

DEUTSCH URKUNDE : Nr. 30 2011 000 726

# EcoMoto

## HYBRID INDUSTRIAL MOTOR

### SUPER ENERGY SAVING



# EXECUTIVE SUMMARY



## • What we do?

- 1) Ultra Premium Efficiency IE5 Permanent Magnet Motor couple with Inverter Drive unit.
- 2) In-house Energy Savings Monitoring with IOT cloud service provider.
- 3) Provide energy audit and determine Baseline. Provide full retrofit proposal with ROI.
- 4) Promote Zero Capex Solution with long term Energy Performance Contract (EPC).

## • Current Status!

- 1) Upselling high efficiency electric motors for Industrial Applications since incorporating 23 July 2020 coined as “EcoMoto”.
- 2) Form an alliance of business owners servicing HVAC, AHU, Chillers, Cooling Tower, Water Pump whereby the need to replace new motors.
- 3) Appoint Project Partners and Distributors providing HVAC, AHU, Chillers, Cooling Tower, Water Pump including Energy Savings solutions.
- 4) Focus on retrofitting the government buildings with long term EPC contract. Mainly the 150 hospitals and 13 State water utilities.
- 5) Product development from 2.2kW to 1,000kW EcoMoto.

## • Traction to date:

- 1) Initial EE Project for 33 sites for TM Data Centre in 2016; Beta Development in 3 core technologies; motor, control drive and monitoring system was develop in Malaysia.
- 2) Commercialization to produce EcoMoto motor range from 3.7kW to 37kW between 2018 to 2019, and by 2020, the latest 4th generation of EcoMoto covers from 2.2kW to 75kW with dual speed setting and IoT ready.
- 3) Late 2019, successfully penetrate new sectors in glove manufacturing, commercial buildings and shopping malls.
- 4) In 2022, retrofitting 600 EcoMoto for 12 government hospitals with a total contract value of \$4 million.

# EcoMoto Founder

Lau Chai Kuan, a Mechanical Engineer graduate from University Putra Malaysia started his early career of 22 years as an entrepreneur in the field of import and export with LG Global Building Material (M) Sdn Bhd together with his siblings.

He also holds a Certified Electrical Energy Manager qualification to pursue into energy savings concept at his very early career path and began to develop his interest to seek an ultimatum concept of eco green and sustainable technology.

He then ventured into the Eco Green Technology business in the following years where he first started to explore into the awareness and promotion of the water savings technology. It was back then in 2012, he brought in the 1st Solar Thermal Air Conditioning unit from Germany to Malaysia and couple it with the hot water recovery unit.

He has dedicated himself to be a strong player in Building Energy Efficiency provider and has more than 50 successful implementations on his belt. Over the 15 years span in the Eco Green Technology business, Mr. Lau Chai Kuan has won 2 New Product Award and 1 Green New Product Award in Archidex Exhibition in Kuala Lumpur, Malaysia; including being the pioneer recipient for My Hijau (Green Label) in 2016.



# EcoMoto EE Solution

## ENERGY EFFICIENCY & CONSERVATION



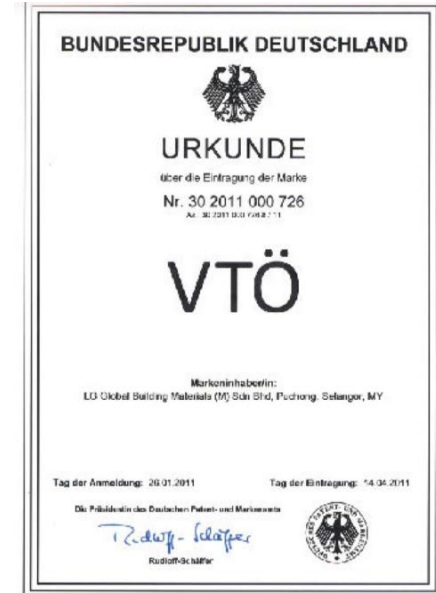
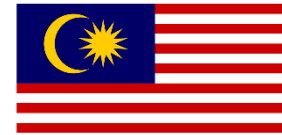
MyHIJAU • MARK



Certificate no.: MyHP00235/20



DEUTSCH URKUNDE: Nr 30 2011 000 76



**EcoMoto** Malaysian Own, Brand Registered in Malaysia, Germany & China.

# Our Mission

1. To Simplified and Speed Up the Retrofitting of High Efficiency EcoMoto to All Low Efficiency Induction Motors.
2. To Incorporate Energy Savings with IoT & IR 4.0 System for Optimum Energy Efficiency, Performance and Sustainability.

# Our Vision

Be a Responsible Malaysian Hi-Tech Company to Cooperate with Government to Nurture, Educate and Prepare Our Youth & Graduates to be a Competitive Entrepreneur in IoT 4.0, Energy Efficiency and Environment Sustainability as a whole.



# SUSTAINABLE DEVELOPMENT GOALS

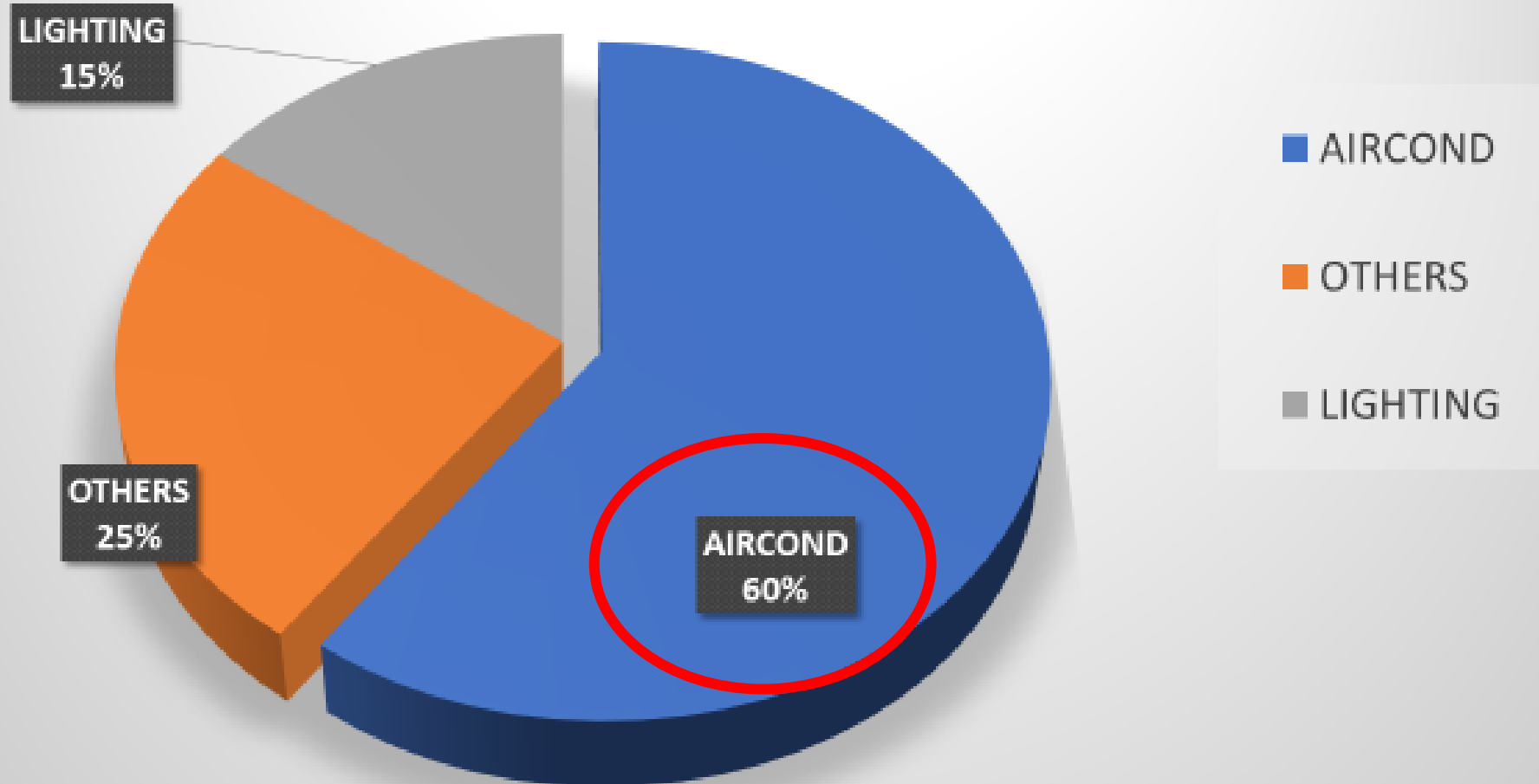


**Energy Efficiency** has been regarded as the first fuel to combat climate change by the International Energy Agency (IEA).

We can reduce our WASTAGE and increase our EFFICIENCY. We can bring the **affordable and clean energy** for the future generations to come.

Every 1 kWh save, is equivalent to 690g of CO2 reduced to save of earth from **global warming**.

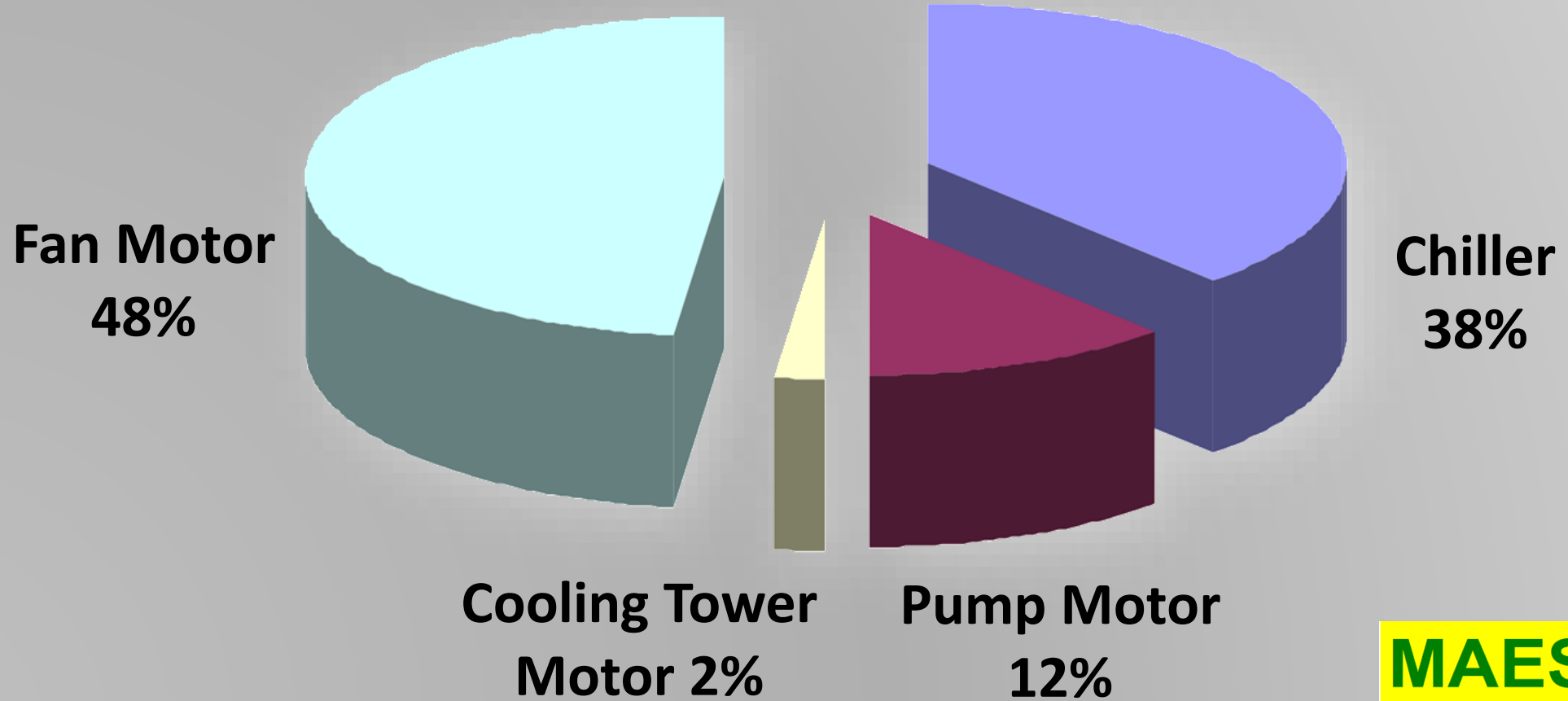
# ENERGY DISTRIBUTION



**HVAC System** is the largest energy consumption in both - building and industries.

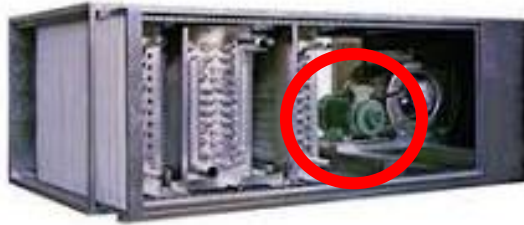


# ENERGY DISTRIBUTION

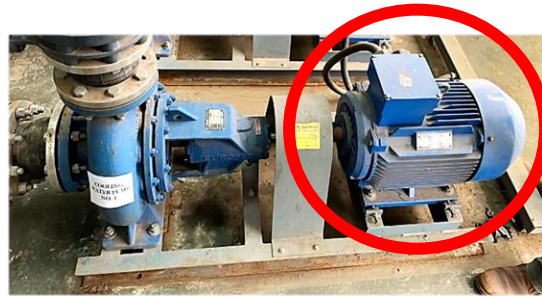


**Electric Motors consume 62% in HVAC System.**

# Electric Motors in HVAC System



**AHU**



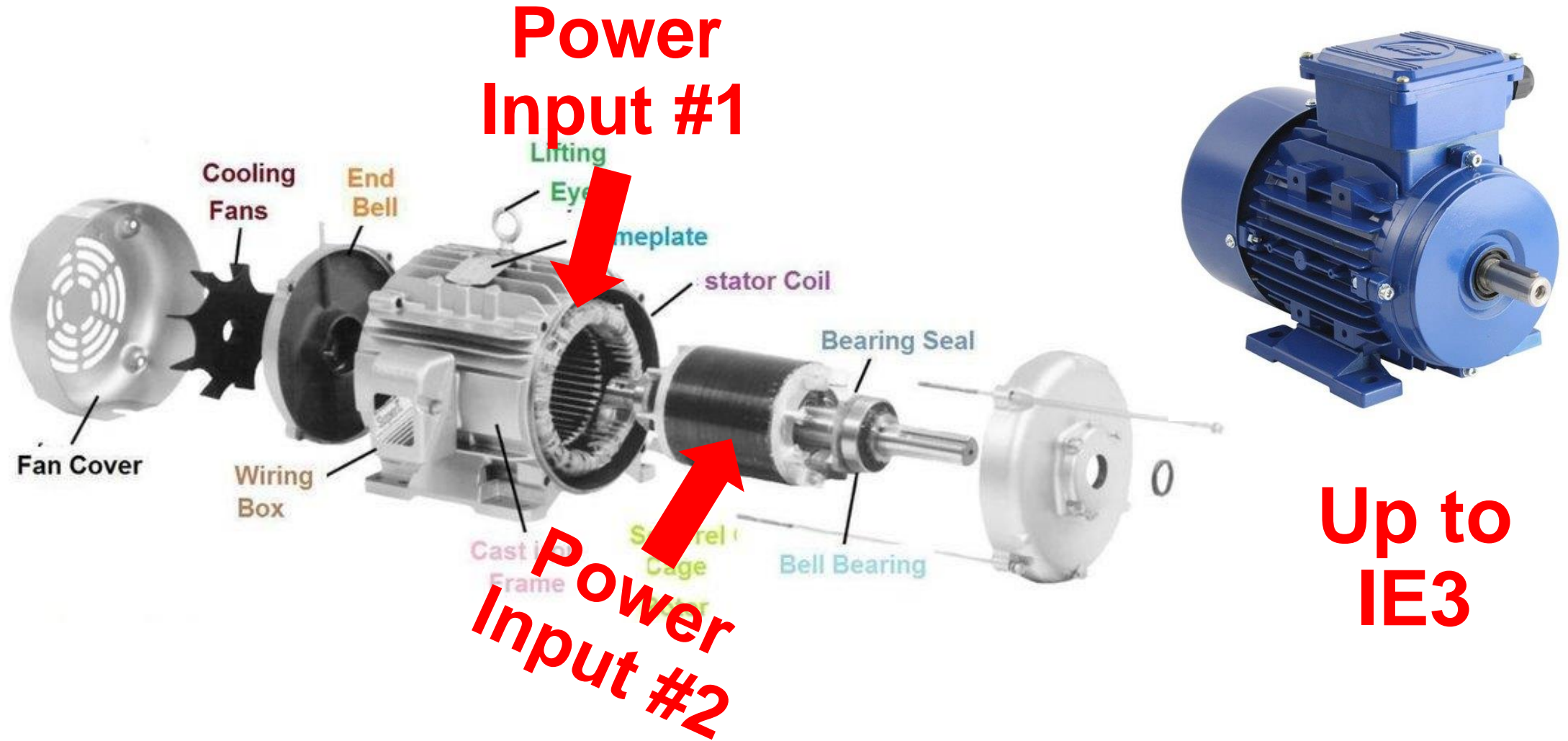
**Chilled Water Pump  
Condenser Water Pump**



**Cooling Tower**

**All Using Induction Motors!**

# Typical 3 Phase Induction Motor



# The **Problem** of Existing Induction Motor

**High Total Cost Of Ownership**

**Lower initial cost (3%)**

High energy consumption

Obsolete technology

**Unable to meet GREEN regulation**

**Unsustainable**

Energy efficiency rating  
up to IE3 only

Climate warming keeps  
on increasing



**High running cost (97%)**

High electricity bill

**Low efficiency**

Up to 40% power lost through heat  
at the squirrel cage rotor

High frequency of motor  
rewinding maintenance

Lower bearing lifespan due to the  
excess heat at the rotor

# Replacing Old Induction Motors

## The Next Global Megatrend

**RETROFITTING ENERGY-EFFICIENT ELECTRIC MOTORS** FOR BUILDINGS AND INDUSTRIES

**FROM 2020 TO 2030**



*(Source: UN Environment - Global Environment Facility)*

Accelerating the Global Adoption of  
**ENERGY-EFFICIENT ELECTRIC MOTORS  
AND MOTOR SYSTEMS**

# The Solution is EcoMoto



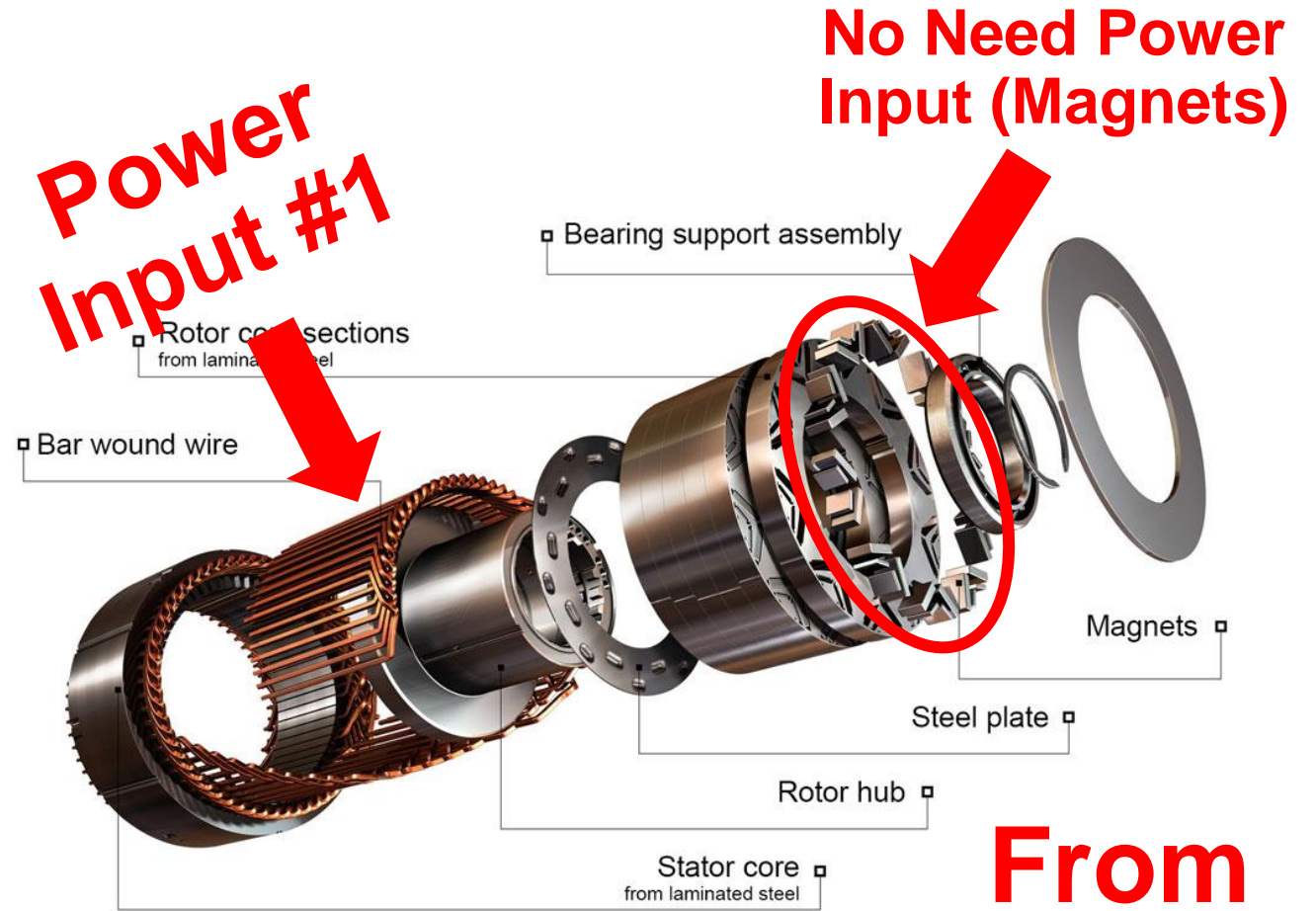
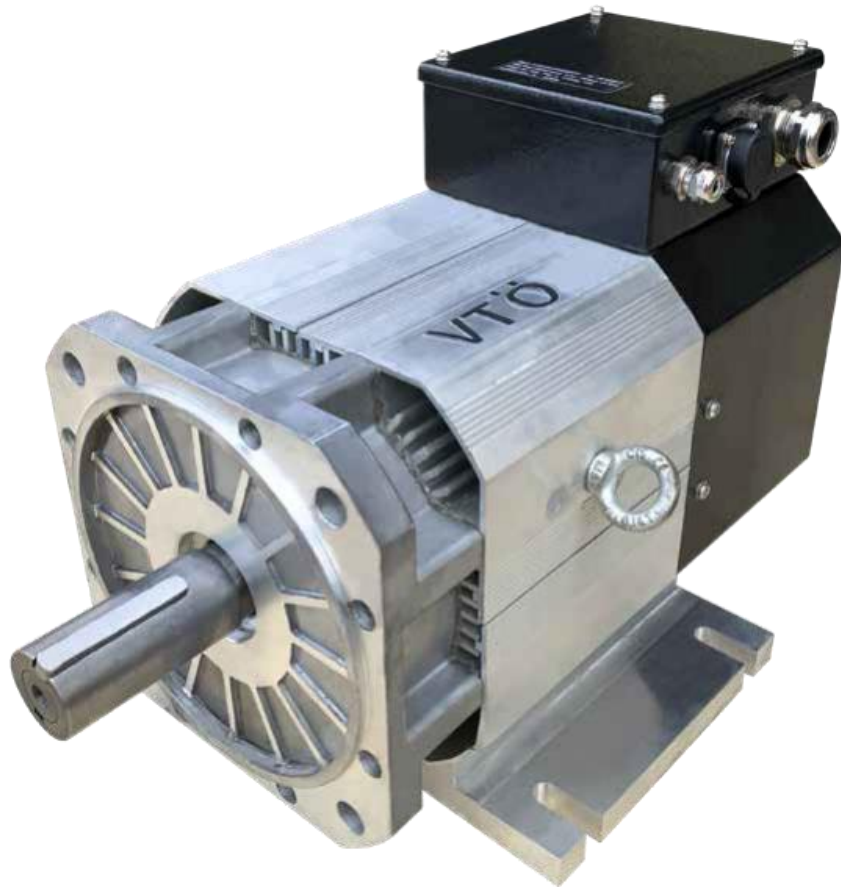
## • **Green Technology**

- Ultra Premium Efficiency IE5
- IR 4.0 Ready.
- Affordable & cost-effective to own and operate
- Longer Service Life thru Maglev Friction Less Technology and IoT monitoring sensors
- Lower Maintenance Cost.

- In the near future, the existing Induction Motor can be trade in and REFURBISH / UPGRADE to become EcoMoto
- Up to 50% of the existing parts can be utilized, and the balance can be recycle to become raw materials. Further reduce the CO2.

- Electricity Saving of 20% - 50%
- Fast ROI within 18 months
- IoT monitoring to prevent Costly Downtime

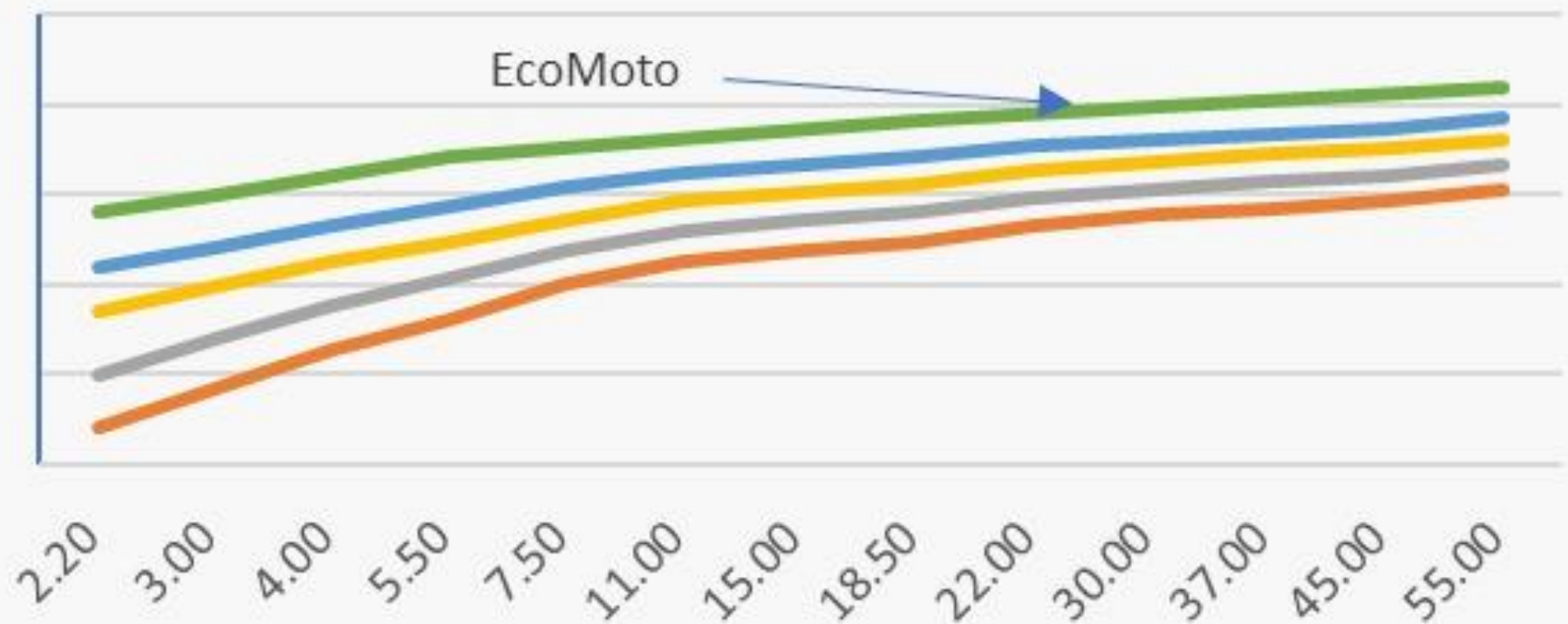
# EcoMoto: The Hybrid Magnetic Motor



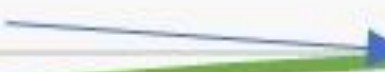
# International Efficiency (IE) Rating

Efficiency (%)

100.00  
95.00  
90.00  
85.00  
80.00  
75.00



EcoMoto



IE1 8 pole

IE 2 8 pole

IE3 8 pole

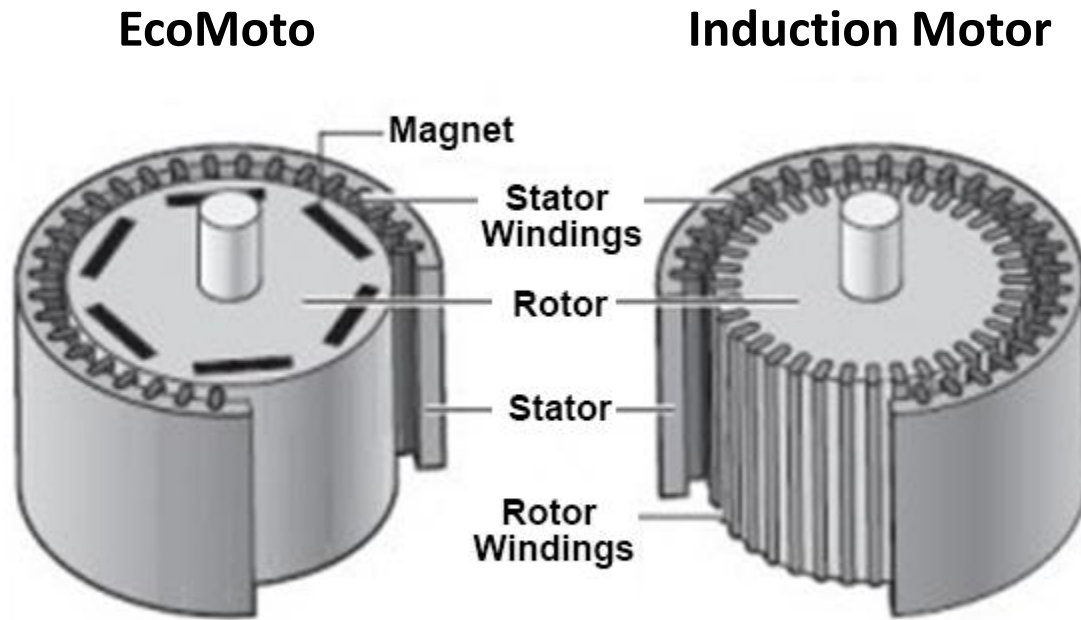
IE4 8 pole

EcoMoto 8 pole

Motor Power Rating (kW)



# ADVANTAGES of EcoMoto



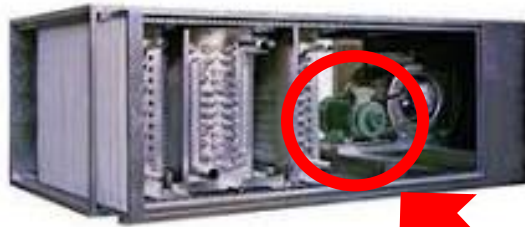
- Low power loss at the rotor
- Low temperature rise
- High torque at starting & all RPM
- High efficiency rating from IE5
- Built-in temperature sensors & overheat protection
- High power to weight ratio
- Light, small, space saving & easy handling
- Low friction rotor with Maglev tech.
- Longer service life
- Lower noise & smoother operation
- **LOW ELECTRICITY BILL!**

# What is EcoMoto System?

1. **EcoMoto** is the trademark for our Motor. And represent the **TOTAL SOLUTIONS** below.
  - ✓ High efficiency industrial Permanent Magnet Synchronous Motor (PMSM) – IE4 and above.
  - ✓ In-build dual speed design to reduce inventory cost and eliminate unpopular / slow moving stock.
  - ✓ Design with flexibility, quick & easy to retrofit any existing motor. **Plug & play with instant \$\$\$ savings.**
2. **EcoInverter** VFD Drive with Proprietary PMSM Vector Control Algorithm. **(Hassle-Free)**
3. **Energy Monitoring System (EMS)** IoT Cloud 4.0 technology. **(One-Stop Solution)**



# To Retrofit EcoMoto to Induction Motors

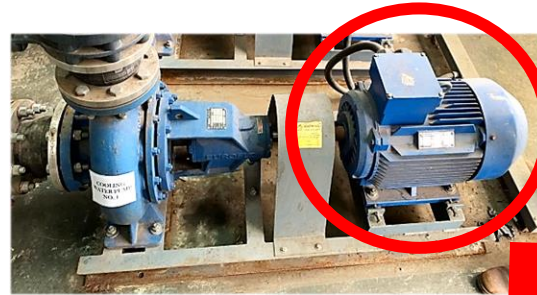


## Retrofit

AHU Fan with  
**EcoMoto**

+

**VAV System**  
(Variable Air Volume)



## Retrofit

Water Pump with  
**EcoMoto**

+

**Pump EMS System**  
(Energy Monitoring  
System)



## Retrofit

Cooling Tower Fan with  
**EcoMoto**

+

**CTFMO System**  
(Cooling Tower Fan  
Motor Optimizer)



# Project Example 1

Shopping Mall in Mont Kiara

AHU Fan Motor

EcoMoto Plug & Play Saving

# AHU Plug & Play 18.5kW EcoMoto

Before



After



Before



17.7 kW

After



8.2 kW

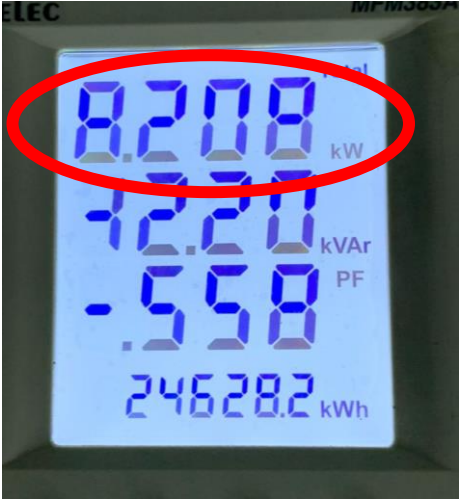
**Savings**  
**9.5kW/h**  
**54%**

Existing 18.5kW Motor 1,450rpm Full load

# Further Savings with EcoMoto – Variable Speed Control



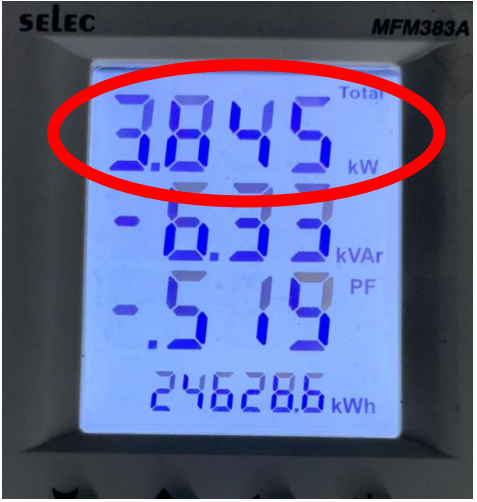
**Induction Motor**  
1,450 rpm  
17.7kW/h



**EcoMoto**  
1,450 rpm  
8.2kW/h  
**Saving 54%**

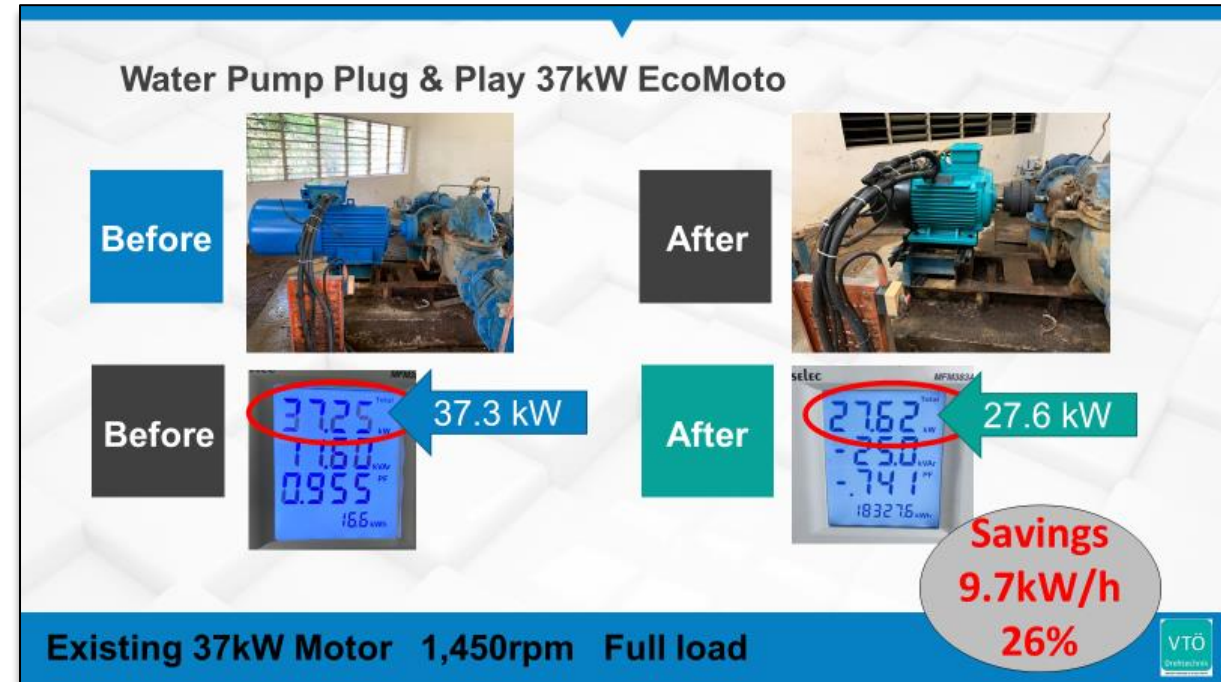
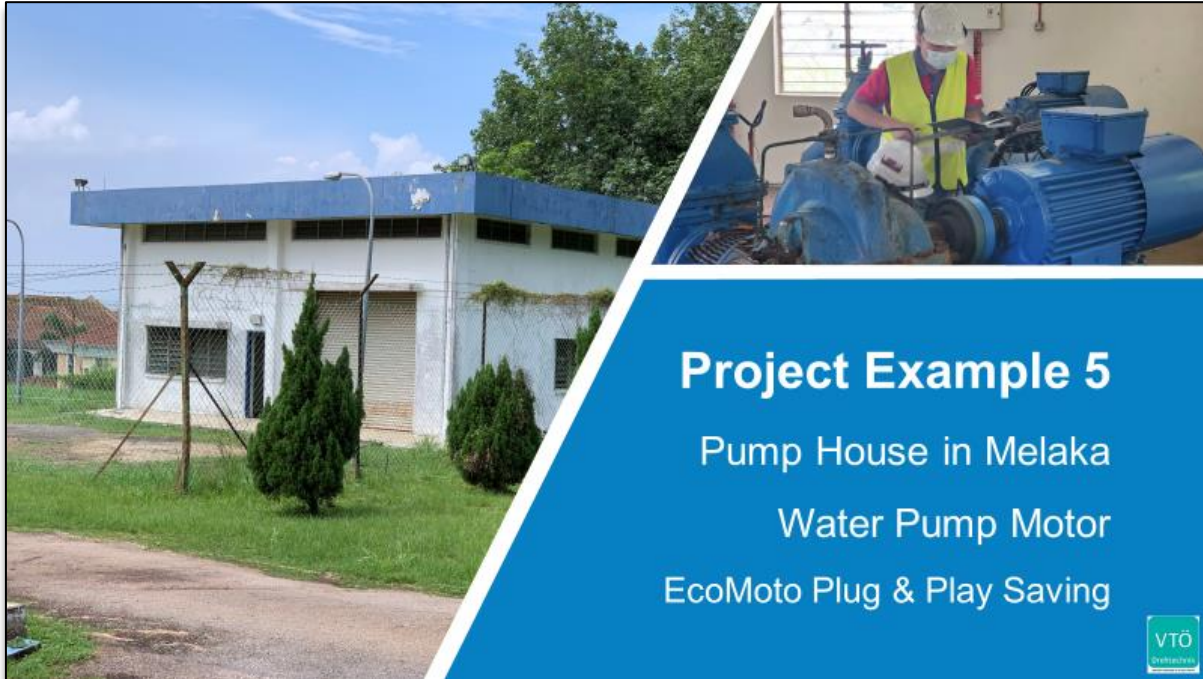


**EcoMoto**  
1,200 rpm  
6.3kW/h  
**Saving 64%**



**EcoMoto**  
1,000 rpm  
3.8kW/h  
**Saving 79%**

# State Water Utilities Company Water Pump Motor



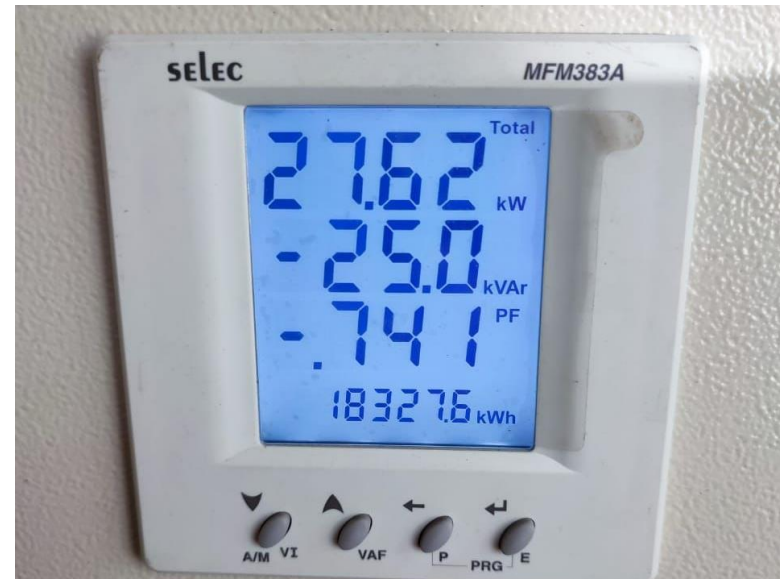
**Melaka Water Works on average consumes 100GWh per annum from induction motors.  
Possible savings of 15GWh per annum equivalent to 10,350 ton CO<sub>2</sub>**

# BEFORE REPLACE MOTOR





# AFTER REPLACE MOTOR



# Duyung Pump House: Existing Motor Retrofit to EcoMoto



**Before**  
**37.66kWh**

**Yearly  
(24 hours)  
Est. Saving  
87,950kWh  
US\$8,795**



**After**  
**27.62kWh**  
**Set to the  
Same RPM**

**Saving 27%  
10.04kWh**

**10.04kWh x US\$0.10 = US\$1.00 savings per hour!**

# EcoMoto: The Low Hanging Fruit



- Easy & Simple
- Plug & Play follow IEC frame standard
- Wide range of motors (2.2kW to 500kW)
- Immediate savings after retrofit
- Very fast ROI 18 to 24 months or even less
- Automatic variable speed control to optimize performance and further energy saving

## LOW TOTAL COST OF OWNERSHIP

- **EcoEMS** Solution IR 4.0 real-time monitoring
- Preventive Maintenance Measure (PMM)
- Fast response team: Local support
- Fast response time: 24/7
- **Hot-Swap**: Ready unit for immediate one-to-one replacement



Prüfbericht - Produkte  
Test report - Products



Prüfbericht-Nr.: Test Report No.:	CN22C9FR 001	Auftrags-Nr.: Order No.:	168339998	Seite 1 von 14 Page 1 of 14
Kunden-Referenz-Nr.: Client Reference No.:	N/A	Auftragsdatum: Order date:	2021.10.20	
Auftraggeber: Client:	VTO MOTOR SDN BHD NO. 23, JALAN 22, TAMAN BUKIT KUCHAI, PUCHONG, 47100 SELANGOR, Malaysia			
Prüfgegenstand: Test Item:	VTO EcoMoto-Permanent Magnet Synchronous Motor			
Bezeichnung / Typ-Nr.: Identification / Type No.:	VE0220-DSP			
Auftrags-Inhalt: Order content:	Commission Test Report			
Prüfgrundlage: Test specification:	Clause 7 of IEC 60034-2-1:2014 Rotating electrical machines -Part 2-1: Standard methods for determining losses and efficiency from test results for machines for function substitution			

Wareneingabe  
Date of sample

Prüfmuster  
Test sample

Prüfzeitraum  
Testing period

Ort der Prüfung:  
Place of testing:

Prüflaboratorium:  
Testing laboratory:

Prüfresultat:  
Test result:

erstellt von:  
created by:

Datum:  
Date:

Stellung / Position  
Project Engineer



genehmigt von:  
authorized by:

Datum:  
Date:

Stellung / Position  
Reviewer

Sonstiges / Other:  
This report does not evidence compliance of the provided sample with the relevant standards but only with the referred tests. This test report documents the findings of examination conducted on the delivered product mentioned above only. This report does not entitle the applicant to carry any safety mark on this or similar products. Further for sales or other application purposes of the tested product, any reference to TÜV Rheinland or a test through TÜV Rheinland is only permissible with prior written consent of TÜV Rheinland.

Zustand des Prüfgegenstandes bei Anlieferung:  
Condition of the test item at delivery:

Prüfmuster vollständig und unbeschädigt  
Test item complete and undamaged

Legende: Pass = entspricht d.g. Prüfgrundlage; Fail = entspricht nicht d.g. Prüfgrundlage; N/A = nicht anwendbar; NT = nicht getestet  
Legend: Pass = tested d.g. test specification; Fail = tested d.n. test specification; N/A = not applicable; NT = not tested

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht ausgewisse vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.  
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.

CERTIFICADO ◆ CERTIFICAT



Product Service

### Attestation of Conformity No. N8A 116230 0001 Rev. 00

Holder of Certificate: **VTO MOTOR SDN BHD**  
No. 23, Jalan 22, Taman Bukit Kuchai  
47100 Puchong, Selangor  
MALAYSIA

Product: **Electric Motors  
(EcoMoto-Permanent Magnet Synchronous Motor)**

based on the technical specifications applicable at the time of issuance. It refers only to the particular sample submitted for testing and certification. For details see: [www.tvsud.com/ps-cert](http://www.tvsud.com/ps-cert)

Test report no.: 64105213089701

Date, 2022-03-23

*Martin Ma*

(Martin Ma)

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書

Page 1 of 2  
After preparation of the necessary technical documentation as well as the EU declaration of conformity the required CE marking can be affixed on the product. The declaration of conformity is issued under the sole responsibility of the manufacturer. Other relevant EU-directives have to be observed.



TEST REPORT EN 60034-1:2010 TÜV SÜD Test report for Rotating electrical machines Part 1: Rating and performance	
Report reference No.:	64.105.21.30897.01
Date of issue:	2022-03-09
Project handler:	Eric Zhu
Testing laboratory:	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
Address:	SF, Communication Building, 153 Pingyuan Rd, Huangpu Ave. West Guangzhou 510656 P. R. China
Testing location:	TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch Huangpu Ave. West Guangzhou, Guangdong

Contact person:	Mr. Lau Chai Kuan
Standard:	EN 60034-1:2010
TRF originated by:	TÜV SÜD Product Service GmbH
Copyright blank test report:	This test report is based on the content of the standard. It was prepared by TÜV SÜD Product Service GmbH. <small>TÜV SÜD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and content.</small>
Test procedure:	<input type="checkbox"/> GS <input type="checkbox"/> TÜV Baurt Mark <input checked="" type="checkbox"/> EU-Directive <input type="checkbox"/> without certification
Non-standard test method:	N/A
National deviations:	N/A
Number of pages (Report):	53
Number of pages (Attachments):	N/A
Compiled by: Eric Zhu	Approved by: Song Lei
(+ signature)	(+ signature)

# TUV Certifications: EE, CE & CB

ID FORM 1

INTELLECTUAL PROPERTY CORPORATION OF MALAYSIA

Industrial Designs Act 1996  
Industrial Designs Regulations 1999  
(Section 14 and Regulation 5)

Industrial Designs Registration Office

APPLICATION FOR REGISTRATION OF AN INDUSTRIAL DESIGN

Application number (For official use only): 20-00-001-0101

- Full name and address of / each applicant:  
(Names of individuals including all partners in a firm shall be given in full. Underline the surname or family name. For a corporate body give its company name). If the applicant is a corporate body, give country / state of incorporation.

Lau Chai Kuan  
No. 23, Jalan 22, Taman Bukit Kuchai, Batu 8,  
Jalan Puchong, 47100 Puchong Selangor, Malaysia

- Full name and address of the author:

# EcoMoto registered Trademarks and Industrial Design

- Name the particular article or set of articles to which the design applies:

PERMANENT MAGNET SYNCHRONOUS MOTOR

- Classification:  
Enter the class and subclass number in accordance with the International Classification for Industrial Designs.

13-01

- View(s):  
Enter the number(s) and which view(s) to be gazetted.

1 View (1.1 Perspective view)



Fee Code  
TMA2A  
TMA2B  
TMA2C

INTELLECTUAL PROPERTY CORPORATION OF MALAYSIA  
TRADEMARKS ACT 2019  
APPLICATION FOR REGISTRATION OF TRADEMARK

PAS Reference No. (if any): TM2020004867

Fee applicable for this request is for each class. Please indicate number of classes requested

Application for registration of trademark – by adopting from pre-approved list (Fee Code TMA2A)  
Application for registration of trademark – without adopting from pre-approved list (Fee Code TMA2B)  
Series of trademark (Fee Code TMA2C)

APPLICANT (If  there is more than one applicant mark off this box and fill additional information):

a	<b>Full Name:</b>	LAU CHAI KUAN								
b	<b>Applicant type</b> (Specify whether Person/individual, body corporate, partnership,	INDIVIDUAL								
d	<b>Business Address</b> • If the address is not within Malaysia, you must also complete section 2 below • If you want to use an address other than the business address, please also complete item 3	<table border="1"> <tr><td colspan="2">No. 23, Jalan 22, Taman Bukit Kuchai,</td></tr> <tr><td colspan="2">Batu 8, Jalan Puchong</td></tr> <tr><td><b>Postcode:</b> 47100</td><td><b>Town:</b> Puchong</td></tr> <tr><td colspan="2"><b>State/Country:</b> Selangor</td></tr> </table>	No. 23, Jalan 22, Taman Bukit Kuchai,		Batu 8, Jalan Puchong		<b>Postcode:</b> 47100	<b>Town:</b> Puchong	<b>State/Country:</b> Selangor	
No. 23, Jalan 22, Taman Bukit Kuchai,										
Batu 8, Jalan Puchong										
<b>Postcode:</b> 47100	<b>Town:</b> Puchong									
<b>State/Country:</b> Selangor										
e	<b>Telephone</b> (For Malaysian applicant only)	03-8076 2218 / 012-700 3888								
f	<b>Mode of Correspondence</b>	<input type="checkbox"/> (Mark off this box if you would like us to correspond with you using our Electronic Filing System services. You must have a registered ID)								
g	<b>Applicant's Reference</b> (If any and no agent appointed)									

# Malaysia Public Works and Minister Of Health



**KETUA PENGARAH KERJA RAYA**  
DIRECTOR-GENERAL OF PUBLIC WORKS

Rujukan Fail : (14)JKR(CKM)500-3/1/6Jld. 11  
Tarikh : 21 April 2022

Encik Hari Krishnan  
Pengarah Pembangunan Perniagaan  
VTO Motor Sdn Bhd.  
No.23, Jalan 22, Taman Bukit Kuchai  
47100 PUCHONG, SELANGOR



**KEMENTERIAN KESIHATAN MALAYSIA**  
(Ministry Of Health Malaysia)  
Bahagian Perkhidmatan Kejuruteraan  
Aras 3 - 7, Blok E3, Kompleks E  
Pusat Pentadbiran Kerajaan Persekutuan  
62590 PUTRAJAYA  
MALAYSIA

Tel : 603-8000 8000  
Faks : 603-8892 4855/4872  
Laman Web: <http://engineering.moh.gov.my>

Ruj. Kami : KKM.600-57/4/2 J40-2 (12)  
Tarikh : 29 April 2022

VTO Motor Sdn. Bhd (1334768-X)  
No.23, Jalan 22, Taman Bukit Kuchai,  
47100 Puchong, Selangor  
(u.p. : **Mr Hari Krishnan - Business Development Director**)

Tuan,

**PENSWASTAAN PERKHIDMATAN SOKONGAN HOSPITAL (PSH)**

5. Segala perhatian dan kerjasama daripada pihak Tuan amatlah dihargai dan didahului dengan ucapan terima kasih.

Sekian.

**"WAWASAN KEMAKMURAN BERSAMA 2030"**

**"BERKHIDMAT UNTUK NEGARA"**

Saya yang menjalankan amanah,

(Ir. **TAURAN ZAIDI BIN AHMAD ZAIDI**)  
Pengarah

## EcoMoto endorsed & approved by Malaysian Government

2. Dimaklumkan, setelah meneliti dokumen dan maklumat semasa sesi pembentangan tersebut, pejabat ini berpendapat produk motor elektrik cekap tenaga EcoMoto yang mempunyai kelas *International Standard* IE4 dan ke atas adalah mematuhi spesifikasi Jabatan Kerja Raya dan boleh digunakan bagi projek-projek baharu dan kerja-kerja *retrofitting* di bawah kendalian JKR, berdasarkan kepada kaedah perolehan dan peraturan semasa yang berkuatkuasa.

Sekian, terima kasih.

**"WAWASAN KEMAKMURAN BERSAMA 2030"**

**"BERKHIDMAT UNTUK NEGARA"**

Saya yang menjalankan amanah,

(DATUK Ir. **HAJI MOHAMAD ZULKEFLY BIN SULAIMAN**)

telah dipasang di AHU wad 6E dan *chilled water pump* no.3 di Hospital Serdang untuk pelaksanaan kajian POC pada awal bulan Januari 2022. Pemantauan bagi sistem tersebut telah dibuat bermula pada 11 Januari 2022 sehingga 18 Februari 2022. Untuk makluman pihak Tuan, Bahagian ini juga telah menerima laporan pelaksanaan POC daripada pihak konsesi sebagai pihak yang bertanggungjawab melaksanakan penyelenggaraan sistem sediaada.

3. Melalui kajian POC yang dilaksanakan serta maklumbalas yang telah diterima, adalah didapati bahawa kajian POC sistem yang telah dipasang telah berjaya mengurangkan penggunaan tenaga elektrik berbanding sistem motor yang digunakan sebelum ini dan sistem motor cekap elektrik yang digunakan semasa POC telah beroperasi pada tahap yang memuaskan. Tiada sebarang isu yang menjejaskan perkhidmatan hospital dilaporkan sepanjang pelaksanaan POC ini.

4. Untuk makluman pihak Tuan, Kementerian Kesihatan Malaysia adalah tidak terikat dengan sebarang perjanjian untuk melantik pihak Tuan ke atas manfaat hasil kajian POC ini. Surat ini juga tidak boleh digunakan bagi tujuan pemasaran dan bukan untuk meluluskan penggunaan produk.

\*Silia catatkan rujukan surat ini apabila menjawab\*



**Jabatan Kerja Raya Malaysia**  
Public Works Department Malaysia  
Aras 33, Menara Kerja Raya, Ibu Pejabat JKR Malaysia, Jalan Sultan Salahuddin, 50480 Kuala Lumpur  
Tel.: 03-2618 8421 Faks: 03-2618 8799 <https://www.jkr.gov.my>



CERTIFIED TO ISO 9001:2015  
CERT. NO.: QMS 03087



CERTIFIED TO ISO 14001:2015  
CERT. NO.: EMS 00227



CERTIFIED TO ISO 45001:2018  
CERT. NO.: OHS 00004



CERTIFIED TO ISO 50001:2018  
CERT. NO.: EMS 60111

Timbalan Pengarah Kanan (Perkhidmatan)  
Bahagian Perkhidmatan Kejuruteraan  
Kementerian Kesihatan Malaysia

Ketua Sektor (Program Lestari)  
Bahagian Perkhidmatan Kejuruteraan  
Kementerian Kesihatan Malaysia

Pengarah  
Hospital Serdang

Pengarah  
Jabatan Kesihatan Negeri Selangor  
(u.p: **Unit Kejuruteraan Operasi Hospital**)

Ketua Pegawai Operasi  
Radicare (M) Sdn. Bhd.

Mukasurat 2 / 2

# Global Electric Motor Market

PRESCIENT & STRATEGIC  
INTELLIGENCE

Where knowledge inspires strategy

## APAC

Fastest-Growing Market

By Region (2020-2030)

Largest Market By Region (2019)



2019  
Market Size  
\$118.2  
billion

2030  
Market Size  
\$195.2  
billion

Market  
Growth Rate  
(2020-2030)  
4.8%

# LOCAL MARKET POTENTIAL

	Sector	Application	(1) Total Clients	(2) Av. No. Motors Per Site	(3) Av. Price (RM) Per Motor*	(4) No. of Clients	YEAR 2022 Revenue (2x3x4)	(5) No. of Clients	YEAR 2023 Revenue (2x3x5)	(6) No. of Clients	YEAR 2024 Revenue (2x3x6)	(7) No. of Clients	YEAR 2025 Revenue (2x3x7)	(8) No. of Clients	YEAR 2026 Revenue (2x3x8)	Total Clients After 5 Years
	<b>(A) Private Sectors</b>				<b>USD</b>		<b>USD</b>		<b>USD</b>		<b>USD</b>		<b>USD</b>		<b>USD</b>	
1	Shopping Malls	HVAC	600	50	4,000	1	200,000	10	2,000,000	50	10,000,000	100	20,000,000	200	40,000,000	361
2	Commercial Buildings	HVAC	500	30	4,000	0	-	1	120,000	10	1,200,000	50	6,000,000	100	12,000,000	161
3	Private Hospitals	HVAC	240	30	4,000	0	-	1	120,000	10	1,200,000	50	6,000,000	100	12,000,000	161
4	Hotel (5 Stars)	HVAC	250	20	4,000	0	-	1	80,000	10	800,000	50	4,000,000	100	8,000,000	161
5	Industry Oil/Fats	Cooling	28	100	4,000	0	-	1	400,000	5	2,000,000	10	4,000,000	10	4,000,000	26
6	Electronic And Electrical	Cooling, Freezer	1695	20	4,000	0	-	1	80,000	10	800,000	50	4,000,000	100	8,000,000	161
7	Glove Factory	HVAC	200	100	4,000	1	400,000	10	4,000,000	30	12,000,000	60	24,000,000	90	36,000,000	191
8	Pharma Plant	HVAC	265	50	4,000	0	-	1	200,000	10	2,000,000	50	10,000,000	100	20,000,000	161
9	Food Industry	Cooling	2000	50	4,000	0	-	1	200,000	10	2,000,000	50	10,000,000	100	20,000,000	161
10	Medical Equipment	HVAC	179	50	4,000	0	-	1	200,000	10	2,000,000	50	10,000,000	100	20,000,000	161
11	Oleo Chemical	Cooling	18	100	4,000	0	-	1	400,000	5	2,000,000	5	2,000,000	5	2,000,000	16
12	Private Universities	HVAC	47	20	4,000	0	-	1	80,000	10	800,000	15	1,200,000	15	1,200,000	41
	<b>TOTAL</b>		<b>6022</b>				<b>600,000</b>		<b>7,880,000</b>		<b>36,800,000</b>		<b>101,200,000</b>		<b>183,200,000</b>	<b>1762</b>
<b>B</b>	<b>Public Sector</b>															
1	Hospitals	HVAC	150	50	4,000	12	2,400,000	50	10,000,000	88	17,600,000	0	-	0	-	150
2	Universities	HVAC	30	20	4,000	0	-	1	80,000	5	400,000	10	800,000	10	800,000	26
3	Airports	HVAC	39	30	4,000	0	-	1	120,000	10	1,200,000	28	3,360,000	0	-	39
4	Water Works**	Pumps	12	300	8,000	0	-	2	4,800,000	5	12,000,000	6	14,400,000	0	-	13
5	Govt. Buildings	HVAC	200	30	4,000	1	120,000	10	1,200,000	50	6,000,000	100	12,000,000	39	4,680,000	200
6	Town Councils	HVAC	155	20	4,000	1	80,000	10	800,000	50	4,000,000	94	7,520,000	0	-	155
	<b>TOTAL</b>		<b>586</b>				<b>2,600,000</b>		<b>17,000,000</b>		<b>41,200,000</b>		<b>38,080,000</b>		<b>5,480,000</b>	<b>583</b>
	<b>GRAND TOTAL (USD)</b>		<b>6608</b>				<b>3,200,000</b>		<b>24,880,000</b>		<b>78,000,000</b>		<b>139,280,000</b>		<b>188,680,000</b>	<b>2345</b>

\* Average price per motor is inclusive of motor, drive & energy monitoring system. Supply and complete with installation. USD4,000 per set

\*\* Water works' pump motors are larger in sizes and the average price per set is USD8,000.



# OVERSEA MARKET POTENTIAL

	COUNTRY	POTENTIAL SALE (Units of Motor)	TARGET OUTRIGHT SALE QUANTITY (Yr 2023)	YEAR 2023 REVENUE (USD)	TARGET OUTRIGHT SALE QUANTITY (Yr 2024)	YEAR 2024 REVENUE (USD)	TARGET OUTRIGHT SALE QUANTITY (Yr2025)	YEAR 2025 REVENUE (USD)	TARGET OUTRIGHT SALE QUANTITY (Yr 2026)	YEAR 2026 REVENUE (USD)	Total Motor in 4 Years
1	Singapore	40,000	500	2,000,000	5,000	20,000,000	20,000	80,000,000	14,500	58,000,000	40,000
2	Thailand	90,000	500	2,000,000	5,000	20,000,000	20,000	80,000,000	30,000	120,000,000	55,500
3	Philippines	70,000	500	2,000,000	5,000	20,000,000	20,000	80,000,000	30,000	120,000,000	55,500
4	Vietnam	70,000	500	2,000,000	5,000	20,000,000	20,000	80,000,000	30,000	120,000,000	55,500
5	Indonesia	800,000	500	2,000,000	5,000	20,000,000	20,000	80,000,000	30,000	120,000,000	55,500
8	Asia & Oceania		0	0	2,500	10,000,000	25,000	100,000,000	100,000	400,000,000	127,500
9	Europe		0	0	2,500	10,000,000	25,000	100,000,000	100,000	400,000,000	127,500
10	Latin America & Africa		0	0	0	0	2,500	10,000,000	100,000	400,000,000	102,500
	Total Motor Qty (unit)		2500		30,000		152,500		434,500		619,500
	TOTAL REVENUE (USD)			10,000,000		120,000,000		610,000,000		1,738,000,000	2,478,000,000

\* Average price per motor is inclusive of motor, drive & energy monitoring system. Supply and complete with installation. USD4,000 per set

# Global Electric Motor Market



## **ECOMOTO**

Ultimate target to achieve 25% Market Share in 2030 for ASEAN market, which is US\$ 5 billion.  
(The Top 5 brands in Motors)  
Total: Over 1m units of EcoMoto sold from 2021 to 2030.

**Low & Medium voltage category:**  
2.2kW to 1000kW power rating  
Total: 30 models only

**EcoMoto Savings in 2030:**  
30TWh and 20MTon CO<sub>2</sub>  
Over US\$6 billion in bill savings



# \$20 Million Funding Requirement



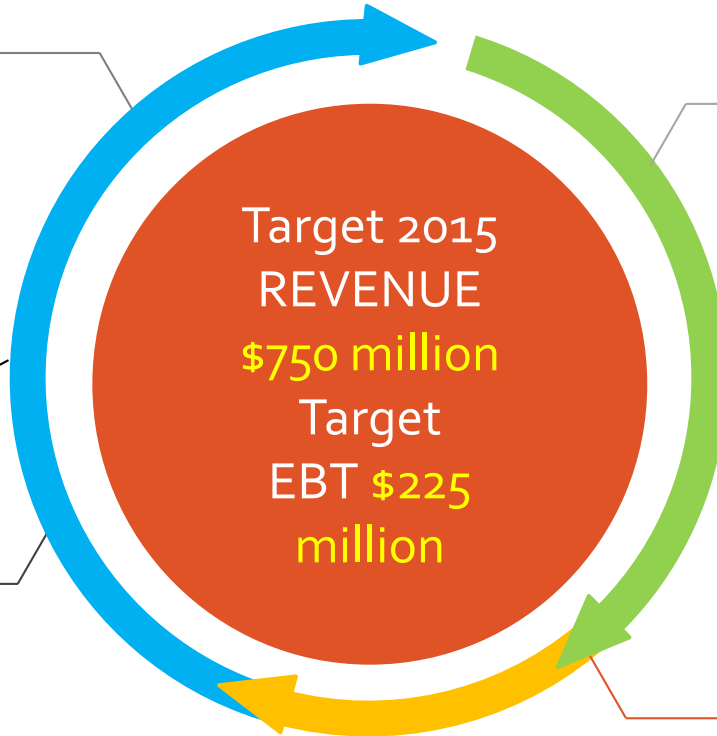
**EXIT for INVESTOR  
Via IPO or M&A**



ASEAN Market  
Development + Setup  
\$5 million



Manufacturing Plant +  
EcoMoto Raw Material  
\$5 million



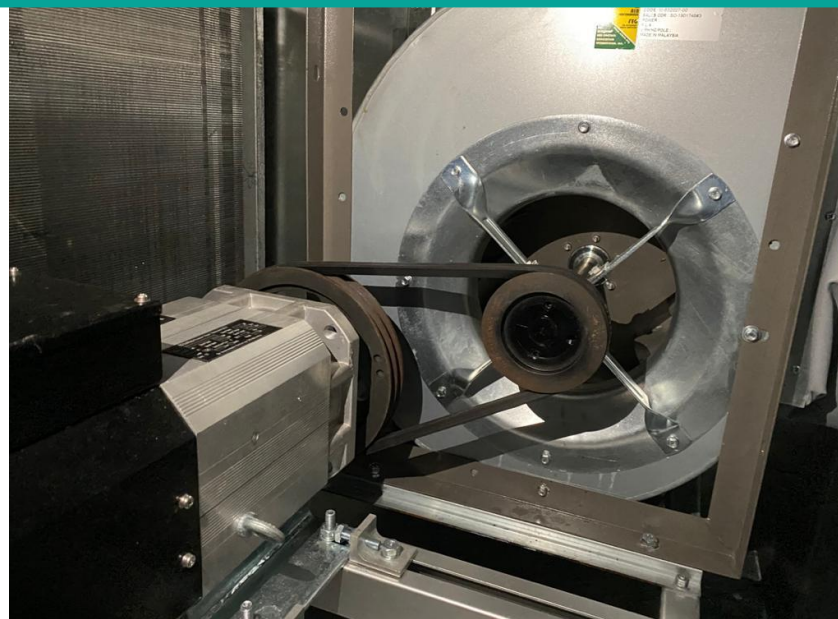
Sales Office + Service  
Center/Warehouse Setup +  
Nation wide branches  
+Certification + Overheads  
\$5 million



EcoMoto Inventory/Stocks/Parts  
From 2.2kW to 500kW  
\$5 million



**More than Thousand of Installations in Malaysia.**





**Save more than 30GWh & 20kTon CO<sub>2</sub> per year**





**Target: Savings of 300GWh & 200kTon CO<sub>2</sub> in 2023!**



# TOTAL SOLUTION PROVIDER FOR ENERGY EFFICIENCY & CONSERVATION

MyHIJAU • MARK



Certificate no.: MyHP00235/20



DEUTSCH URKUNDE: Nr 30 2011 000 76



Malaysian Own, Brand Registered in Malaysia, Germany & China.



# SUMMARY

THE ANSWER TO YOUR HIGH ELECTRICITY BILL

- ✓ 8 Years Of R&D
- ✓ **Own Invention (Patentable)**
- ✓ Unique (Revolutionary Invention)
- ✓ **Green Technology**
- ✓ TUV Certified; CE, CE & EE
- ✓ Zero Capex Solution On Energy Savings
- ✓ **Eligible for Pioneer Status (0% Tax)**
- ✓ Proven Since 2016 (Market Ready)
- ✓ Large Target Market Size (Retrofit)
- ✓ **The Next Global Megatrend (2020-2030)**
- ✓ High Sales Turnover Per Site
- ✓ **Continuous Stream Of Revenue (EPC)**
- ✓ Lower Inventory Cost (Dual Speed)
- ✓ Affordable & Cost-effective (Fast ROI)
- ✓ **Blue Ocean Market**

