

# Green coding: reduce your carbon footprint

Intermezzo quiz





# Instructions



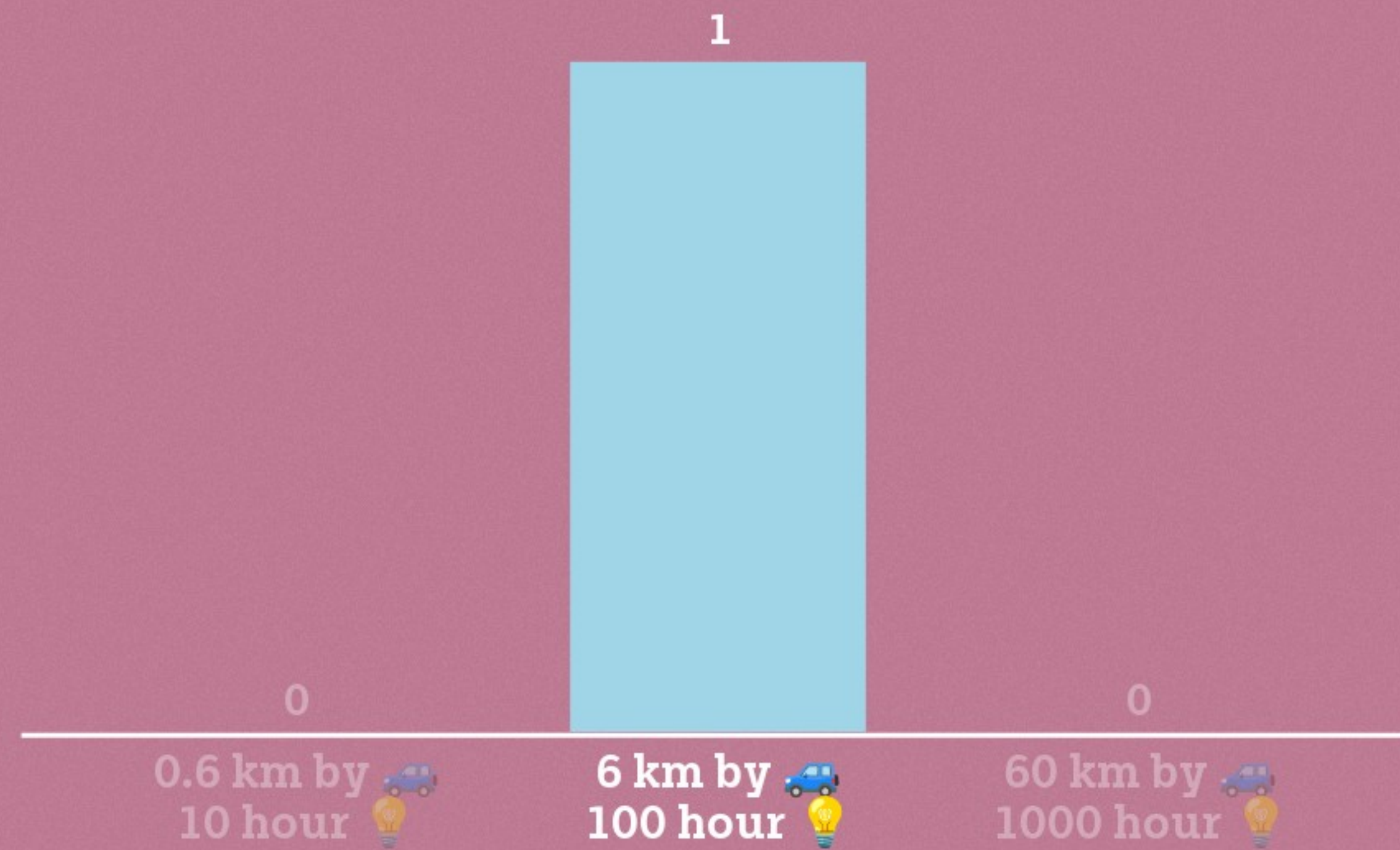
# How much of your (work) time do you spend coding?

% coding time

88



**The 2 following tasks require roughly the same amount of energy. How much energy do they require?**

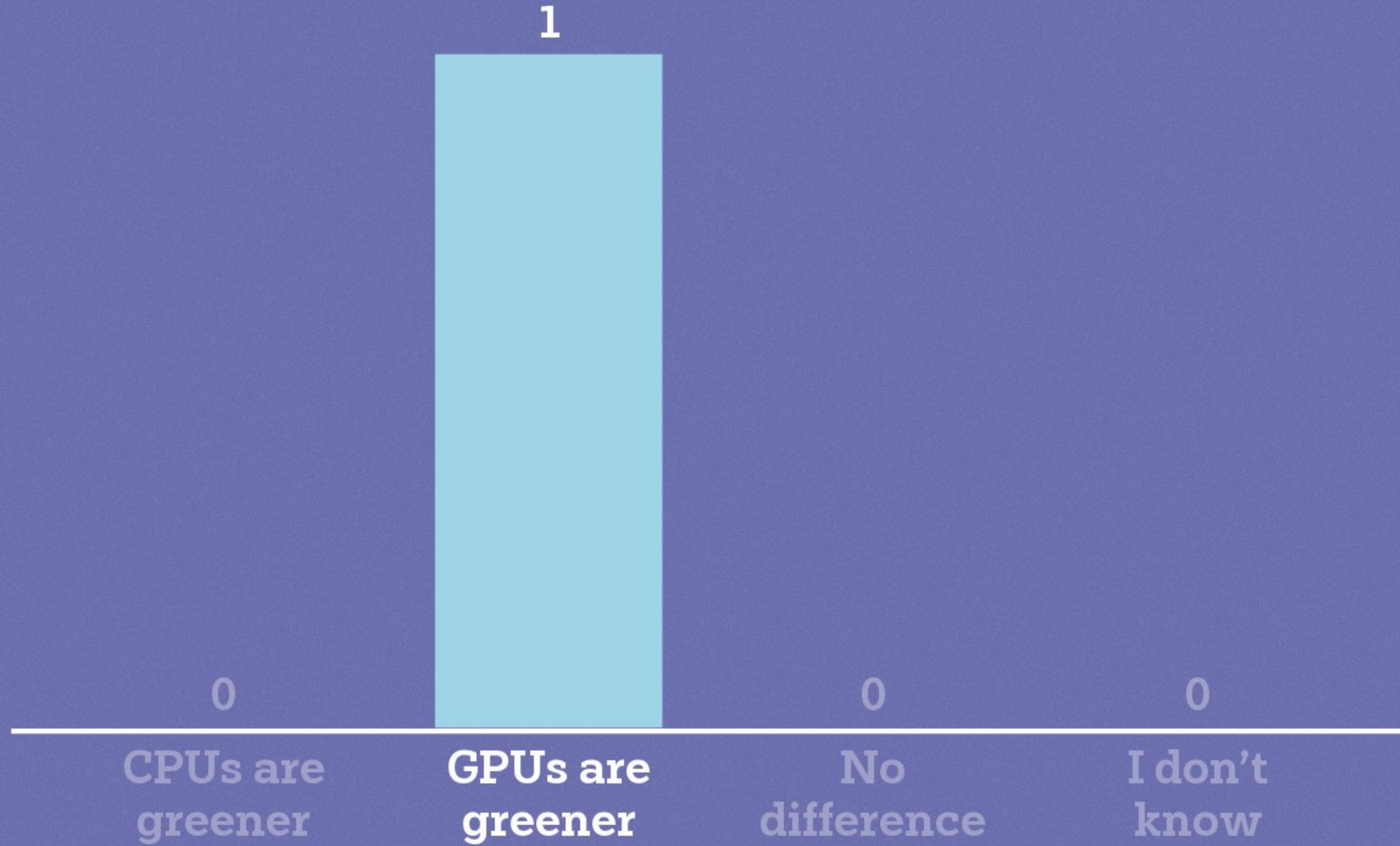


Moderately scaled machine learning training on GPUs for 3 minutes

Physics based fluid simulation for 10 mins



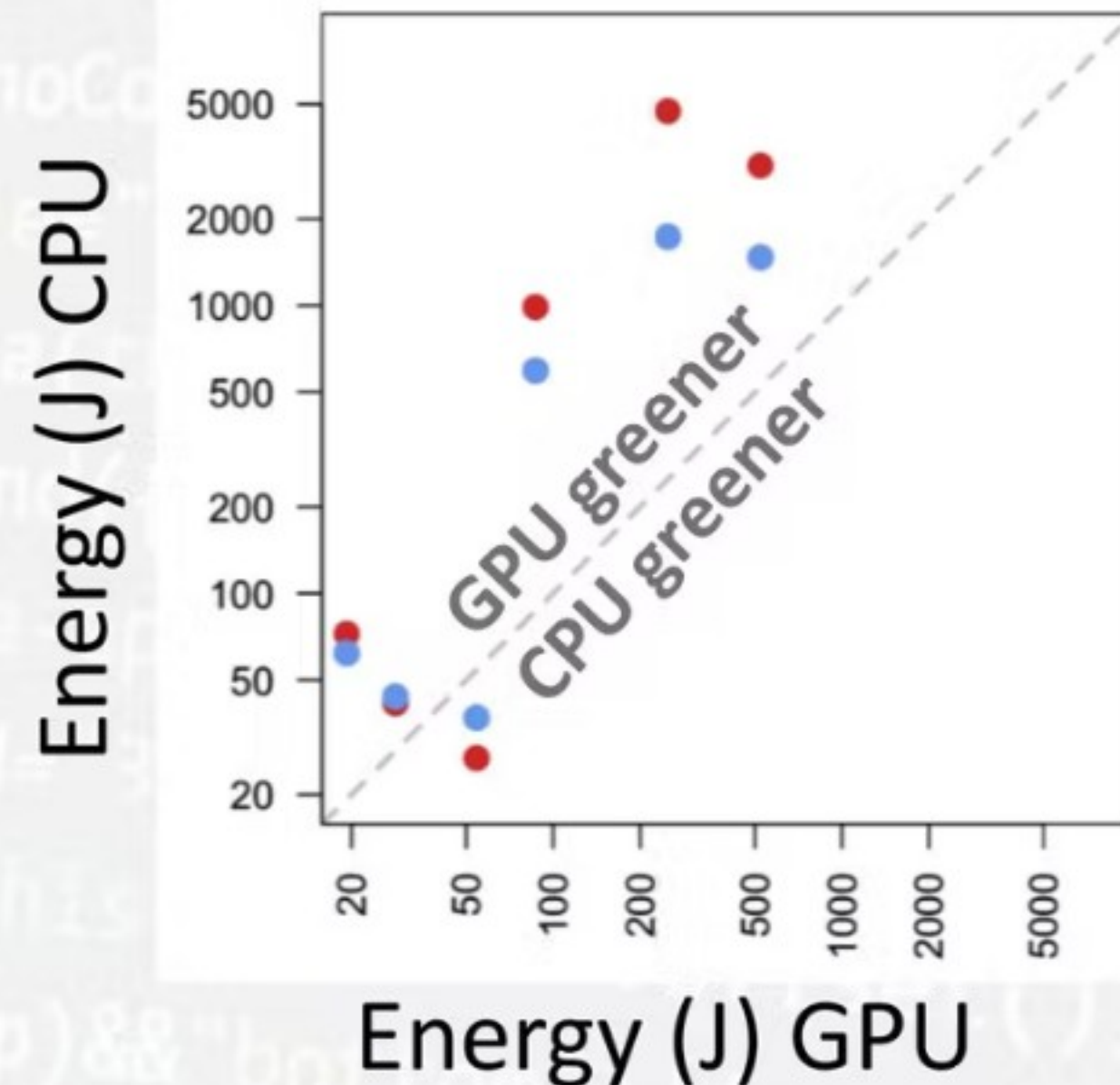
# Are CPUs greener than GPUs?





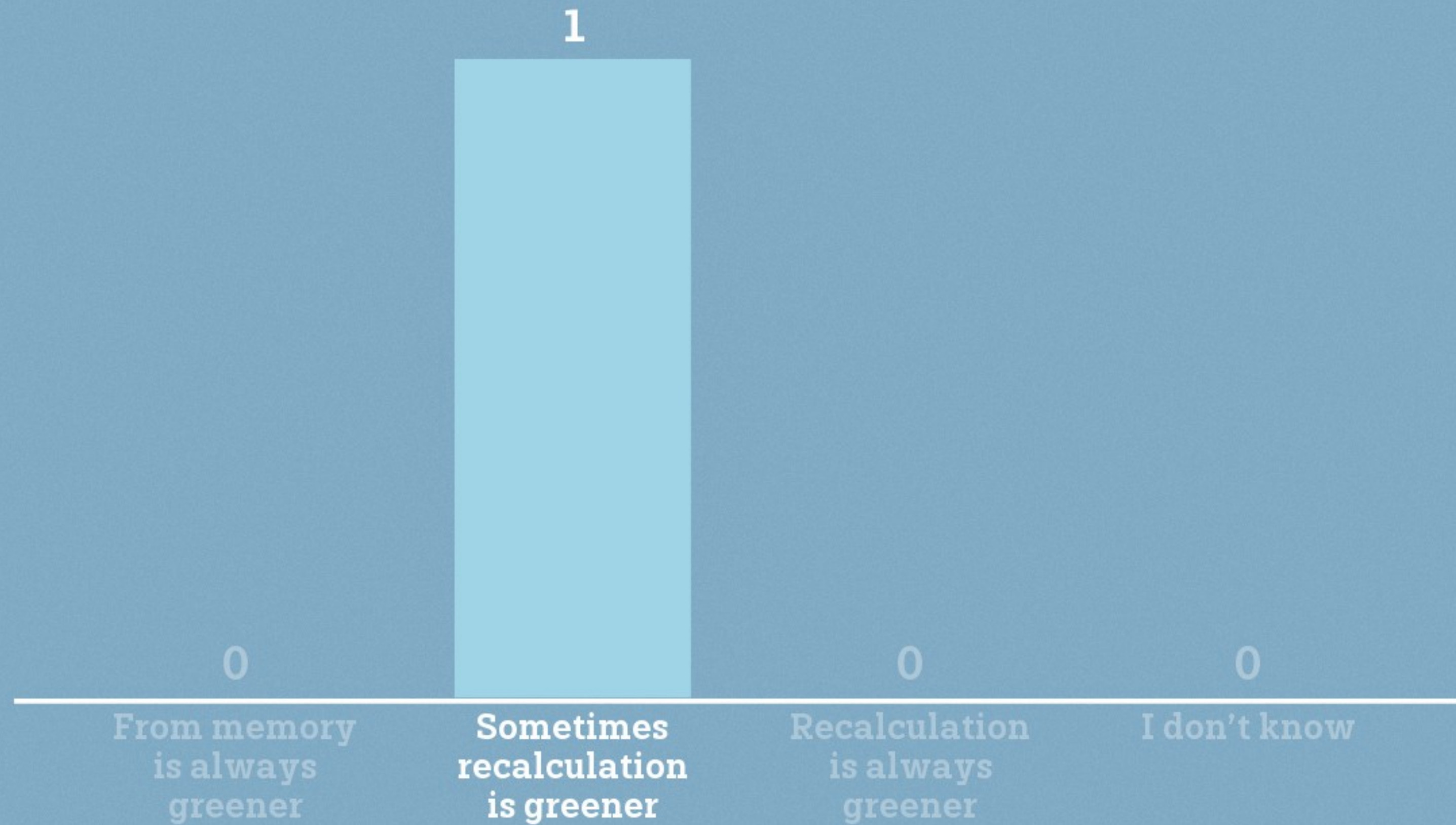
# Are CPUs greener than GPUs?

GPUs use more energy, but when jobs can be paralized properly, GPUs are much more energy efficient.





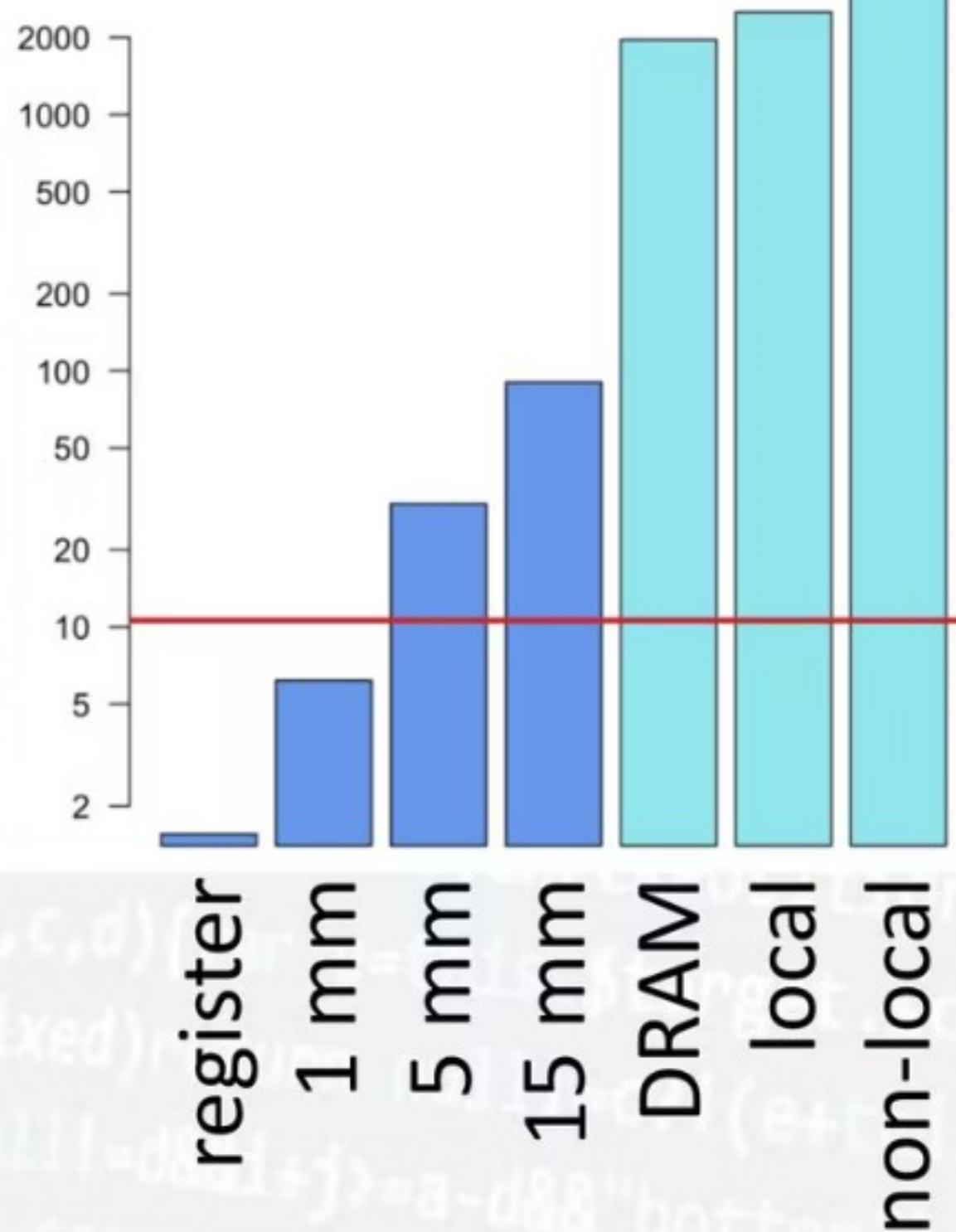
# Is it always greener to retrieve the outcome of calculations from memory than to recalculate them?



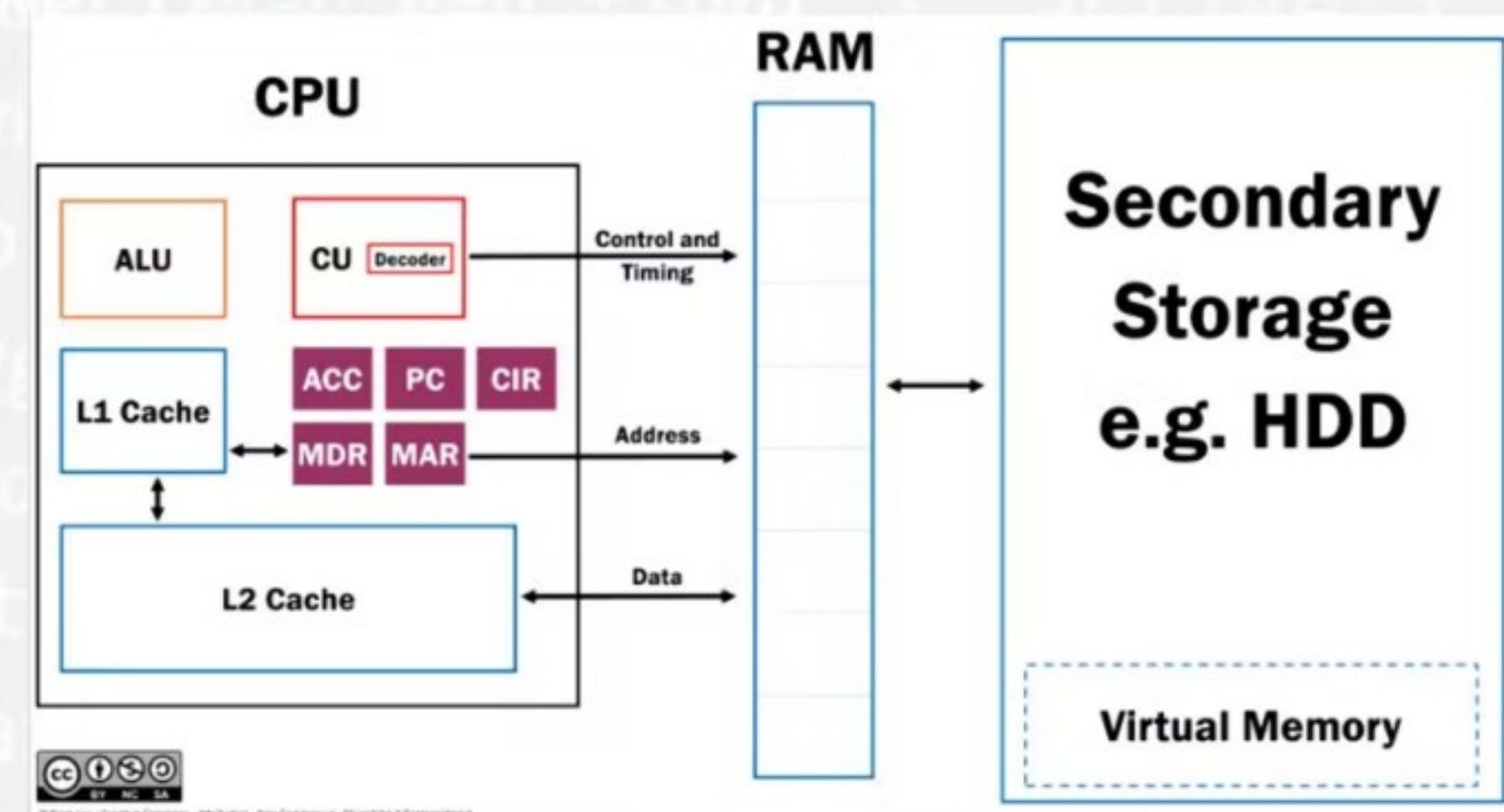


# Is it always greener to retrieve the outcome of calculations from memory than to recalculate them?

Energy (pJ)  
per 64-bit operation



operation





# Feedback questions





# What did you get out of this symposium?

I learned a lot



# What kind of support do you need with green coding?



# How can your institution help you to start and advance in green coding?

