

# CESS

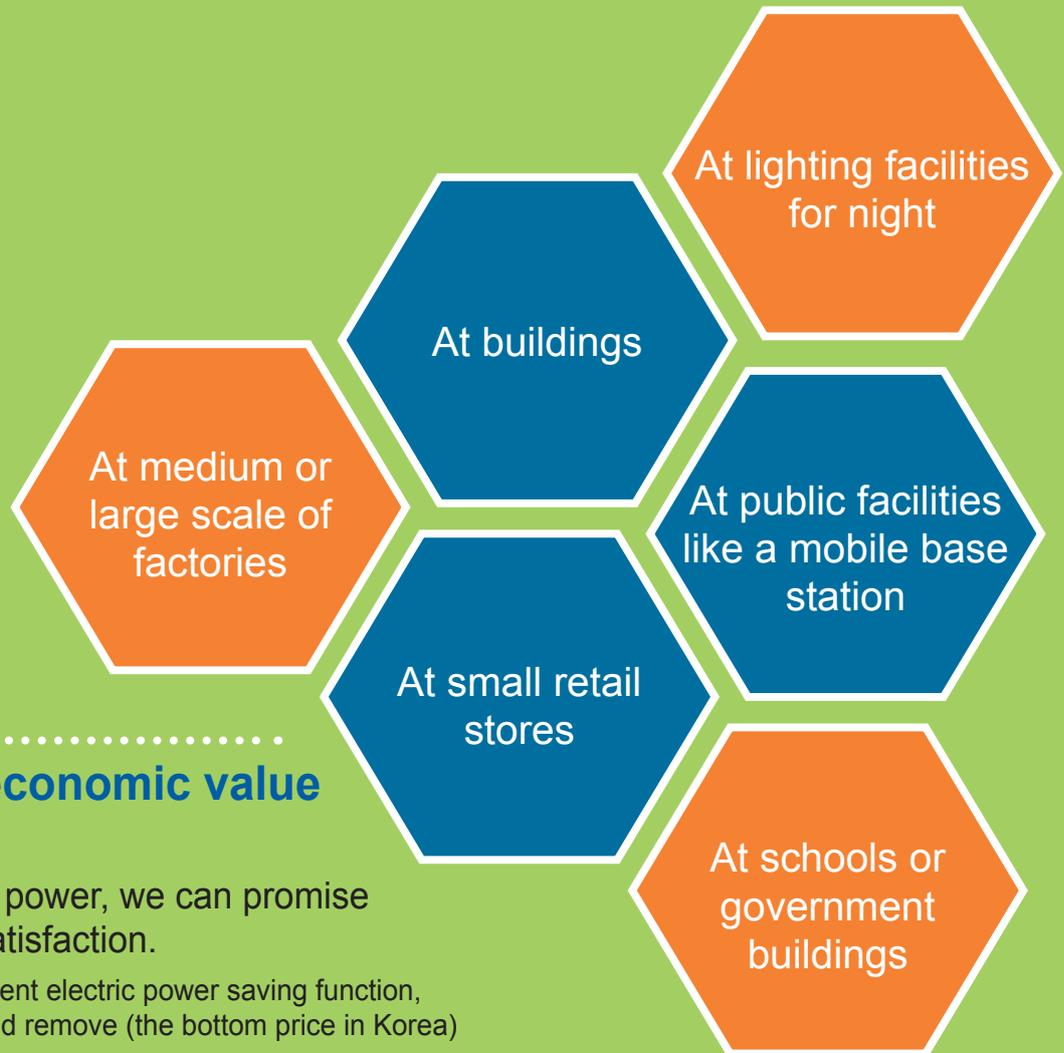
Cosmotor Electricity Saving System

New World of Electric Power Saving, CESS will make it.



You can save money for utility fee safely without damage of voltage drop down by using CESS which has improved electric power efficiency invented by new idea & technique!

## Electricity saving efficiency by 6~15%



### Excellent economic value of CESS

Saving electric power, we can promise beyond your satisfaction.

- Low price, excellent electric power saving function, easy to install and remove (the bottom price in Korea)
- As you can save at least 10% of utility fee, you can recover purchase cost within 2 year.(From saving electric fee only)
- Through various financial support, we will help you to minimize CESS installation cost and lighten your burden.

Provide stable, hi-quality electric power

Enhance efficiency of whole electric power system.



Reduce the prime cost  
(Save electric fee, maintenance fee)

Protect electric machinery, prevent electric system from hazardous accident effectively.



Increase productivity

Prevent electric system from malfunction and eliminate declining performance.



Maximize profit margin

Enlarge competitive ability against foreign industries, countries.

# Installed CESS Photo

It is essential to install CESS wherever they use electric power.

Government buildings, Industries, Buildings, Wedding Halls, Hospitals, Markets, Hotels, Super scale grocery stores, Schools, Golf clubs, Sports complexes, Churches,...etc.

○○ paper company



○○ company



○○○○ hotel



○○ university



By customer's request, restricted to show customer's full name.  
We, however, can provide detailed information and show you installation cases if you want to install CESS.



## • Company motto

'Become the person who makes success oneself and company'

First, become person who loves jobs.

Second, become person who is reliable.

Third, become person who has a dream.

## INTRODUCTION COSMOTOR

### • Business significance

- raise competitiveness by retrenchment of energy
- Contribute to the improved world environment by reducing fossil energy use

### • The objectives

- Having technical skills to be best power-saving BRAND.
- Securing profitability by developing various Profit Business Model.
- Dominating the market in advance with active marketing training.

### • The status of business

- Rapid growth of relevant market in relation to ENERGY SAVING owing to the aftermath of global economic crisis
- Fully realization of the necessity of cost reduction by rivalry seriousness between corporations

### • Management philosophies

- Love people: Enterprise shall focus on people oriented management based on human dignity.
- Love environment: Enterprise shall try to improve and preserve environment passed down in future ages.
- Love country: Enterprise shall make effort for increasing national interest by sincerely paying taxes and clear management.

### • Vision & Mission

- Happy social implementation well being all us with the settlement of the alternative energy's culture.
- Actively come up to the energy saving policy of the government and contribution to the competitiveness reconsideration of the corporation and lead the global environmental protection.
- To embody the best service and commodities differentiated to competitive companies, it invests in sustained research and development.
- It contributes to the poor and alienated neighbors' welfare through the foundation establishment and profit revert to society through the steady corporation's management.

## 02 \_ Greeting from C.E.O

# “ Company which shares our brilliant future in the public confidence ”

First of all, we would like to thank you for your lavis encouragement and cheer to us, the COSMOTOR.

We set our very first step in 1966 aiming for development and provision of the state-of-the-art electrical power saving system under the slogan of 'Create New Energy Culture' in company with our the most talented staffs. We have been concentrated our energy onto the Research and Development for saving energy field, which is our long cherished desire, with liberal investment.

With our struggle, fruit-bearing efforts, CESS, COSMOTOR Electrical power Saving System. came out in the world first time. The CESS can provide good quality supply power through power efficiency improvement without voltage drop damage on the live-line practically to maximize saving its energy.

After we applied CESS for International Patent, our new technology was gradually known to electrical engineers and embossed our CESS as a matter of great interest among them. Also the CESS was approved as new saving energy technology through lots strict certified tests and analysis. Pass through those process, this CESS was also recognized as new idea technology by electrical experts, we have a rush of orders from around the world. We, however, are cautious not to be self-satisfied and focus our efforts in order to develop another epochal technology with lasting, sound investment. Additionally, we will concentrate all of our energy and capabilities to contribute and enhance our competitive ability as well as our native land, Korea's competitive ability through effective saving energy.

We have a dream to realize everybody be happy with the COSMOTOR and hope to keep up our relationship with useful meeting from our precious the first greeting.

Thank you very much!

C.E.O COSMOTOR Corporation

# 03 HISTORY

## Research & Development Stage

- 1996. 04. Registered small business & established an Annex Technical Institute
- 1998. 08. Developed harmful wave interceptor PC-MATE (No1. product from the Institute)  
12. Developed Electricity Saving System for home (CESS) (No2. product from the Institute)  
Developed Electricity Saving System for industries (CESS) (No3. product from the Institute)
- 1999. 06. Developed new technology for Hi-Voltage (3300v,6600v) application : World's 1st
- 2000. 02. Developed new technology how to produce 100000KW singular item : World's best

## Business Stage

- 2002. 02. Changed business status from individual to corporate / Established own factory  
Released Electricity Saving System CESS for home/industries, and harmful wave interceptor PC-MATE  
08. Established COSMOTOR Corp. in Thailand (Capital Stock : US\$ 1.5M)  
Applied Korean Patent for COSMOTOR Electricity Saving System (CESS) (10-2002-0046730)  
Applied Registration of Design in Korea for COSMOTOR Electricity Saving System(CESS) (30-2002-0022599)  
Applied for CESS Grade Mark(40-2002-0035381)  
09. Started national chain stores and set up production line of 100,000kw model as of unit model in the same business field  
10. Contracted Agent for north America  
Applied for design patent of CESS (0335321)  
11. Registered Utility New Model Patent for CESS (No.0296714) /  
Registered Trade Mark for CESS (No.0565812)  
Established branch of Vietnam, Philippines, China, Brazil and concluded export contract
- 2003. 01. Contracted exclusive supplying agreement for pc room with Getokorea and Daol Communication  
02. Produced CESS for pc room use and attended L.A electricity exhibition  
03. Received a Technology Certification from Thailand Electric Power Corp. and produced 1st new upgraded CESS product.  
04. Upgrade CESS using new tech  
05. Obtained certificate of Thailand power company  
06. Established south area business center and opened 50th chain stores  
08. Opened the 70th selling agency and produced 2nd new upgraded CESS product.  
10. Controlled to install CESS with S., K., H. group's factories  
11. Participated saving energy case study & seminar sponsored by Korea Energy Management Corp.
- 2004. 05. Received a Technology Certification from Korea Testing Laboratory(KTL) and participated Korean Electrical Engineer Association Seminar  
06. Engineer Association Seminar  
09. Controlled to install CESS in the KT powertel BTS  
10. Received a Technology Certification from China Electric Power & Science Research Institute(CNAL) and established 50000\$ worth of CESS in Japan factory.
- 2005. 02. Registered a public tender agent for Korea Public Procurement Service  
05. Opened a Certification of ISO 9001:2000  
07. Contracted a selling agency with China (Kyungan National Corp.)  
Opened up new markets in all the area of China  
08. Established a general branch for Beijing COSMOTOR, electric power saving company, in China  
12. Selected as a outstanding Corporate by the Korea Daily News
- 2006. 01. Contracted an agency in Turkey  
04. Installed 500 units of CESS at the base station of KT POWERTEL  
05. Established Oversea Marketing Subsidiary (Glosel Corp.) & Sales Agent Corp.. in India.  
09. Developed Static Electricity Removal Device.  
12. Business promotion by participating in KOTRA Exhibition (World Best Merchandise Exhibition) held in Mumbai, India which supported by Korean Industries and Renouncement Department.

# THE HISTORY OF COSMOTOR

- 2007.**
01. Designated into Export Incubator by Korean Small Business Promotion Corp.  
Attended '2007 India Market Promotion Team' organized by Seoul Business Agency of Korea (SBA).
  02. Established Sales Agent Corp. at every Province of China. / Made an Agent Agreement in Mexico.
  04. Participated in Chinese Technology Association Exhibition in Beijing. / Made an Agent Agreement in Spain.
  07. Obtained European CE certificate.
  09. Obtained the certificate of Environmental Management System.
  10. Participated in Seminar held by Chinese Technology Association in Shanghai  
Obtained Quality Test certificate from Korean Small and Medium Business Administration (SMBA)
  11. Obtained Quality Mark (Q-Mark) of Korean Administration.
  12. Obtained ROHS certificate
- 2008.**
04. Launched CESS business in Japan market
  08. Participated in Japan Exhibition.
  09. Made Agent Agreement in Sudan
  12. Obtained CESS function certificate from India Electricity Development Institute.  
Obtained Invention patent. / Obtained Surge Expressing certificate.
- 2009.**
06. exclusive agreement for Philippines
  10. exclusive agreement for Russia
  11. exclusive agreement for Malaysia & Singapore
- 2010.**
06. Acquired CERTIFICATE OF TRADE BUSINESS NUMBER from Korea International Trade Association
  07. Contracted MOU in Iran & Poland
  09. Selected as the global buyer sourcing program by Small & medium Business Corporation
  11. Awarded as the Excellent company by Seoul Small & Medium Business Administration
  12. Contracted MOU in Russia, Ireland, Netherlands, Germany
- 2011.**
03. Selected as Excellent service company of knowledge 2011 by The future knowledge management institute.
  06. Attend to PSECE 2011(Philippines Exhibit)
  07. Attend to Int'l energy saving technology conference(SENEX) hold by national climate change forum  
Acquired Mexican Certificate "NOM"
  08. Agent contracts are in place for Guangdong and Liaoning province area.
  09. Agent contracts are in place for Shanghai and Beijing area.
  11. Awarded the 8th Order of Industrial Service Merit by Competition Policy for the Electricity Industry of Korea.
- 2012.**
01. Export contract to Kazakhstan, Belarus
  02. Attended to 2012 World Energy Saving Expo
  03. Export Contract to Haiti
  04. Established Korea Business Center in Mexico
  06. Awarded as intellectual "patent application" by Korean Intellectual Association
  08. Agent Contract to Chile
  11. Received Grand Prize of Knowledge managers held by Korean Intellectual Association
  12. Acquired GOST Certification from Russian Federation Standard Measuring Committee  
Received Grand Prize of Korean Talent Sharing held by Korean Intellectual Association
- 2013.**
06. Signing MOU with China Xian Telecom for BTS
  09. Selected as of "21st century Korean & figures grand prize" and "electric power saving in economic field"  
by Korea newspaper broadcasting journalists association
  10. Serve as president of the board of examiners in "Korea Beauty Model Contest" held by Korea health &  
AMP(Beauty industry association) Serve as the panel of jury for Korea CEO Reading Grand Prize held by  
National Success Era
  11. Participated in International Energy Exhibition held by Yancheng city located in Jiangsu province of China
- 2014.**
11. Participation in The Environmental Preservation Fair at Jiangsu (Yeom-seong Si) in China
  12. Chairman of KOREA SUCCESS GRAND AWARDZ Sponsored by The corporate Juridical  
Person, Citizen Success Times (National Age of Success)
- 2015.**
05. MOU agreement with yancheng china in seoul joint explanatory meeting for economy and trade
  07. Win the prize of major of seoul awarded korea Tarent Donation Association.

# 04 \_ Efficiency Improvement

## Efficiency and Efficiency Improvement

Efficiency is the ratio between the amount of input energy a machine needs to make it work, and the amount of output energy it produces.

If the output energy is bigger than the input energy, we can say Efficiency is improved.

## Efficiency Improvement of Electric Power Area

### Efficiency Improvement of Home / Small Business Hardware

Should purchase Hi-ratio of energy efficiency products or energy saving products or Widely use of improved energy efficient equipment like CESS.

### Efficiency Improvement of Industries Hardware & Efficiently use of machinery and equipment

Check the electrical load each area correctly to try maintain & control well for quantity of supply & demand power energy and effectively operate on the machinery & planning.

## The mechanism of Electric Power Efficiency

### Conversion Efficiency

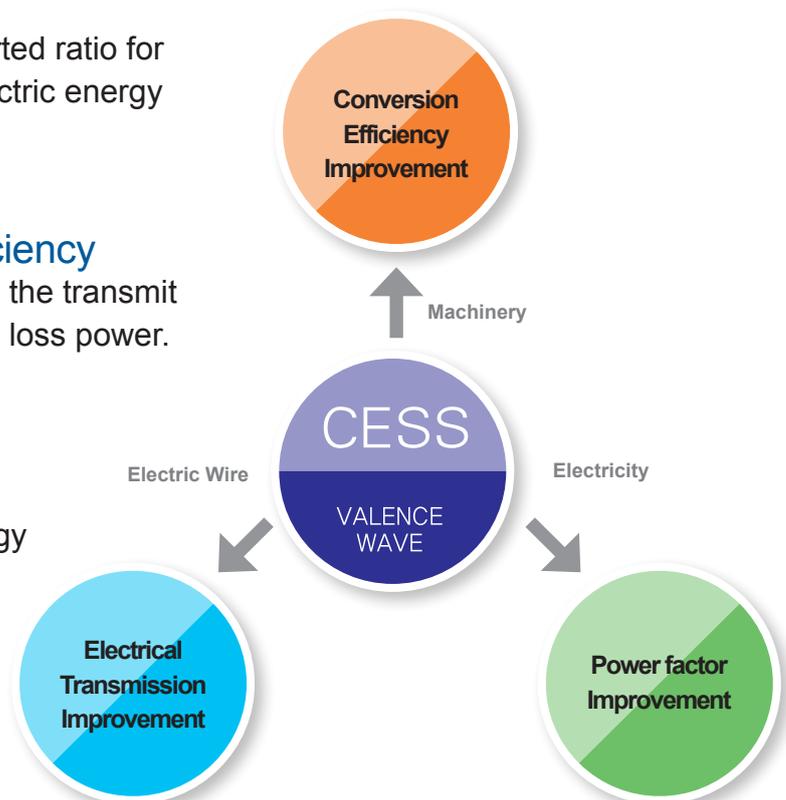
In electrical machinery, the converted ratio for light, heat, kinetic energy from electric energy without loss.

### Electrical Transmission Efficiency

In Electrical Transmission system, the transmit ratio on electric power line without loss power.

### Electric Power Factor

In electric power energy, the value of practically using energy without loss.(Max.=1)



# 05 – Efficiency Improvement principle of CESS

– (Saving power energy principle)

## Nobody imitates our power saving technology of CESS

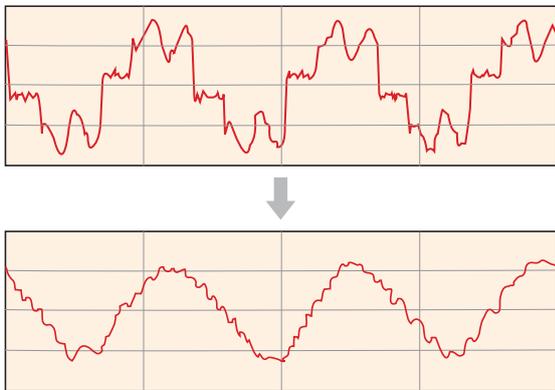
If the specific boundary energy from CESS emitted, Valence Wave, flow on the electric current, this wave can eliminate internal / external loss factors of electricity such as reactive electric power, leaking electric current, oxidizing effect, heat generation and can improve power factor, electrical transmission efficiency, conversion efficiency. As those results, you can save electric power energy, maintenance cost, and utility fee.

### Physical function of Saving electric power - Function of Efficiency Improvement

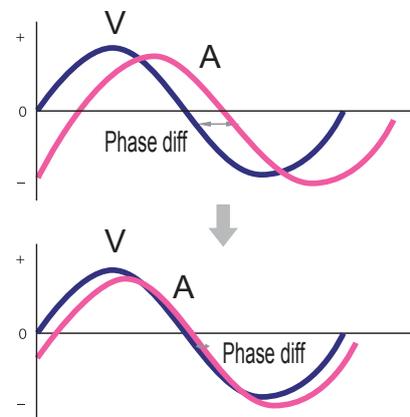
#### The Primary function

Wave length activation function → Offset distorted wave to improve wave shape Adjust phase angle to improve power factor

- Improved Wave Shape

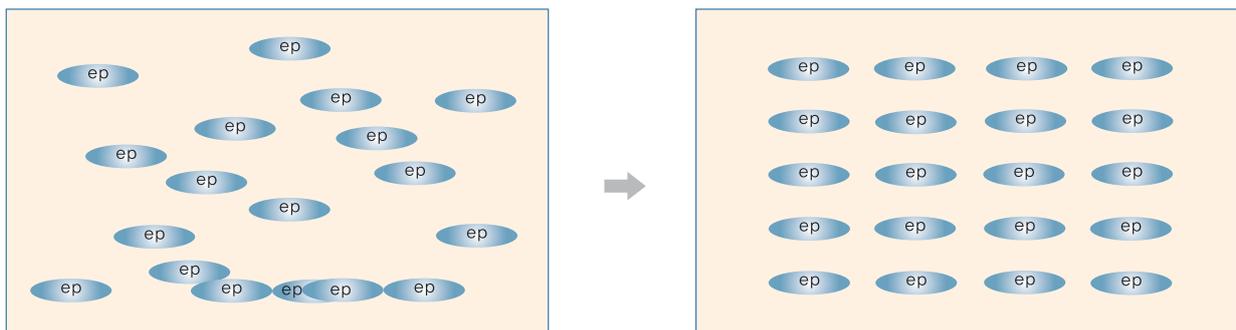


- Improved Power Factor



#### The Secondary function

Maintaining permanent wave length function → Change to unique, stable molecular structure Semi-permanent effect by restoration a half-life



# 06\_ Various Type of CESS and Characteristic

**Need to save electric power energy wherever we can produce custom-built CESS Whatever you want.**

The CESS is excellent electric power saving product which the only COSMOTOR can produce unlimitedly by our technology regardless of any circumstance : capacity (10~100,000 KW), voltage(110~6,600 V), phase / wiring method (single phase, three phases, any type of wiring..).



General home like a detached house, villa...  
**CESS for Home (10kW)**



Small Business, Offices, Small scale factories...  
**CESS for industries, General (10kW~1,000kW)**



Large scale of public facilities, industrial complex...  
**CESS for industries, case type (1,000kW~100,000kW)**

We can produce custom-built CESS for hi-voltage (3,300 / 6,600 V) or hi-current (over 10,000 A)

# 07 \_ Feature and Expected effect of the CESS

Anybody can make promises for power saving.  
But, No one imitates our reliable saving technology.

**01** You can check **power saving** by power saving test before installation.

It is very reliable products for power saving effect by data measured with power analyzer in case of high capacity products.

**02** It is **absolutely safe** after installation.

It never affects to the other equipment and no damages of equipment because CESS does not generate high harmonic waves and noise and no voltage fluctuation. In addition, installation is simple due to parallel method and it is a safe product without any malfunction of electrical equipment and no risk of power failure.

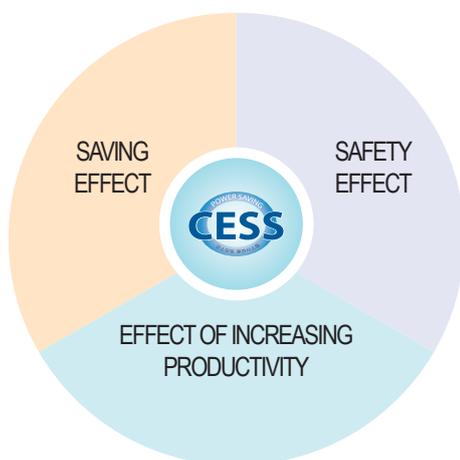
**03** It has **unlimited performance**.

It is outstanding product, which can be produced with capacity (10~100,000 KW) voltage (110~6,600 V), phase (single phase, three phase, three phase four ~ wire system) without any limit regardless of wiring method (Y wiring, delta wiring method).

**04** It is rock **bottom price** among same level power saving systems.

Movement and installation are easy because it is light as 1/2 ~ 1/5 less than general power saving system in weight, volume and price and purchase burden was eased because investment is recouped within 2 years.

## EFFECT OF CESS



CESS EFFECT	EFFECT CONTENT
Saving Effect	Save electric charge CESS saves electric charge because used power and reactive power are greatly decreased without voltage drop due to increased efficiency of the whole electric system.
Safety Effect	Save maintenance cost CESS protects electric equipments and prevents occurring accident because of no variation in voltage and hertz, also prevents electric troubles such as power failure by safe parallel wiring type, which has no influence on the other equipments.
Effect of Increasing Productivity	Maximizing corporate profits CESS increases productivity by preventing abnormal condition of electric equipments and facilities and removing performance deterioration, which increases competitive power between nations.

### ● CONCRETE EFFECT

Electricity activation and damage compensation, Overvoltage and Returns, Protection of equipment and saving expenses, Productivity increase and strengthening of competitiveness, Reducing abnormal condition and extension of lifespan

# 08 \_ Analysis Table for Saving Power Test Results

Perfect performance of CESS, proved as follows

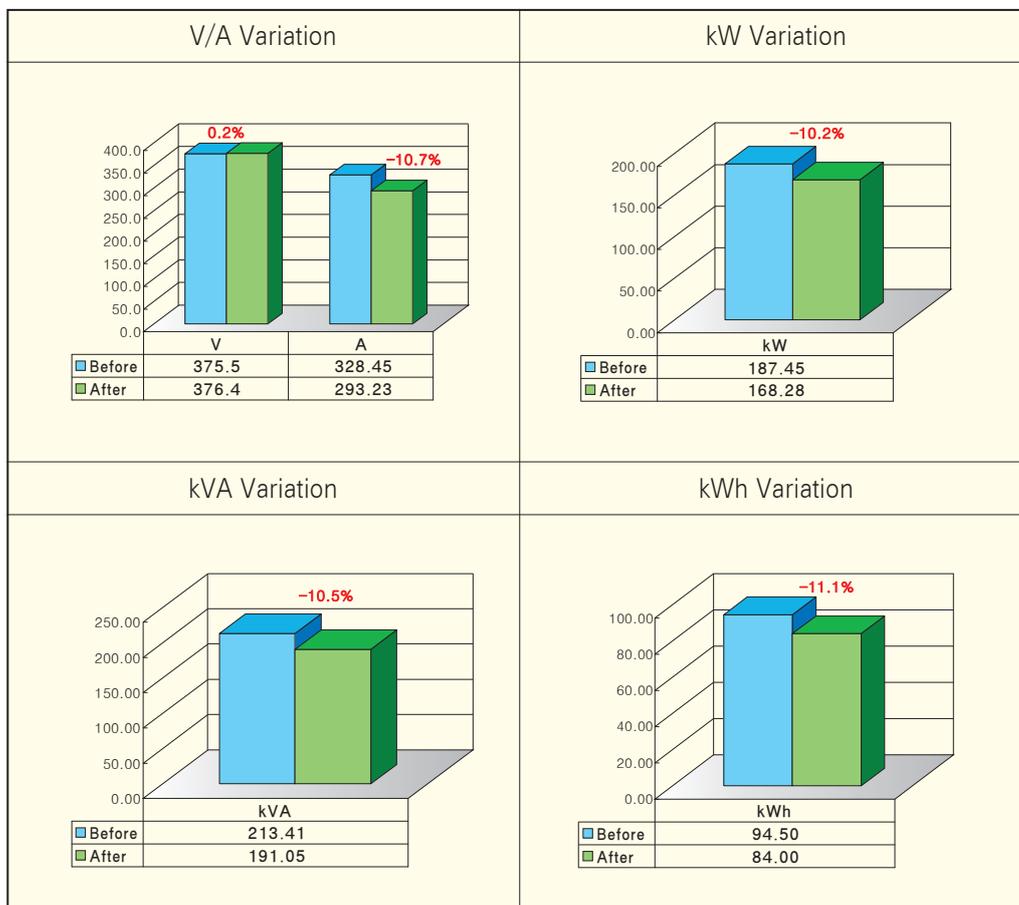
## 1. Test Result

Items	Division	Voltage	Current	Active Power	Apparent Power	Watt-hour
		V	A	kW	kVA	kWh
Total	Before	375.5	328.45	187.45	213.41	94.50
	After	376.4	293.23	168.28	191.05	84.00
Measuring Results	Variation Rate(%)	0.2%	-10.7%	-10.2%	-10.5%	-11.1%

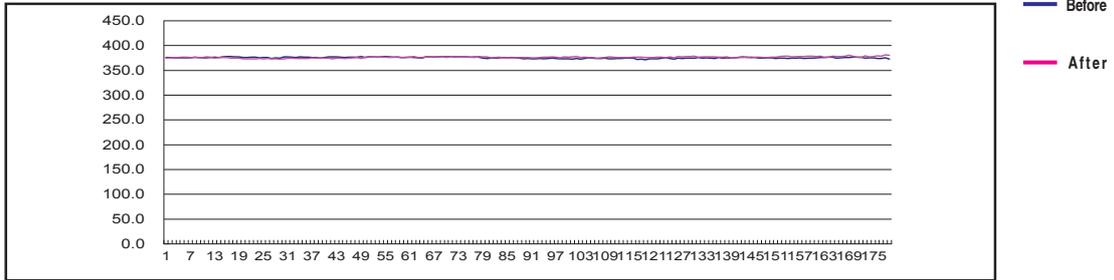
## 2. EMS 9200 Watt-hour Results

	Date, Time	Measuring Time	Measuring Value (kWh)	Watt-hour
Before	12-09-12 10:41:50	179	0.0	-
	12-09-12 11:11:30	(29minute 40sec)	94.50	94.50
After	12-09-12 11:17:40	179	0.0	-
	12-09-12 11:47:20	(29minute 40sec)	84.00	84.00
Variation Rate(%)				-11.1%

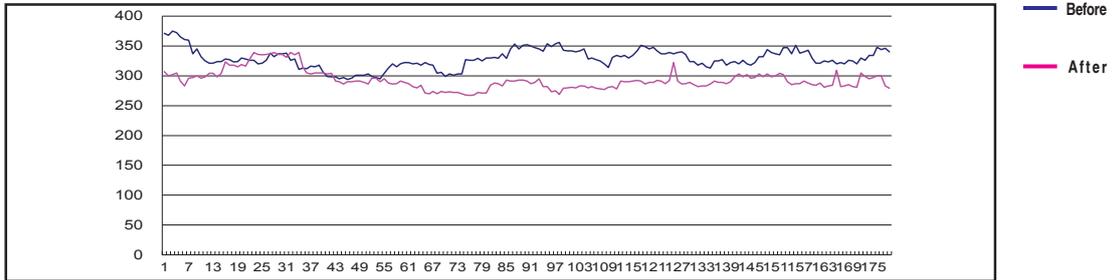
As reduce power consumption, electric power saving rate : 11.1%



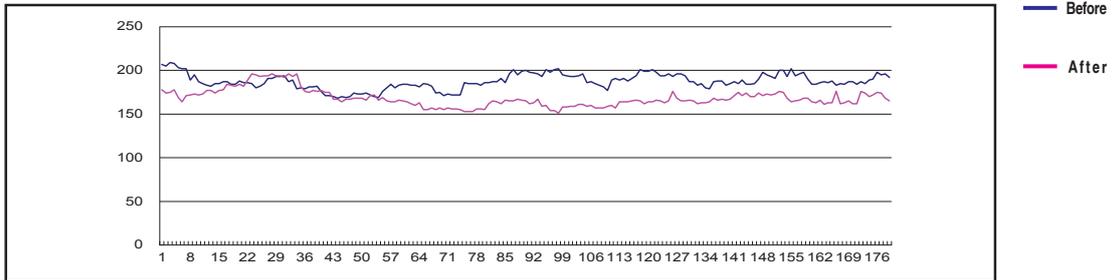
● Voltage(V) Installation Before, After Graph



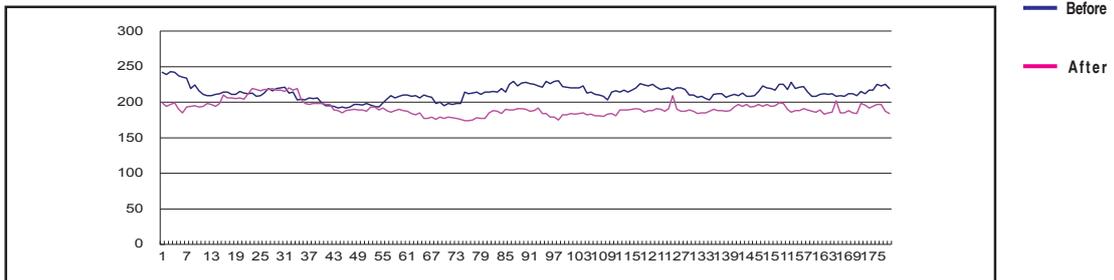
● Current(A) Installation Before, After Graph



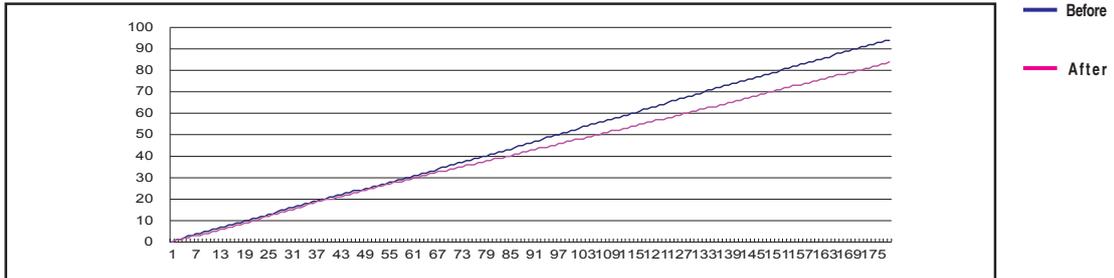
● Active Power(kW) Installation Before, After Graph



● Apparent Power(kVA) Installation Before, After Graph



● Watt-hour(kWh) Installation Before, After Graph



# 09\_ How to install CESS

Use parallel wiring method, very easy to install.

## How to install

### STEP 01

Open power distribution box.

### STEP 02

Confirm the position of main breaker switch.

### STEP 03

Turn "OFF" the main breaker switch from "ON" position.

### STEP 04

Confirm Neutral line(N) under the main breaker switch.

### STEP 05

Check another 3 lines of electric power (R,S,T line)

### STEP 06

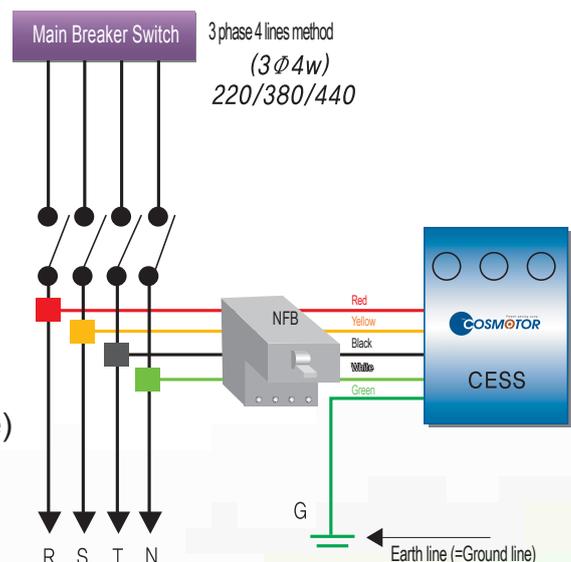
Check Neutral line(N) of CESS.

### STEP 07

Connect 4 lines between CESS and the main breaker switch, start Neutral Line(N) first then, R, S, T, lines orderly.

### STEP 08

Turn "ON" the main breaker switch from "OFF" position.



# 10\_ CERTIFICATION

CESS has passed strict electric power saving test by several certificate authorities and was recognized officially its excellent quality and technology.



INVENTION PATENT  
No. 10-0876163



Registered CESS for  
Registratiobn Of Design  
KIPO Reg. No.0335321



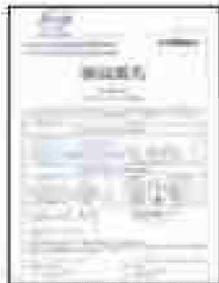
Registered CESS  
for Trade Mark  
KIPO Reg. No.0565812



Technology Certification:  
Korea Testing Laboratory  
(KTL) : 04-326-032



EMI test Certificate  
by Korea Testing Certification



China CNAL NO.L0780  
China Electric Power &  
Science Research Institute



China CNAL NO.L1592  
China Electric Power &  
Science Research Institute



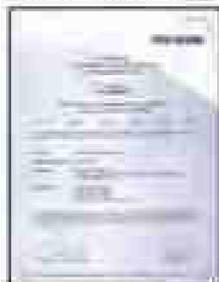
Product Reparation  
Liability Insurance  
Samsung Fire Ins.



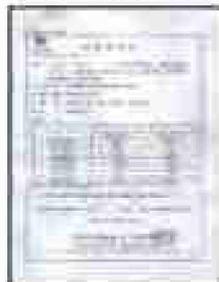
International Certification  
Registrar  
Certificate ISO 9001:2008



Certificate of the  
excellent small & medium  
companies



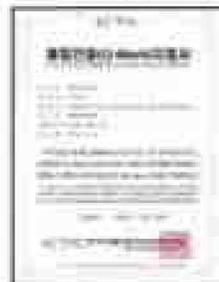
European CE Certificate  
K1704/L07, K1705/E07



Function Test  
Certificate by SMBA



ROHS Certificate



Certificate of Quality  
Assurance [Q-MARK]



Russia Certificate GOST



Environment Management  
System  
Certificate ISO 14001 : 2004



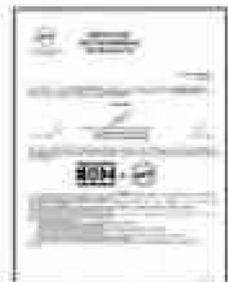
TIC Test Certificate  
by Incheon University



Surge Expressing  
Certificate



Function Test  
Certificate by India



Mexican Certificate "NOM"

Is there any GOOD idea to SAVE utility FEE safely  
without voltage drop damage?

**CESS! YES, WE CAN DO IT!!**



(4F.DREAMCOM BUILDING) 8, HANNAMDAE-RO 21-GIL, YONGSAN-GU, SEOUL, KOREA  
Tel : 82-2-796-7427 Fax : 82-2-793-2844  
[www.cosmotor.net](http://www.cosmotor.net)