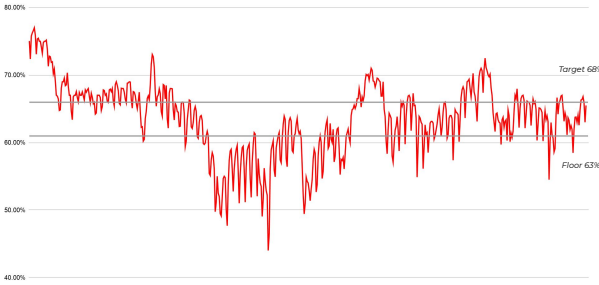


.renbloc Optimizing on Real-Time Renewables saves ABB Research Center 5 tons CO₂ per year

When tracking the renewable energy consumption of a building we calculate the renewable index of that building. This shows how large a part of a building's energy consumption is made up of renewable sources.

Below is a graph of the renewable index for the month of July, with a monthly average renewable index of about 63% (63.47%). The monthly average is an important indicator if you want to start optimizing for renewables. When optimizing in real time, you encourage consumption when renewables levels are high (high renewable index) and discourage consumption on lower levels.

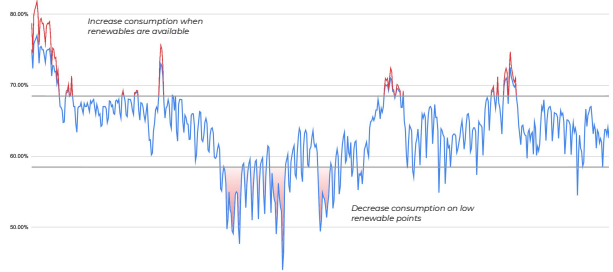


Running simulations, we set a "floor" at 5% below average, decreasing consumption, and a target high at 5% above where we increase consumption.

This way we're able to virtually shift consumption levels to when it's more renewable thus emitting less CO₂.

We do not stop consuming entirely but rather just decrease the consumption slightly. In practice this means switching of lights, not charging phones or computers or using kitchen appliances such as the microwave or coffee maker.

If we encourage a decreased consumption when below 63% (the red areas) with just 15% and at the same time encourage an increased consumption on high renewables, we save up to 5% in total CO₂ emissions.



15% is on average the consumption of laptops and phones in a regular office building.

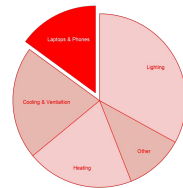
For the consumption of the Research Center that translates to 120 kg CO₂ for this month alone! Extrapolated over an entire year, weighted for shifts in renewable production, and the building would save 2 tons of CO₂ annually - only by being mindful of when to charge your devices!

SUMMARY FINDINGS

Optimization of when you charge your phone and laptop, will save an ABB office building as much as 2 tons of CO₂ annually. Allowing for additional appliances to be optimized would yield larger savings, and there are several low hanging fruits.

CO₂ savings from optimizing on renewables

- ☐ Phone charging - 2 tons
- ☐ Lighting - 4,3 tons
- ☐ Ventilation - 2,8 tons



These numbers are based on a target and floor that differs 10% (above). Narrowing that span, and setting a higher floor will naturally increase the CO₂ savings even further. The combined CO₂ savings of this building could reach 16% - well above any CO₂ capture tech currently on the market, and we do it all without any hardware, just smart monitoring

Seems like the weather is clearing up. Hold off heating your meal till 12.30 for a solar powered lunch!



Today's Renewable Tip

PUTTING OPTIMIZATION TO THE TEST

Renbloc is now installing feedback systems in two buildings, the Research Center and Headquarter Ottar, actively encouraging people to be mindful of their energy. A "Renewable Tip" will let tenants know when to best consume, nudging them to consume more renewably.

If you want to know more please don't hesitate to ask
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