

# Cambodia Energy Efficiency Competition



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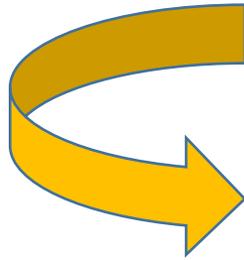
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# WHAT IS THE CEE COMP?



## Universities 90-DAY CHALLENGE



WHY CEE COMP is so RELEVANT for  
ENERGY & CLIMATE CHANGE  
in Cambodia?



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# WHAT IS THE CEE COMP?



CEE Comp is a not-for-profit, multi-year campaign



Engage people and organisations, using gamification & competition.



Rely on simple but cost-efficient energy saving measures

A one-year competition between private buildings comparing their energy savings according to the evolution of their electricity bill

A 90-day challenge between public buildings to raise awareness on energy efficiency in ministries and universities

Sensitization of the general public to energy efficiency through events and social media communication



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# WHAT IS THE CEE COMP?

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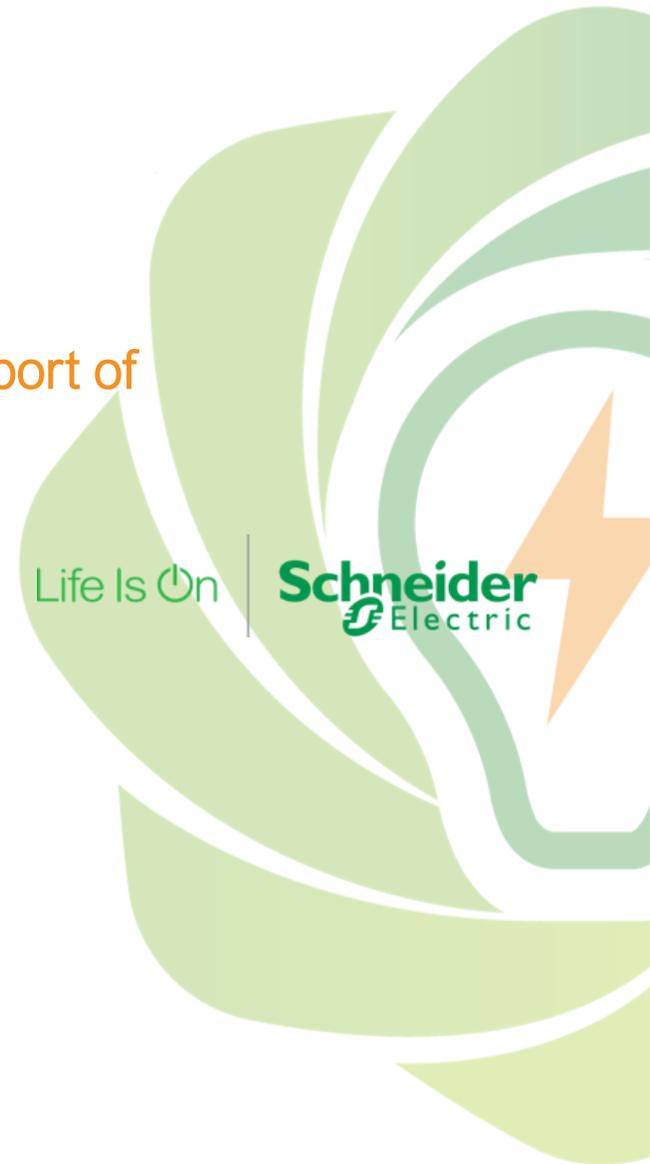


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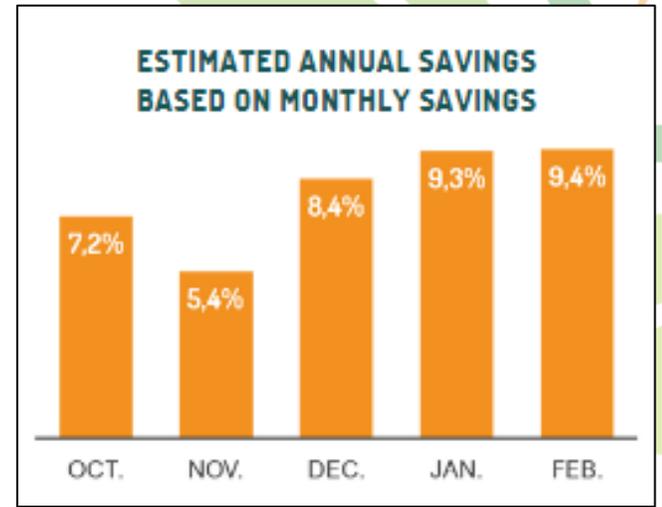
# ONE-YEAR COMPETITION for PRIVATE ORGANIZATIONS

Very simple concept: saving the maximum amount of energy in 1 year by implementing small gestures, improving the building's management and mobilizing its occupants.

22 buildings      14 companies      2300+ employees

The energy savings are calculated based on the building's electricity bills.

Focus on commercial buildings.



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# Universities 90-DAY CHALLENGE



A 90-day challenge to raise awareness of energy efficiency in university buildings



Learn more about the energy use of your university's buildings

Take action for the planet by implementing energy saving measures

Participate in fun contests on the theme of energy efficiency

The winning university will be the one that collects the most points!



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Participants:



# Universities 90-DAY CHALLENGE

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Co-funded by the  
Erasmus+ Programme  
of the European Union

# Universities 90-DAY CHALLENGE



Started on May 23



National University of Battambang



National University of Management



Institute of Technology of Cambodia



Royal University of Law and Economics



Royal University of Agriculture



Royal University of Fine Arts



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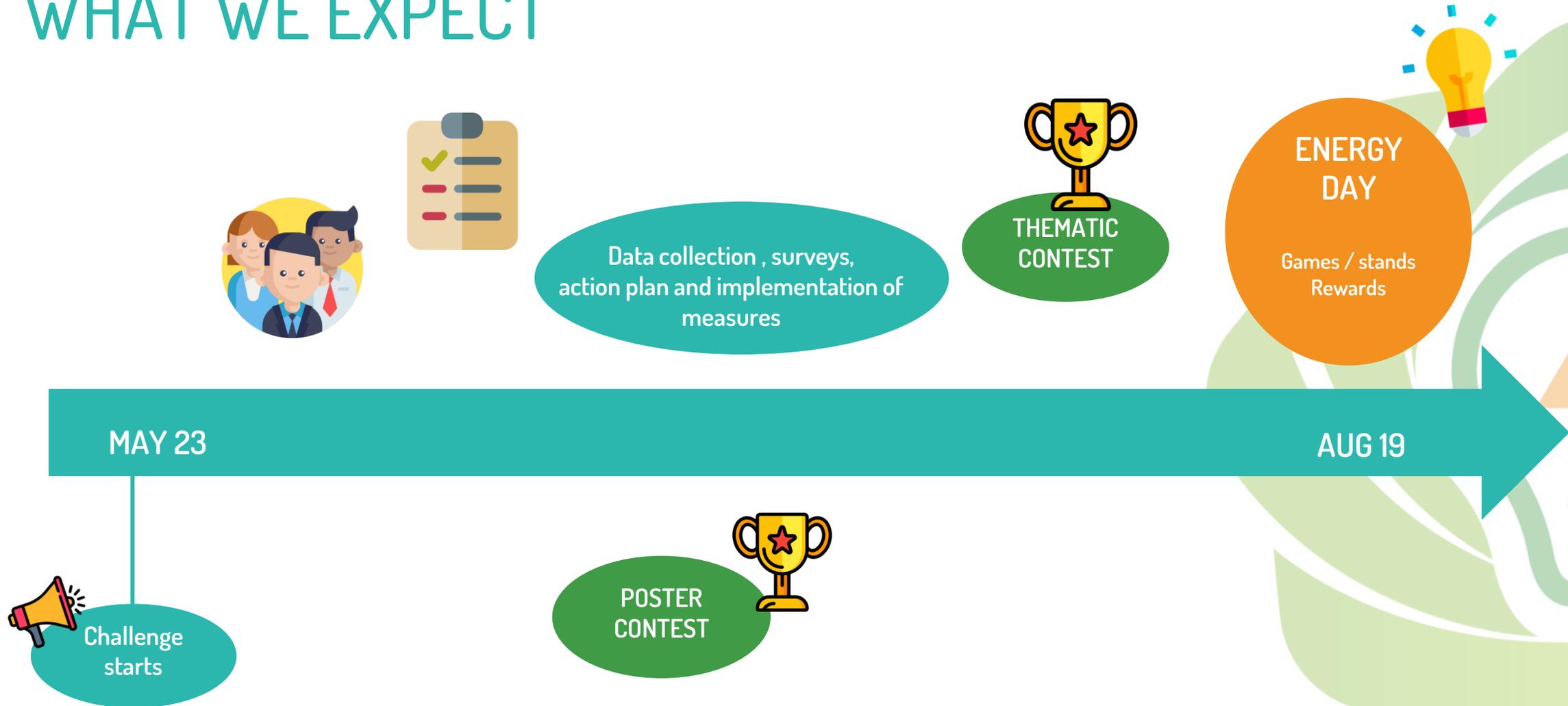
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# WHAT WE EXPECT



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Participants:

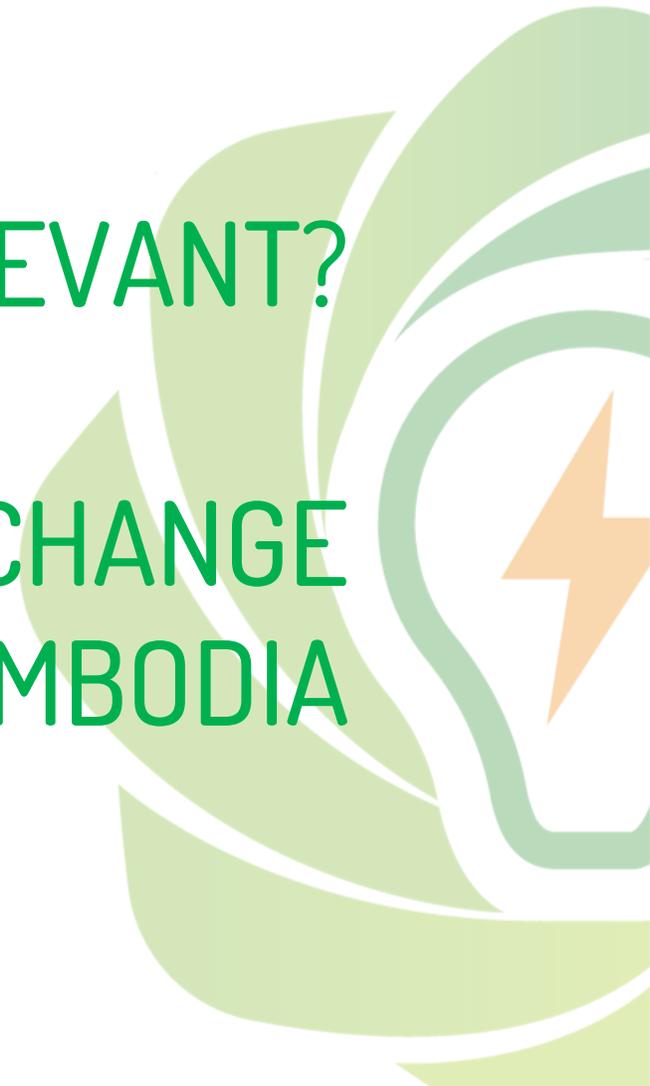


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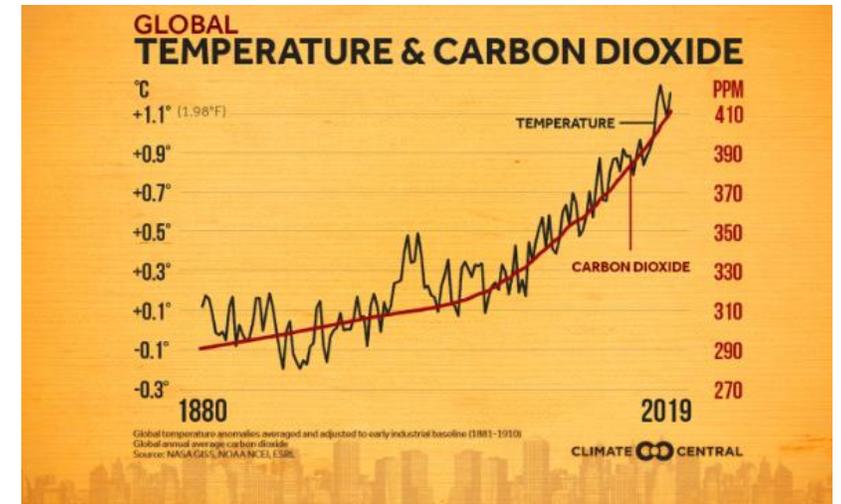
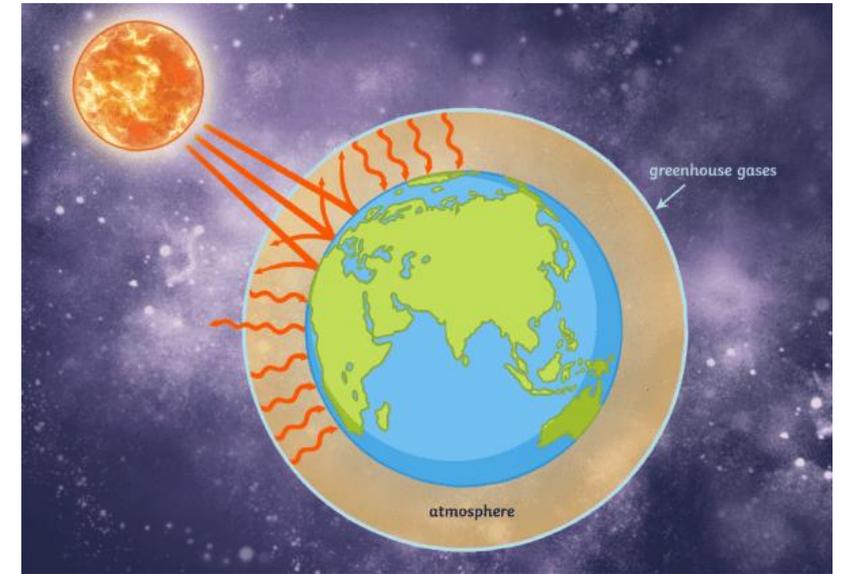
# WHY CEE COMP IS SO RELEVANT?

## ENERGY & CLIMATE CHANGE IN CAMBODIA



# What is CLIMATE CHANGE ?

- refers to long-term shifts in temperatures and weather patterns.
- these shifts may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas.
- burning fossil fuels generates greenhouse gas emissions that act like a blanket wrapped around the Earth, trapping the sun's heat and raising temperatures.



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# CONSEQUENCES OF CLIMATE CHANGE IN CAMBODIA

Increased incidence of extreme heat  
Longer period of drought



More frequent tropical storms



Rising sea levels and saline intrusion of key freshwater resources



## Agriculture and Food Security



Reduced crop yields  
Reduced agricultural lands  
Decreased food security

## Water Resources



Decreased water quality for drinking  
Limited freshwater availability  
Unpredictable changes in water flow

## Human Health



Increased heat stress  
Reduced water and food supply  
Increased water and vector borne diseases

## Fisheries and Food Security



Reduced fish production  
Decreased food security  
Loss of livelihoods

## Ecosystems



Loss of livelihoods  
Decreased food security  
Habitat and biodiversity loss



# AN OVERVIEW OF CLIMATE AND ENERGY IN CAMBODIA



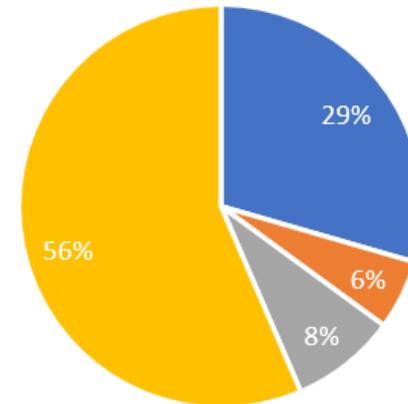
Cambodia is highly vulnerable to climate change



1.0-2.6 °C  
Increase in temperatures very likely by 2050 in Cambodia



Main cause: deforestation and change in land use

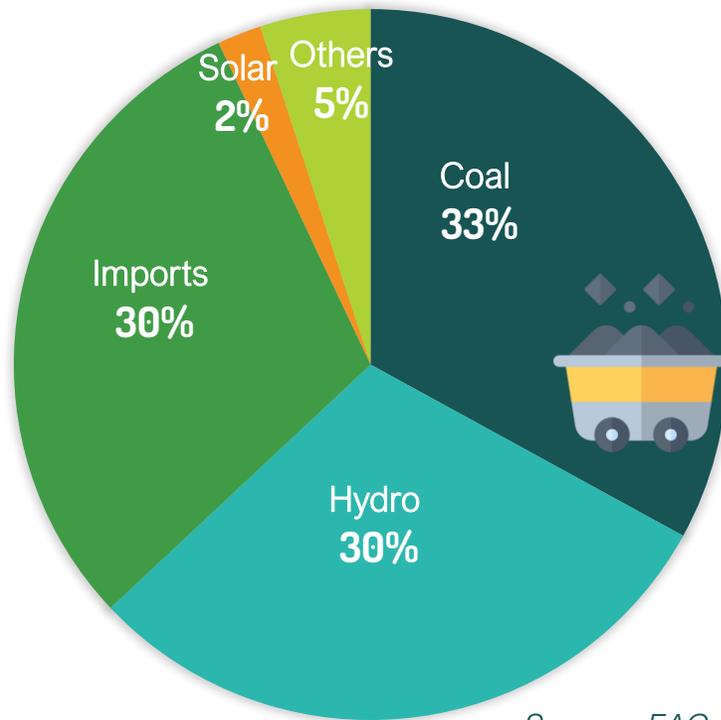


The energy sector is responsible of ~30% of GHG in 2016 and it is estimated to increase by 22% by 2030.

■ Energy ■ Industry ■ Waste ■ Agriculture

# WHERE DOES THE ENERGY WE CONSUME COME FROM?

Distribution of electricity consumption in Cambodia  
by source, 2020



Source : EAC, 2020

*Coal is the energy that emits the most CO<sub>2</sub>, ahead of oil and gas*



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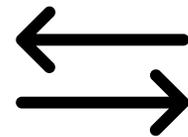
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ENERGY



CLIMATE CHANGE



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# GROWTH AND DEVELOPMENT = ENERGY CONSUMPTION

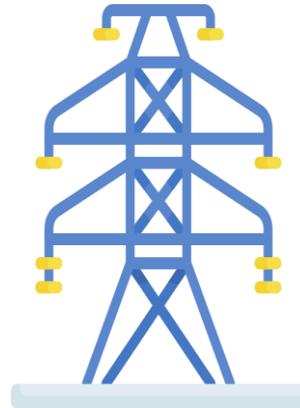
Cambodia is becoming more and more populated



+ 6 million inhabitants between 1994 and 2019

Source : World Bank

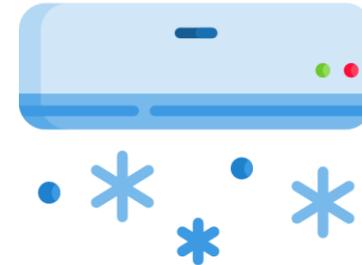
Our living conditions are improving (thankfully!)



81% of households have access to electricity  
That's six times more than 15 years ago!

Source : EAC, 2020

And we are getting more and more equipped



63% of households in Phnom Penh are equipped with air conditioning (50% on average in Cambodia)

Source : UNDP Energy Efficiency Booklet, 2019



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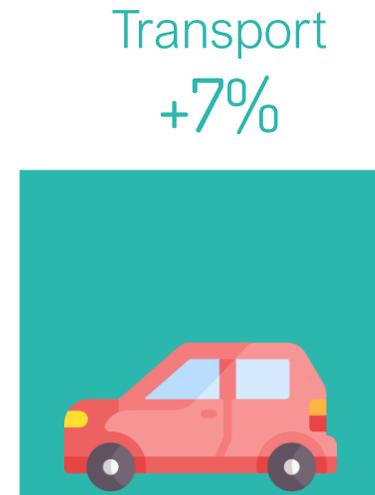


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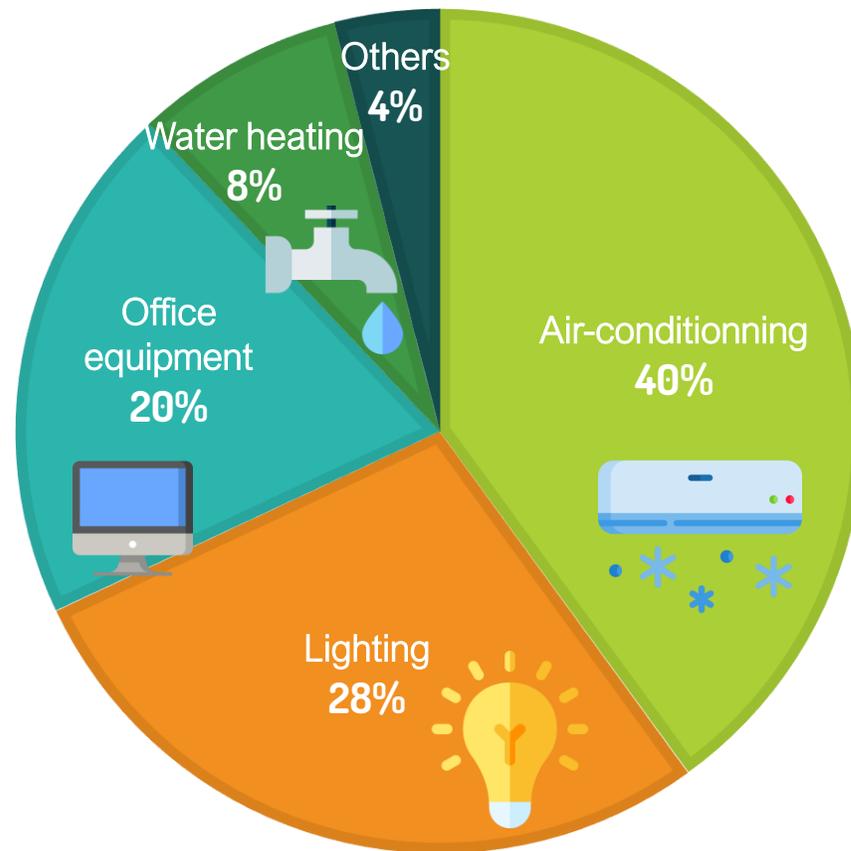
# BUILDINGS ARE BECOMING MORE AND MORE ENERGY-INTENSIVE IN CAMBODIA

Final energy consumption growth rates  
2010-2018 (per year)



Source : MME & ERIA, 2020

# ENERGY CONSUMPTION IN COMMERCIAL BUILDINGS



Commercial buildings:  
office buildings, retail  
malls, hotels, hospitals,  
schools...

Source : Energy management of commercial buildings – A case study  
form a POET perspective of energy efficiency



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# CEE Comp focusing on



commercial buildings



operation management  
and behaviour change



awareness raising and  
communication



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# THANK YOU!

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