV Room MSB 3
Equipment: Panel CDWP-03
Inspection Date: 12/16/2019
Time: 11:49:19 AM

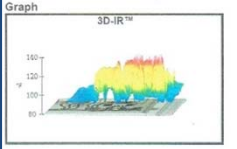
COMPONENT IDENTIFICATION




DIAGNOSIS & ANALYSIS

Main Image Markers					
Name	Avg	Min	Max	Emissivity	St. Dev.
A0	108.7°F	89.1°F	134.8°F	0.97	9.33

Graph: 3D-IR™



DIAGNOSIS
High temperature at termination

High temperature at termination is most likely due to poor or improper connections.

*Reason of reporting even when temperature are within limits is because I'm unable to determine the work load of cable.

RECOMMENDATION

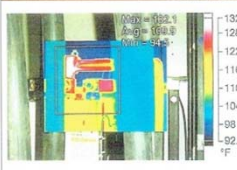
PRIORITY CLASSIFICATION
Slight

CORRECTIVE ACTION
Remove cable, inspect connection, clean and tighten connection.

THERMOGRAPHY INSPECTION REPORT

Location: LG 5 LV Room MSB 3
Equipment: Panel msb
Inspection Date: 12/16/2019
Time: 11:45:13 AM

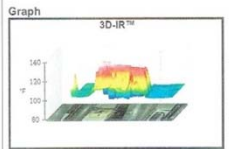
COMPONENT IDENTIFICATION




DIAGNOSIS & ANALYSIS

Main Image Markers					
Name	Avg	Min	Max	Emissivity	St. Dev.
A0	109.9°F	94.5°F	132.1°F	0.97	10.17

Graph: 3D-IR™



DIAGNOSIS
High temperature at termination

High temperature at termination is most likely due to poor or improper connections.

*Reason of reporting even when temperature are within limits is because I'm unable to determine the work load of cable.

RECOMMENDATION

PRIORITY CLASSIFICATION
Slight

CORRECTIVE ACTION
Remove cable, inspect connection, clean and tighten connection.

THERMOGRAPHY INSPECTION REPORT

Location: LG 5 LV Room MSB 3
Equipment: Panel msb
Inspection Date: 12/16/2019
Time: 11:46:46 AM

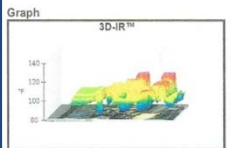
COMPONENT IDENTIFICATION




DIAGNOSIS & ANALYSIS

Main Image Markers					
Name	Avg	Min	Max	Emissivity	St. Dev.
A0	101.5°F	83.7°F	116.8°F	0.97	6.86

Graph: 3D-IR™



DIAGNOSIS
High temperature at termination

High temperature at termination is most likely due to poor or improper connections.

*Reason of reporting even when temperature are within limits is because I'm unable to determine the work load of cable.

RECOMMENDATION

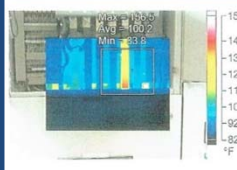
PRIORITY CLASSIFICATION
Slight

CORRECTIVE ACTION
Remove cable, inspect connection, clean and tighten connection.

THERMOGRAPHY INSPECTION REPORT

Location: LG 5 LV Room MSB 4
Equipment: Panel CH-05
Inspection Date: 12/16/2019
Time: 12:19:25 PM

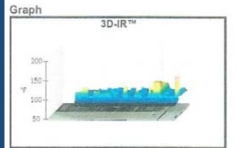
COMPONENT IDENTIFICATION




DIAGNOSIS & ANALYSIS

Main Image Markers					
Name	Avg	Min	Max	Emissivity	St. Dev.
A0	100.2°F	83.8°F	156.5°F	0.97	12.43

Graph: 3D-IR™



DIAGNOSIS
High temperature at cable

High temperature at cable is most likely due to poor or improper connections.

*Reason of reporting even when temperature are within limits is because I'm unable to determine the work load of cable.

RECOMMENDATION

PRIORITY CLASSIFICATION
Moderate

CORRECTIVE ACTION
Remove cable, inspect connection, clean and tighten connection.



KLEA Energy Analyzer

Klemsan KLEA is an energy analyzer that can give you essential electrical parameters to manage your energy. It is a energy revenue class 0.2 meter with high speed sampling rate of 512 samples per cycle, while other meters are typically 32 samples per cycle. It also has individual harmonics spectrum up to 51st order, wave form display and phasor diagram display within the meter itself. It comes with built-in memory for parameters, that can be downloaded for further analysis. This powerful energy analyzer also able to measure energy consumption for different shifts in a facility by using the multi tariff features besides logging demand profile, provide monthly report and many more.

i3EnMS V3 - Energy Management Software

3EnMS V3 is a complete and comprehensive Energy Management Platform which is able to perform all the activities meeting the requirements of :

- **ISO50001**
- **Reporting to Energy Commission under EMEER 2008**
- **Green Building Index and BSEEP**
- **AEMAS**



Electrical Safety is one of our highest priorities in both design, installation as well as operation and maintenance.

We market our own range of LOCK OUT - TAG OUT (LOTO) equipment in order that companies can fully comply with

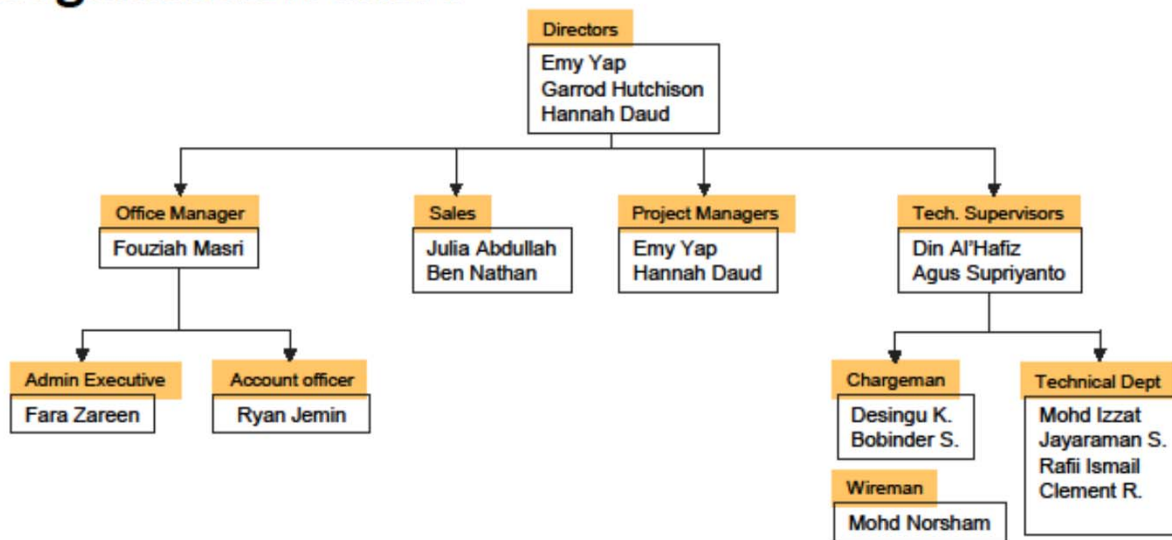
THE ELECTRICITY SUPPLY ACT 1990 (ACT 447)

and the

ELECTRICITY SUPPLY (SUCCESSOR COMPANY) ACT 1990 (ACT 448) & REGULATIONS



Organisation chart



Certificates

No 0089211



PEJABAT PENDAFTAR SYARIKAT MALAYSIA

BORANG 9
AKTA SYARIKAT, 1965

No. Syarikat

248144 U

Seksyen 16 (4)

PERAKUAN PEMERBADANAN SYARIKAT SENDIRIAN

Adalah diperakui bahawa

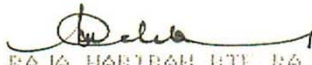
CENTRAL CAPACITORS (M) SDN. BHD.

telah diperbadankan di bawah Akta Syarikat, 1965 pada dan mulai
dari 02 haribulan September 1992, dan bahawa syarikat ini
adalah sebuah syarikat berhad menurut syer dan bahawa syarikat ini adalah
sebuah syarikat sendirian.

Dibuat di bawah tandatangan dan meterai saya di Kuala Lumpur.

pada 02 haribulan Sept., 1992




(RAJA HABIBAH BTL RAJA SAIDIN)
PENOLONG PENDAFTAR SYARIKAT
MALAYSIA



SURUHANJAYA SYARIKAT MALAYSIA
COMPANIES COMMISSION OF MALAYSIA

FORM 42A
COMPANIES ACT, 1965

[Section 113(1)]

Company No.

248144

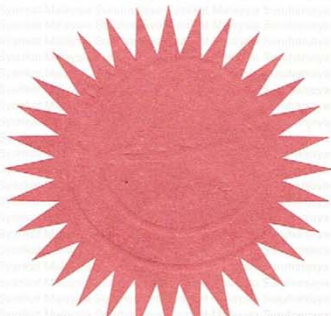
U

**CERTIFICATE OF REGISTRATION OF SATISFACTION
OF CHARGE**

CENTRAL CAPACITORS (M) SDN. BHD.

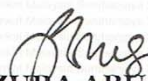
This is to certify that the particulars of a Memorandum dated the 20th day of November 2008 relating to the satisfaction in whole of the Charge dated the 15th day of September 1994 numbered 001 in the Register of Charges for securing the amount stated in the statement of particulars in respect of the above charge, has this day been entered into the Register of Charges.

Given under my hand and seal, at KUALA LUMPUR this 30th day of December 2008.



UserID: noorazura

Date: 12/30/2008 4:25:58 PM


NOOR AZURA ABU BAKAR
ASSISTANT REGISTRAR OF COMPANIES
MALAYSIA

NO. SIRI: SSM 5411719

ST(TKL)WPKL/C/KE/01643/2016

NO: 2020/03023

BORANG Q
(peraturan 75)**AKTA BEKALAN ELEKTRIK 1990****PERAKUAN PENDAFTARAN SEBAGAI
KONTRAKTOR ELEKTRIK**

Mengikut peraturan 75 Peraturan-Peraturan Elektrik 1994, Perakuan ini dikeluarkan kepada

CENTRAL CAPACITORS (M) SDN. BHD.
(nama syarikat)

dan memberi kuasa kepada pemegang untuk menjalankan perniagaan kerja elektrik sebagai Kontraktor Elektrik di :

**8, JALAN BIOLA 33/1
ELITE 33 SIGNATURE BUSINESS PARK
SEKSYEN 33
40400 SHAH ALAM
SELANGOR**
(alamat perniagaan dan cawangan)

di bawah kelas :



selama tempoh 5 tahun** dari tarikh diperbaharui yang ditunjukkan di :

Tarikh diperbaharui : 30/11/2020
Tarikh Habis Tempoh : 29/11/2025
No. Pendaftaran : ST(TKL)WPKL/C/KE/01643/2016
Fi RM : 1,500.00


Ir. SHAFIE BIN MOHAMED
Pegawai Kanan Kawasan
Suruhanjaya Tenaga
Kawasan Suruhanjaya Tenaga (Putrajaya)

** Tidak kurang daripada satu tahun dan tidak lebih daripada lima tahun.



KEMENTERIAN KEWANGAN MALAYSIA
SIJIL AKUAN PENDAFTARAN SYARIKAT

NO. SIJIL : K60410799443534291
NO. RUJUKAN PENDAFTARAN : 357-02039284
TEMPOH SAH LAKU : 13/06/2023 - 12/06/2026

Bahawa dengan ini diperakui syarikat :

CENTRAL CAPACITORS (M) SDN. BHD. (248144-U)
4-2, JALAN ANGGERIK VANILLA
BE 31/BE, SEKSYEN 31
PETALING
40460 SHAH ALAM
SELANGOR, MALAYSIA

Telah berdaftar dengan Kementerian Kewangan Malaysia dalam bidang bekalan/perkhidmatan di bawah sektor, bidang dan sub-bidang seperti di Lampiran A. Kelulusan ini adalah tertakluk kepada syarat-syarat seperti yang dinyatakan di Lampiran B. Individu yang diberi kuasa oleh syarikat bagi urusan perolehan Kerajaan adalah seperti berikut :

CIK HANNAH AZUREE BINTI RYAN DAUD	931203145492	DIRECTOR
CIK YAP LAI LING	610814105812	DIRECTOR
PUAN FOUZIAH BINTI MASRI	731013086448	OFFICE MANAGER

t.t

AB RAHIM BIN AB RAHMAN
Bahagian Perolehan Kerajaan
b.p. Ketua Setiausaha Perbendaharaan
Kementerian Kewangan Malaysia

Tarikh Berdaftar Dengan Kementerian Kewangan Malaysia : 13/06/2023

(Sijil ini adalah cetakan komputer dan tidak memerlukan tandatangan)

LAMPIRAN A

NO SIJIL : K60410799443534291
 NO RUJUKAN PENDAFTARAN : 357-02039284
 TEMPOH SAH LAKU : 13/06/2023 - 12/06/2026

BIL	TARIKH DAFTAR BIDANG	KOD BIDANG	KETERANGAN	STATUS
1	12/06/2023	130201	PERALATAN KEJURUTERAAN DAN MESIN PENGELUARAN/ JANAKUASA ELEKTRIK DAN PERALATAN GENERATOR/ALAT GANTI DAN BATERI/ JANAKUASA,PERALATAN/ALAT GANTI/AKSESORI(SECONDARY)	Aktif
2	12/06/2023	130202	PERALATAN KEJURUTERAAN DAN MESIN PENGELUARAN/ JANAKUASA ELEKTRIK DAN PERALATAN GENERATOR/ALAT GANTI DAN BATERI/ MESIN DAN KELENGKAPAN KHUSUS	Aktif
3	12/06/2023	140101	PERALATAN KEJURUTERAAN ELEKTRIK DAN ELEKTRONIK/ MESIN DAN JENTERA PENJANAAN DAN PENGAGIHAN TENAGA ELEKTRIK SERTA AKSESORI/ MOTOR DAN ALATUBAH/ALATGANTI	Aktif
4	12/06/2023	140102	PERALATAN KEJURUTERAAN ELEKTRIK DAN ELEKTRONIK/ MESIN DAN JENTERA PENJANAAN DAN PENGAGIHAN TENAGA ELEKTRIK SERTA AKSESORI/ ENJIN, KOMPONEN ENJIN DAN AKSESORI	Aktif
5	12/06/2023	140201	PERALATAN KEJURUTERAAN ELEKTRIK DAN ELEKTRONIK/ STESEN JANAKUASA ELEKTRIK DAN PERALATAN GENERATOR/ALAT GANTI DAN BATERI/ STESEN JANAKUASA, PERALATAN/ALAT GANTI/AKSESORI(PRIMARY)	Aktif
6	12/06/2023	140202	PERALATAN KEJURUTERAAN ELEKTRIK DAN ELEKTRONIK/ STESEN JANAKUASA ELEKTRIK DAN PERALATAN GENERATOR/ALAT GANTI DAN BATERI/ PENJANA KUASA	Aktif
7	12/06/2023	140301	PERALATAN KEJURUTERAAN ELEKTRIK DAN ELEKTRONIK/ KABEL, WAYAR ELEKTRIK DAN AKSESORI/ KABEL ELEKTRIK DAN AKSESORI	Aktif
8	12/06/2023	140302	PERALATAN KEJURUTERAAN ELEKTRIK DAN ELEKTRONIK/ KABEL, WAYAR ELEKTRIK DAN AKSESORI/ WAYAR ELEKTRIK DAN AKSESORI	Aktif
9	12/06/2023	140503	PERALATAN KEJURUTERAAN ELEKTRIK DAN ELEKTRONIK/ SISTEM, KOMPONEN ELEKTRIK, ELEKTRONIK, LAMPU DAN AKSESORI/ LAMPU, KOMPONEN LAMPU DAN AKSESORI	Aktif
10	12/06/2023	220301	PERKHIDMATAN/ PENYELENGGARAAN/PEMBAIKAN ALAT HAWA DINGIN/ ALAT HAWA DINGIN (WINDOW/SPLIT/BERPUSAT)	Aktif
11	12/06/2023	220501	PERKHIDMATAN/ PENYELENGGARAAN/PEMBAIKAN KEJURUTERAAN DAN KOMUNIKASI/ ALAT SEMBOYAN PERHUBUNGAN/PENYIARAN	Aktif
12	12/06/2023	220503	PERKHIDMATAN/ PENYELENGGARAAN/PEMBAIKAN KEJURUTERAAN DAN KOMUNIKASI/ PERKAKAS/SISTEM ELEKTRIK	Aktif
13	12/06/2023	220504	PERKHIDMATAN/ PENYELENGGARAAN/PEMBAIKAN KEJURUTERAAN DAN KOMUNIKASI/ MESIN DAN PERALATAN WOKSYOP	Aktif

Tarikh Berdaftar Dengan Kementerian Kewangan Malaysia : 13/06/2023



PERAKUAN PENDAFTARAN

Adalah dengan ini diperakui bahawa kontraktor yang dinyatakan di bawah ini telah berdaftar dengan Lembaga mengikut Bahagian VI Akta Lembaga Pembangunan Industri Pembinaan Malaysia 1994. Pendaftaran ini adalah tertakluk kepada syarat-syarat yang telah ditetapkan bersama perakuan ini.

No. Pendaftaran : 1961127-WP017244
Nama Kontraktor : CENTRAL CAPACITORS (M) SDN. BHD.
Alamat Berdaftar : M2D/17, JALAN PANDAN INDAH 4/3A PANDAN INDAH
55100 KUALA LUMPUR
WILAYAH PERSEKUTUAN KUALA LUMPUR
Daerah : KUALA LUMPUR
Tarikh Mula Berdaftar : 03/11/1998

<u>GRED</u>	<u>KATEGORI</u>	<u>PENGKHUSUSAN</u>
G3	B	B04
G3	CE	CE21
G3	ME	E09 M15
G2	ME.	E04

Tarikh Mula Berkuatkuasa : 03/07/2024

Tarikh Habis Tempoh Perakuan : 29/06/2025

STATUS: AKTIF

Ketua Eksekutif

Lembaga Pembangunan Industri Pembinaan Malaysia

Tarikh: 03/07/2024





SIJIL PEROLEHAN KERJA KERAJAAN

Adalah disahkan syarikat/Firma ini adalah berdaftar dengan Lembaga Pembangunan Industri Pembinaan Malaysia dan tertakluk kepada syarat-syarat termaktub bersama sijil ini.

No. Pendaftaran : 1961127-WP017244
Nama Kontraktor : CENTRAL CAPACITORS (M) SDN. BHD.
Alamat Berdaftar : M2D/17, JALAN PANDAN INDAH 4/3A PANDAN INDAH
55100 KUALA LUMPUR
WILAYAH PERSEKUTUAN KUALA LUMPUR
Daerah : KUALA LUMPUR
Tarikh Mula Berdaftar : 03/11/1998

<u>GRED</u>	<u>KATEGORI</u>	
G3	B	(Pembinaan Bangunan)
G3	CE	(Pembinaan Kejuruteraan Awam)
G3	ME	(Mekanikal dan Elektrikal)
G2	ME	(Mekanikal dan Elektrikal)

PEGAWAL SYARIKAT YANG DITAUHIAHKAN

AMIRA EMY YAP BINTI ABDULLAH

NO. K/P

610814105812

Tarikh Mula Berkuatkuasa : 05/07/2024

Tarikh Habis Tempoh Perakuan : 29/06/2025

Ketua Eksekutif

Lembaga Pembangunan Industri Pembinaan Malaysia

Tarikh: 05/07/2024





TENAGA NASIONAL
BERHAD

Dengan ini disahkan bahawa

CENTRAL CAPACITORS (M) SDN. BHD.
4-2, JALAN ANGGERIK VANILLA
BE 31/BE, SEKSYEN 31, PETALING
40460 , SHAH ALAM , SELANGOR

Telah berdaftar dengan Tenaga Nasional Berhad sebagai

Pembekal & Kontraktor Perkhidmatan

di bawah kategori yang tercatat dalam sijil ini

130201, 130202, 140101, 140102, 140201, 140202, 140301, 140302, 140503, 220301,
220501, 220503, 220504***

BUTIR-BUTIR PENDAFTARAN

NO PENDAFTARAN TNB	:	3008536
NO PENDAFTARAN SYARIKAT	:	248144U
NO SIJIL KEMENTERIAN KEWANGAN	:	K60410799443534291
TEMPOH SAHLAKU SEHINGGA	:	12.06.2026
TARAF	:	BUKAN BUMIPUTERA
LAIN-LAIN PENDAFTARAN	:	SPKK0000 /2023,PPK0000 /2023,SPKK0000 /2023,PPK0000 /2023.

Tarikh tempoh sahlaku pendaftaran ini adalah tertakluk kepada tempoh sahlaku Pendaftaran sijil-sijil Kementerian Kewangan(KK), Lembaga Pembangunan Industri Pembinaan Malaysia (CIDB) dan sijil-sijil professional yang berkaitan.

Amir Mahmod bin Abdullah
Ketua Pegawai Perolehan
Bahagian Procurement & Supply Chain
Tenaga Nasional Berhad

Tarikh kelulusan : 31.07.2023

Ini adalah cetakan komputer dan tidak memerlukan tandatangan.

MAESCO

(Pertubuhan Syarikat Syarikat Perkhidmatan Tenaga Malaysia)
Malaysia Association of Energy Service Companies

Certificate of Membership
(Ordinary Class "B")

Malaysia Association of Energy Service Companies

hereby certified that

Central Capacitors (M) Sdn Bhd

is a member in good standing of the Association

The registration no is : 1003

This certificate expires on : 31st December 2025



Ar. Zulkifli Zahari
President

Dr. VTR Dharamarajah
Honorary Secretary

The End

Thank You !



CENTRAL CAPACITORS (M) SDN BHD

(248144-U)

Energy Efficiency Through Power Factor Enhancement