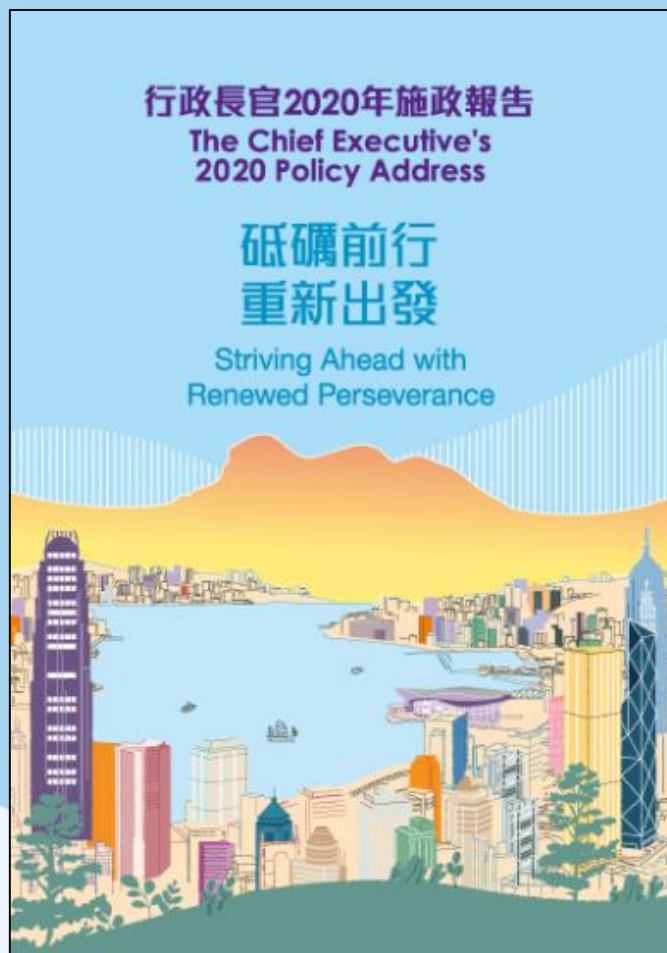




# Energy Saving Charter and 4T Charter

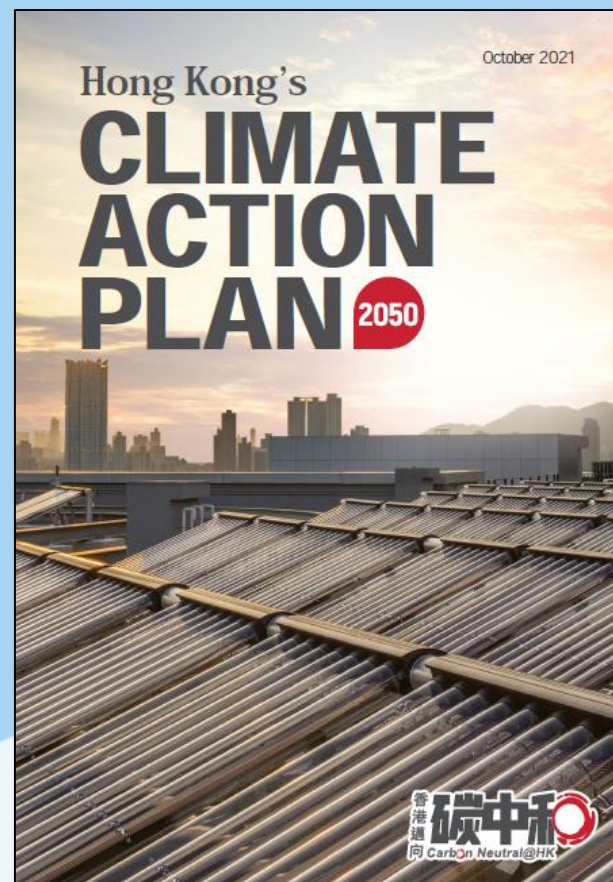
April 2024



行政長官2020年施政報告  
The Chief Executive's  
2020 Policy Address

砥礪前行  
重新出發

Striving Ahead with  
Renewed Perseverance



Hong Kong's  
**CLIMATE  
ACTION  
PLAN** 2050

October 2021

香港邁向 **碳中和**  
Carbon Neutral@HK

# Climate Action Plan 2050 (CAP2050)



香港邁向 **碳中和**  
Carbon Neutral@HK

機電工程署  
EMSD

Striving towards Carbon Neutrality before 2050

# Climate Action Plan 2050 (CAP2050)

## Medium-to-long-term decarbonisation targets

Before  
2035



Total carbon  
emissions  
Compared with  
2005 level

Before  
2050



## Four decarbonisation strategies



Net-zero  
Electricity Generation  
淨零發電



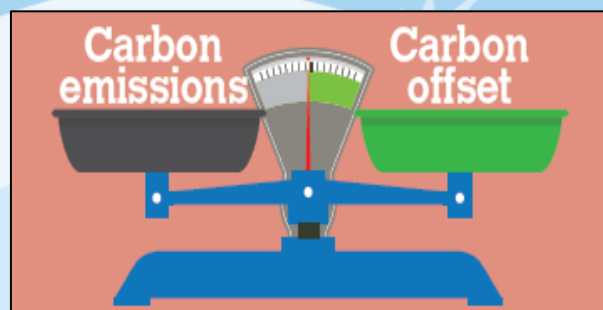
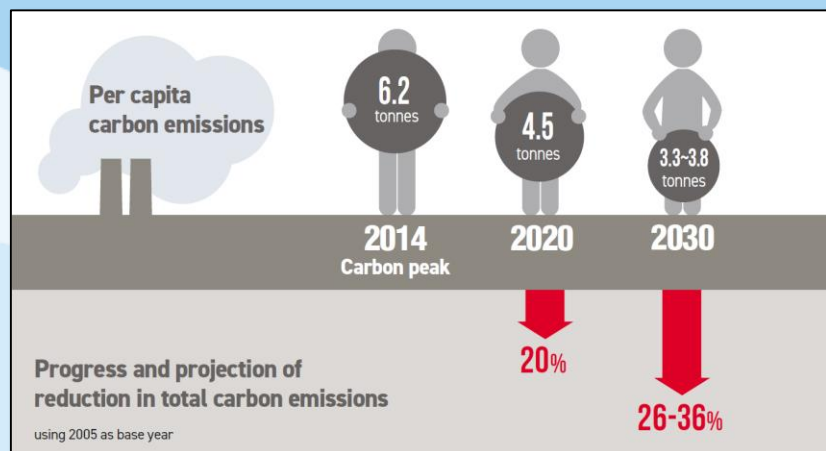
Energy Saving and  
Green Buildings  
節能綠建



Green Transport  
綠色運輸



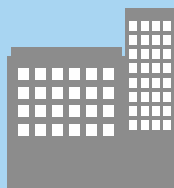
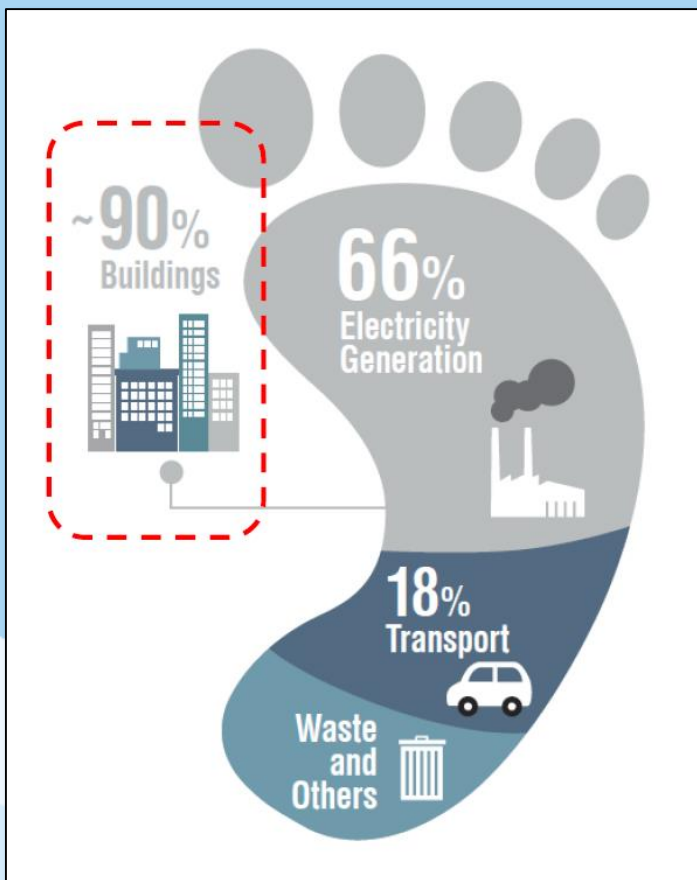
Waste Reduction  
全民減廢





# CAP2050 – Electricity consumption of Buildings

Decarbonisation comes at a price. Buildings account for about 90% of Hong Kong's total electricity consumption. Promoting energy conservation and improving energy efficiency can help reduce the cost of electricity consumption.



## Building sector:

~ **90%** electricity  
~ **60%** carbon  
emission

### Electricity Saving in Buildings



Electricity  
consumption  
(Compared  
with 2015)

COMMERCIAL  
BUILDINGS

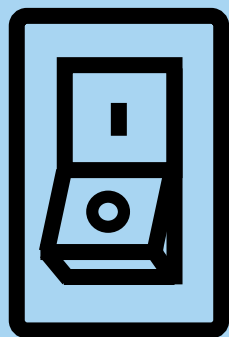
15-20%

(Reduce by 30-40%  
subsequently)

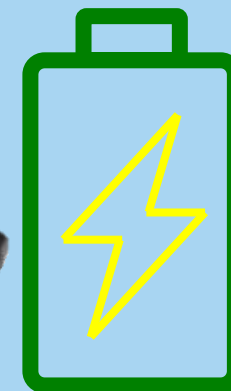
RESIDENTIAL  
BUILDINGS

10-15%

(Reduce by 20-30%  
subsequently)



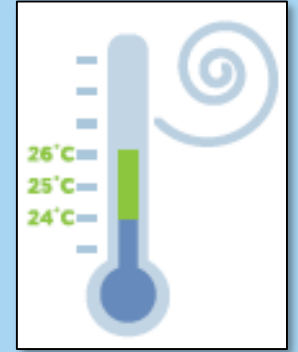
# Energy Saving Charter 2024



# Energy Saving Charter - Pledges

EMSD launched Energy Saving Charter since 2012, aims to encourage business and community organisations to save energy. Participants are pledged to: -

- Maintain average indoor temperature at 24-26°C during summer (June to September 2024);
- Switch off electrical appliances & systems when not in use and procure energy efficient appliances (such as with Grade 1 energy labels) and systems;
- Engage staff/students/tenants to adopt the above practices together;
- Promote energy data transparency, and share energy saving measures and achievements ;and
- Promote building energy saving retrofit



# Energy Saving Charter



Sample Leaflet for Energy Saving Charter 2024

Details: <https://www.energysaving.gov.hk/esc2024/en/charter/index.html>

# Energy Saving Charter - Coverage

With continuous efforts, we have extended the coverage of participants from Shopping Mall to now **10 categories**:

- |  |  |
|--|--|
| 1) Shopping Mall   | 7) Schools (Kindergarten / Primary & Secondary Schools / Post-Secondary Education Institution) |
| 2) Office Building / Commercial Building / Industrial Building | 8) Hotel   |
| 3) Residential Building / Housing Estate                       | 9) Hospital  |
| 4) Office  | 10) Others (not covered in the above categories, such as piers)                                |
| 5) Shop  |  |
| 6) Non-governmental Organization / Community Facilities        |  |

Shopping mall is the first category, and 100+ premises have signed up the Energy Saving Charter 2012



# Energy Saving Charter - Recognition

- 1) Participating certificates for signatories  
✓ With recognition for premises signed up the Charter (e.g. since 2012)
- 2) Uploading names participating premises to event website

Signatories of Energy Saving Charter increased gradually over years and 3,200+ premises have signed up the Energy Saving Charter 2023



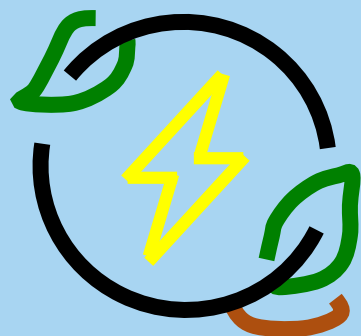
Sample Certificate for Energy Saving Charter 2023

# Energy Saving Charter - Recognition

- 3) Actively Supporting Organizations (recruit shops/offices) – recognition by appreciation certificates



Sample Certificate for Actively Supporting Organisations



# 4T Charter





# 4T Charter – Scope

## 4T Charter



### Pledging to

- set energy saving **target** with a **timeline**;
- ensure **transparency** on energy saving results and building energy data; and
- encourage inhabitants (including staff / students / occupants / tenants) to **work together** on the above energy saving target.

### Optional additional pledge

set targets and timelines for the reduction of carbon emissions.





# 4T Charter – Target & Timeline

Setting energy saving **target** with **timeline**:-

Example

(i)	基準年份 Base Year	2020	年份 Year
(ii)	目標年份 Target Year	2028	年份 Year
(iii)	與基準年份相比，目標年份能源節省的百份比 Percentage of Energy Reduction by Target Year when compare with Base Year	6	%
(iv)	基準年份的總能源消耗 <sup>1</sup> Total Energy Consumption of Base Year (12 months)	1,234,567	兆焦耳 (MJ)

Energy saving plan of  
6% over 8 years

Note <sup>1</sup>: 1 kWh is equivalent to 3.6 Mega Joules (MJ)

Total energy consumption including electricity in kWh x 3.6 MJ + gas consumption in MJ

# 4T Charter – Transparency

How to announce/publish energy saving targets and results?

Reports	Newsletters or Notices	Websites (internet)	Others (intranet, internal emails, etc.)
Over 30%	Over 30%	Over 20%	About 20%

About **80%** of total participants



# 4T Charter – Together

## How to engage stakeholders to work together on energy saving plan?

1. Involve inhabitants in planning and implementation of energy saving programme	Over 60%
2. Communicate regularly with inhabitants on energy saving programme	Over 60%
3. Provide briefing or supportive coaching for inhabitants on energy saving	About 40%



# 4T Charter – Recognition

- 1) Participating certificates for signatories
- 2) Uploading names participating premises to event website

Signatories of 4T Charter increased gradually over years since 2017 and 750+ premises have signed up the 4T Charter in 2023



Sample Certificates for 4T Charter





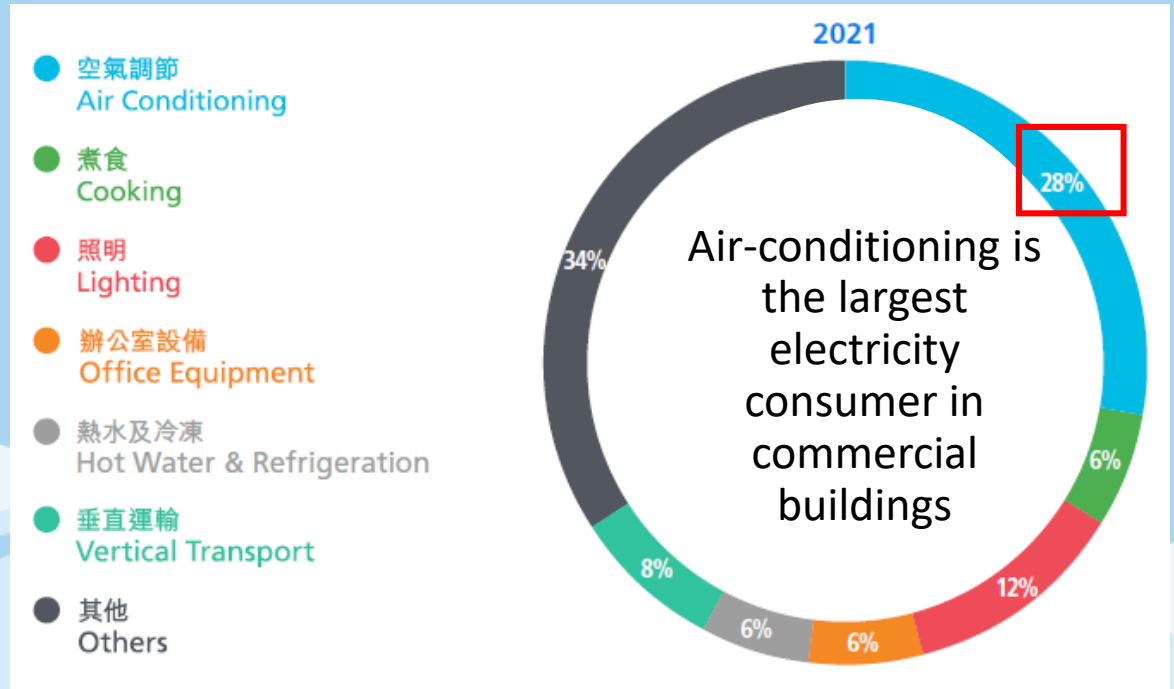
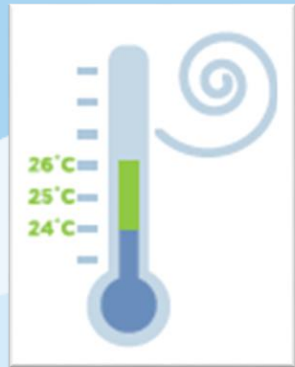
# Energy Saving Tips



# Energy Saving Tips

## 1) Maintain average indoor room temperature at 24-26°C during summer (June to September)

- Similar practice adopted in the Mainland (26°C), Japan (26°C) and US (78°F, which is about 25.5°C)



# Energy Saving Tips

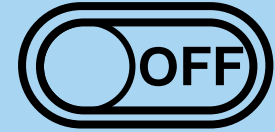
## 1) Maintain indoor room temperature at 24-26°C during summer

- Conduct air temperature measurement regularly
- Keep all the windows and doors close when air-conditioner is running
- Consider using an electric fan in conjunction with AC to spread cooled air more effectively
- Set an indoor AC unit to low fan speed as the normal setting. Use a high fan speed first rather than lowering the temperature setting to cater for an increased cooling demand
- Carry out regular maintenance on office equipment for optimal energy efficiency performance



# Energy Saving Tips

## 2) Switch off appliances and systems when not in use



- Lights, air-conditioners should be switched off in areas that are unoccupied
- Part of lift and escalator can be idled during non-peak hour
- Use appliances with timer control or automatically switch-off control functions to avoid leaving appliances in standby mode for a long period
- Switch off the computer screen can save more energy instead of letting the "screen saver" run
- Arrange for the last-man-out to check and switch off the power source when leaving office







# Energy Saving Tips

- 3) Procure energy efficient appliances and systems, such as appliances with **Grade 1 energy label**



ENERGY LABEL	
能源標籤	
more efficient 效益較高	
1	
2	
3	
4	
5	
less efficient 效益較低	
Annual Energy Consumption (kWh) 每年耗電量(千瓦小時) Based on 1460 hrs/yr operation 以每年使用1460小時計算	38
Diagonal Screen Size (cm) 屏幕對角尺寸(厘米)	106
Energy Efficiency Index 能源效益指數	0.11
Television Brand	電視機 品牌:
Model	型號:
Reference Number / Year Information Provider	參考編號 / 年份: 資料提供者:
ABC 某某牌 HK1234 TXXXXX / YYYY XYZ 某某某	
機電工程署  EMSD	

# Energy Saving Tips

## 4) Engage staff / students/ tenants to adopt the above energy saving practices together

- Involve staff / students/ tenants in planning and implementation of energy saving practices
- Set goals and provide feedback to staff / students / tenants on progress / results of energy saving practices
- Provide briefing / seminar / workshops to staff / students / tenants
- Communicate regularly with staff / students / tenants on energy saving practices
- Create opportunities for sharing of goals and accomplishments

# Energy Saving Tips

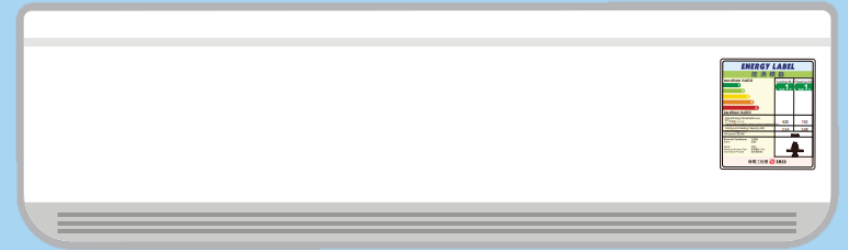
**5) Promote energy data transparency, and share energy saving measures and achievements**

**6) Promote building energy saving retrofit**

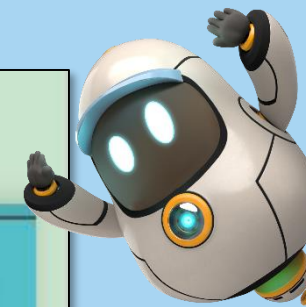
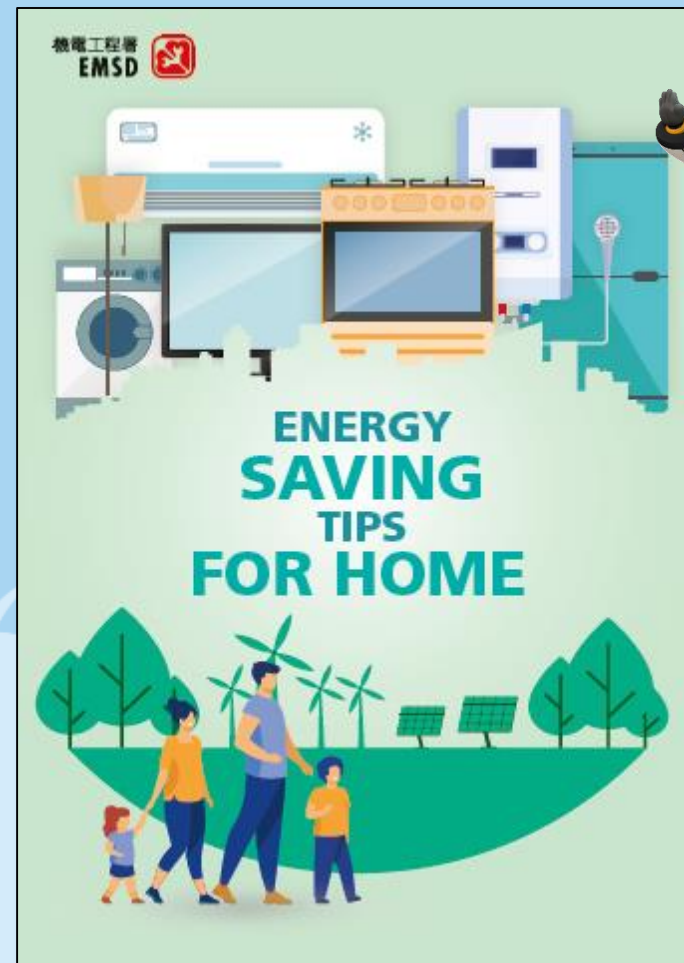
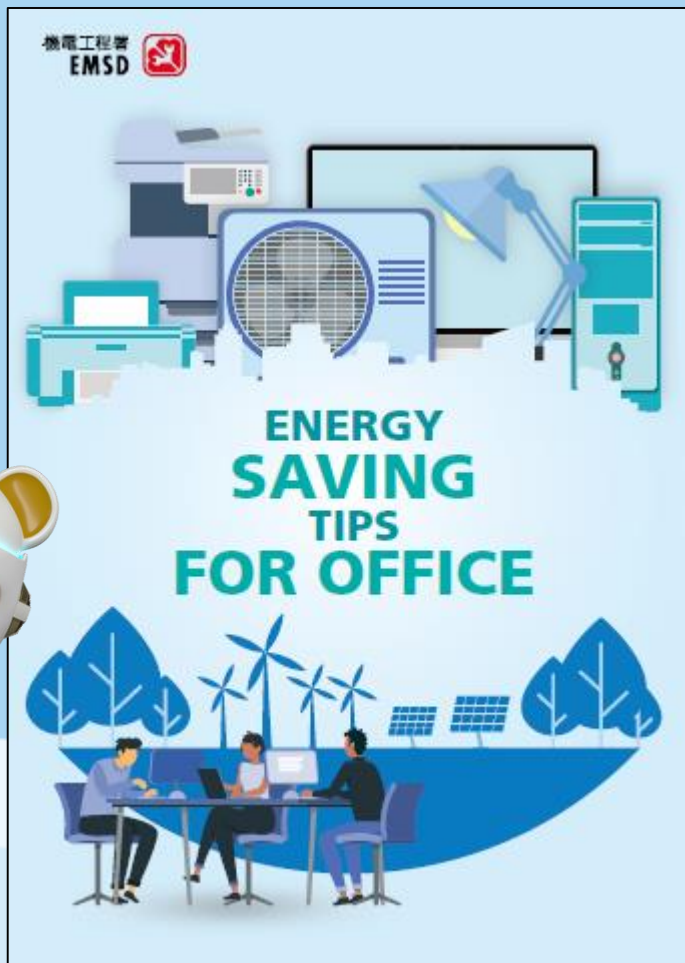
- Replace aged/ energy inefficient E&M equipment with new technologies to improve energy efficiency

Examples:

- a) Replace aged air-conditioners with Grade 1 energy label
- b) Replace fluorescent lamps with LED lightings



# Energy Saving Tips





# Energy Saving Charter 2023 – Carbon Reduction Guides



## GUIDE TO LOW CARBON OFFICES

Practical Guide on  
Carbon Audit and Management



## GUIDE TO LOW CARBON SCHOOLS

Practical Guide on  
Carbon Audit and Management

# Guide to Low Carbon Offices/Schools

In addition to Carbon Reduction Initiatives for Lighting System and Heating, Ventilation and Air-conditioning (HVAC) System,

## **(1) Carbon Reduction Initiatives for Paper Consumption (for Offices and Schools)**

- Purchase printing paper and toilet paper with recycled content
- Reuse paper or use paper on both sides, wherever possible

## **(2) Carbon Reduction Initiatives for Water Consumption (for Offices and Schools)**

- Use dual-flush toilets
- Use faucets and urinals with infrared sensors

# Guide to Low Carbon Offices/Schools



## (3) Carbon Reduction Initiatives for Waste Generation (for Offices and Schools)

- Provide more recycling bins and facilities
- Use recycled toner/ink cartridges



## (4) Carbon Reduction Initiatives for Company/ School Vehicle (for Offices and Schools)

- Adopt electric vehicles



## (5) Carbon Reduction Initiatives for Staff Engagement (for Offices)

- Encourage the use of staircase instead of taking the lift



# Guide to Low Carbon Offices/Schools

## (6) Carbon Reduction Initiatives for Printing Equipment (for Offices)

- Use timer or switch off printers completely during non-operating hours



## (7) Carbon Reduction Initiatives for Information and Communications Technology (ICT) Equipment (for Offices)

- Set the computers to automatic standby/sleeping mode when idling



## (8) Carbon Reduction Initiatives for Campus Greening (for Schools)

- Plant trees in school garden
- Set up green roof and/ or green walls



# Guide to Low Carbon Offices/Schools

## (9) School Catering (for Schools)

- Reduce use of disposal and non-recyclable eating utensils
- Educate students to waste no food

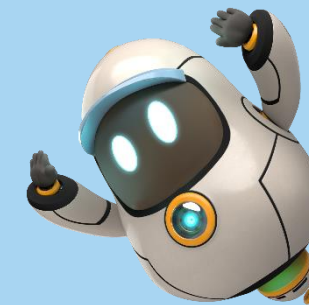


## (10) Environmental Education (for Schools)

- Affix energy saving, water saving and paper saving labels to raise students' and staff awareness







Event website:

Enquiries

Phone: 3155 3977

Email : [esc2024@emsd.gov.hk](mailto:esc2024@emsd.gov.hk)

