

MARCH 2022

# CEE COMP NEWSLETTER N°6

## Question of the month ?

What consumes the most on average in a household in Phnom Penh?

To find out the answer, go to page 8!



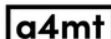
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In this page, you will learn some tips to save energy at home!

# EDITORIAL



**Oussa Suon**  
Energy Consultant

សួស្តីឆ្នាំថ្មី!!! Happy Khmer Years to valuable candidates! CEE comp team would like to wish you all being safe and healthy.

I am Oussa, an energy engineer who is supporting the technical task in the CEE comp team, especially the energy consumption model of each building.

One of the hottest months has passed and it seems that April was hot, but also sometimes cold and rainy. Most of you reported consuming more energy during this period. However, this does not mean you consume more energy than before your participation in the CEE comp. By implementing energy efficiency measures, many of you have reduced your consumption despite high temperatures. You are doing awesome!



The hot season is not over yet and you will probably continue to use your air conditioning and consume more than usual. So, it is important to make your behavior change be linear and sustainable. If you notice that you or your colleagues is coming back to the old behavior, we encourage you to reflect on this relapse to be able to get back in track:

- What did you learn from this setback?
- What do you need to get back into action?
- How to motivate and reward your colleagues to work toward change?

*“What you do makes a difference, and you have to decided what kind of difference you want to make.”- Dr. Jane Goodall*

Thank You!



## Green Team of the month

The green team of March is **ATS**

Prior to the competition, ATS have already made improvements to their building and have seen energy savings every year since 2017. For example, they switched to LED lighting, invested in inverter air conditioners, and added motion sensors in the restrooms.

Therefore, during the CEE Comp, they focus especially on changing the habits of their employees. The green team organizes internal competitions:

- Best energy saving competition: the winning department is the one that saves the most energy over the month
- Energy quizzes: teams of employees can participate. The last winners each received a \$5 voucher in a refillable shop.

## Winning team of the quiz



It is the green team that works to raise awareness among staff but not only! Indeed, the green team works in collaboration with some motivated employees, call "mediators", that:

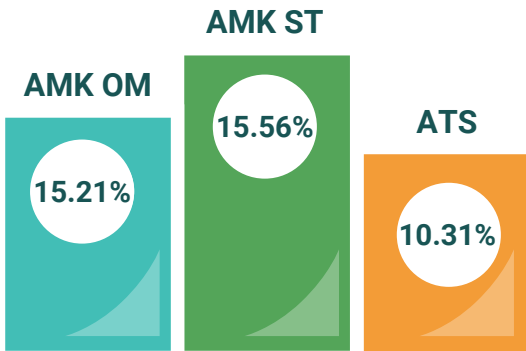
- ✓ *Provide constant motivation to all staff*
- ✓ *Help to disseminate information and best practices*
- ✓ *Provide suggestions to help ATS become greener and greener.*



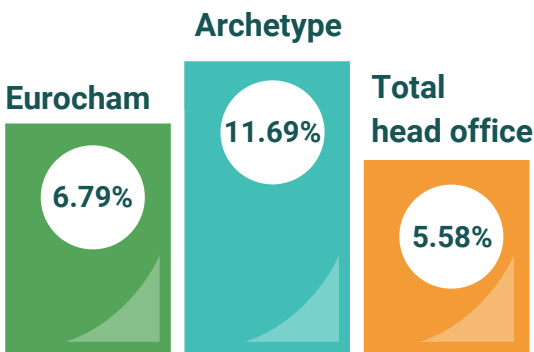
Finally, ATS celebrated Earth Day! The Green team moved from room to room to present the significance of this special day. This included talking about their upcoming action plan and ATS's commitment to energy efficiency, behavior change, and technology solutions. They also shared best practices to be applied in everyone's daily life.

# RANKING OF EACH CATEGORIES

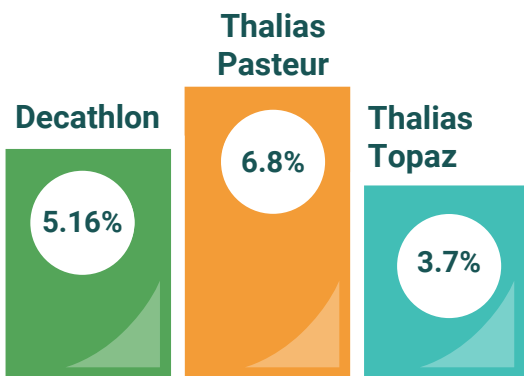
## CATEGORY 1



## CATEGORY 2



## CATEGORY 3



## Three building categories prizes

Considering the diversity of the buildings participating in the CEE Comp, we have chosen to create 3 building categories to make the competition fairer. These categories have been defined according to the nature and use of each building. At the end of the competition, there will thus be **one winner per category!**

CATEGORY 1	CATEGORY 2	CATEGORY 3
<ul style="list-style-type: none"> <li>• Airport Admin</li> <li>• AMK Olympic</li> <li>• AMK OM</li> <li>• AMK ST</li> <li>• ATS</li> <li>• DHL</li> <li>• LBL</li> </ul>	<ul style="list-style-type: none"> <li>• AMK head office</li> <li>• Archetype</li> <li>• BRED Bank</li> <li>• Comin Khmere</li> <li>• French Embassy</li> <li>• EuroCham</li> <li>• HEINEKEN</li> <li>• Total head office</li> </ul>	<ul style="list-style-type: none"> <li>• Airport Cargo</li> <li>• Decathlon</li> <li>• Smart</li> <li>• Thalias La Poste</li> <li>• Thalias Pasteur</li> <li>• Thalias Topaz</li> <li>• Total De La Gare</li> <li>• Total Pochentong</li> </ul>



## Special prizes

- **The best overall communication:** The building that best communicates both internally and externally will win this special award
- **The best green team:** The green team most involved during the whole competition will be rewarded.
- **The best energy savings of the portfolio:** For multisite organizations, we will reward the building that will save the most from your portfolio!



## Poste Immo building at Quai Vendreuve, France

The building of the Poste Immo company at Quai Vendreuve was the **winner of the 2nd edition of the CUBE 2015-2016** competition in France. It achieved **38.5% energy savings** over the year of the competition, representing 152 000 kWh for a 37.8% reduction in its greenhouse gas emissions. Their return on investment was immediate.

**The Park Inspector at the Regional Office said:**

*"By offering occupants the opportunity to improve their comfort, we have fully involved them in our energy-saving approach."*

### Building Info

- Office building of **2440 m<sup>2</sup>**
- **60** employees
- Multi-tenant occupancy of subsidiaries of the LA POSTE
- Gas heating and electric air conditioning



### Technical Actions

- Successful "comfort versus improvement" communication: change of heating set points in winter and air conditioning set points in summer
- Relocation of the offices for a better operating temperature (felt by the users)
- Re-lamping of T8 tube to LED

### User awareness

- Very high participation, generalized enthusiasm of 60 people
- Collective morning ventilation ritual: all the windows open & close at the same time
- A positive "ranking effect": desire to remain at the top of the ranking
- Rewarding all occupants with an organic basket
- Newcomers are coached on energy use by other employees



At our last Candidate Meeting, the director of the M.E.P.E. Consulting firm gave a presentation on air conditioning. He highlighted how dimensioning of the air conditioning is crucial to optimize its own operation and maximize energy efficiency.

**If the cooling power is not sufficient**, the air-conditioning will be permanently overloaded and **will consume more energy without cooling the room well**.

On the contrary, **if the air conditioning is oversized**, you will have bought a device that is too powerful and more expensive when it was not necessary. Moreover, your air conditioner will tend to **multiply the short cycles which will cause thermal discomfort**.

*Note: It is important to have good ventilation in the room to ensure that carbon dioxide (CO<sub>2</sub>) is removed. If the CO<sub>2</sub> content increases too much, the brain can be affected, and productivity can decrease.*

Here are some indications valid in Cambodia for the dimensioning of the air conditioning:

- *Proper designers will **study the needs and ask questions on the different factors and building use***
- *Lazy designers will use a cooling load ratio which will allow them to size an AC unit by ratio. Usually with fresh air it shall be around 800 BTU/m<sup>2</sup> and going up to 1000 BTU/m<sup>2</sup>*
- *Without fresh air ratio can be around 1000 BTU/m<sup>2</sup>.*

Air conditioning sizing depends on many factors:



- ⚡ *Orientation of the room*
- ⚡ *Building construction*
- ⚡ *Heat loads (computers, coffee machines...)*
- ⚡ *Fresh air renewal needs (depending on the number of persons in the room)*





## How can you save energy at home?

Energy efficiency and renewable energy are the twin pillars of a sustainable energy system. In Cambodia, energy efficiency has enormous economic potential and can play a vital role in ensuring the country's low carbon development path.

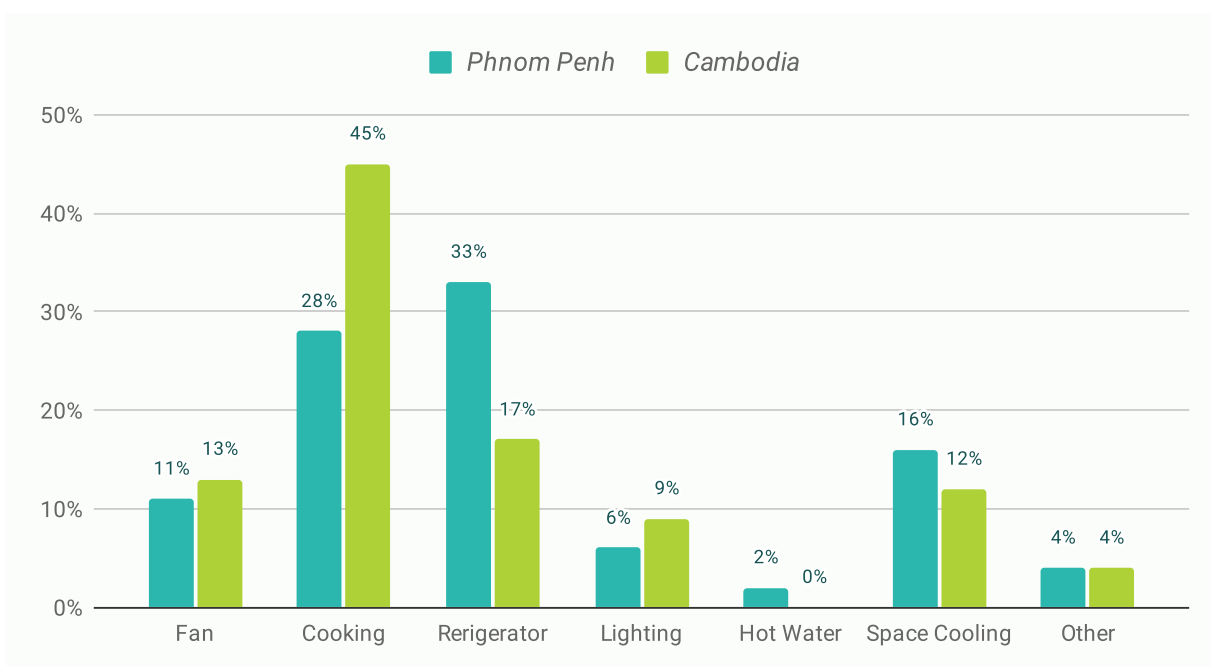
The first step to improving the energy performance of your home is to draw up an inventory of all the electrical equipments, record their power, if you can, and estimate their time of use.

The second step is to identify which appliances consume the most. Refrigerators, cooking appliances, and air conditioners (space cooling) are the

major electricity-consuming devices in a typical urban household in Phnom Penh. Are these devices efficient?

For that, you can look at their energy efficiency label. The energy label is the same for all products in each category, which makes the products comparable. The energy label classifies products from 1 to 5 according to the national standard, with 5 being the most energy-efficient class, and 1 the least energy-efficient.

Finally, the third step is to act! Improving your energy habits, setting up a good maintenance of your equipment, and eventually replacing inefficient appliances can help to save energy.



Source: "The key pillar of Cambodia's Energy Future" Booklet 2019 by UNDP





Here are some actions concerning the biggest energy consumption items.



## Cooking

It seems appropriate to reduce the use of gas or coal, but this is not necessarily easy:

- Choose appliances with a good energy label
- Cover your pan with a lid to reduce cooking time and therefore consumption.
- Always choose an electric plate or burner that is appropriate for the size of your pan
- As soon as the boiling point is reached, you can reduce the power of your cooktop by 2/3. The temperature should be sufficient to maintain the boil.

## Lighting



- Replacing halogen and incandescent lamps with LED lamps will allow dividing by 2 or 3 the energy consumption of this use.
- Do not forget to turn off the light when leaving the room



## Air conditioning

- Fans should be used whenever possible
- Use natural ventilation when it is not too hot outside
- Otherwise, set the temperature of your air conditioner between 25 and 27°C
- Remember to clean and maintain your A/C regularly (filter cleaning etc...).



## Refrigerator

- Set the temperature of your fridge between 5 and 7°C and between -18 and -21°C for the freezer
- Regularly defrost your freezer
- After cooking, allow food to cool before placing it in the refrigerator or freezer
- Let sufficient space between the refrigerator and the wall to ensure a good evacuation of heat and improve the energy performance of your refrigerator