



From the French Association **ACHED**
 Contre l'Heure d'été Double
 Pour la réduction des avancements de l'heure
 Against double DST / Summer Time
 For the reduction of time advances

September 10, 2019
To the Secretary General of the United Nations
 António Manuel de Oliveira Guterres
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FOR CLIMATE SAKE, LET'S REDUCE THE ADVANCE OF CLOCK TIME VS STANDARD TIME

Dear Secretary General, thanks for organizing the UN Climate Action Summit 2019 and for your calls for action.

Ref your request found on your site: <https://www.un.org/en/climatechange/un-climate-summit-2019.shtml>

"I want to hear about how we are going to stop the increase in emissions by 2020"...

Reducing the advance of clock time vs standard time could rapidly affect emissions downwards. Would you help?

In 1884, a prime meridian and an international date line were selected at the Washington Conference, and then Earth time was divided into **24 slices / time zones** where everybody's clock could be at a **standard time** (the average time of the corresponding meridian) and as a result within 30 minutes of his/her **solar time**. **But today many people live very ahead of these standard times** often by 1 hour and also by 2 and more hours, sometimes permanently, sometimes with a seasonal change¹. With clocks ahead of standard times, either seasonally or permanently, through direct and indirect effects, as a sole / primary factor or as an aggravating factor, **humans sleep less, are more obese, sick, impaired, and spend more in many ways**. Originally DST had the idea of saving with lighting. But **1) light bulbs are more efficient so corresponding savings decreased. 2) emissions add up beyond lighting, beyond electricity: energy consumption for production, heating (all kinds), cooling, transportation (including personal car mileage). All things considered, emissions are increased.**

In 1999, the Council of Europe recommended² to France, Spain and Benelux, the 5 countries with the most time advance in Europe (1 hour in the winter and 2 in the summer compared to their 1884 standard time), to reduce this advance. Climate change was not in the forefront but, as reasons, the final recommendation **REC 1432** cited health and air pollution. Moreover, the underlying document (**DOC 8564**) mentioned unconvincing savings and evidence of "increase in energy consumption" when adding **heating, cooling and car mileage** to lighting. **Our association ACHED is mentioned in DOC 8564**. Unfortunately REC 1432 was ignored by the European executives. **Since 1999, more evidence shows that advanced time increases energy spending and health costs: 1)** with the deployment of DST in Indiana in 2006, it was determined³ that households of that state **spent more in electricity** (for lighting, heating and cooling) by an **average of 1% for the DST period** (March-October) and furthermore, rather **by 2-4% in the fall** and for some months **up to 11.7% for cooling**, and **up to 4.4% for heating. 2)** a study⁴ found Americans **sleep 19 minutes less, are sicker and spend more** on the western side of time zones than on the eastern side. **1 hour ahead** at the clock carries a toll of at least **\$82 of health costs and \$23 of lost productivity costs per person.**

Today the voice of science against advanced clocks is getting louder on the chapter of health. The Medicine Nobel prize recognized the Chronobiology science in 2017. Chronobiologists wrote to the EU Commission in October 2018 to recommend permanent standard time as the "best option for public health"⁵. **But people are not fully aware and can be directed in wrong directions for their own health and for climate.** In 2018-19, there were many initiatives about ditching DST, the seasonal clock change system, but sadly, many were funneled towards **permanent DST which would make things worse for health and climate.**

We don't have **total figures** for how much could be saved in \$, €, CO2, in lives, but they could be **astounding and obtained cheaply**. As the idea challenges previous public decisions, some revenues and habits, it is a **difficult task to gather them.**

Would you please help to take the matter to light and forward? : **1)** Could you champion the question? facilitate endorsements by scientists, associations, agencies, institutions, governments? **2)** Could you help initiating / auditing useful studies? **3)** Could you add the cause to the dashboard of useful considerations to protect the climate?

We hope this **letter reaches** you. Share it in English <https://www.heure-ete.net/letter20190910AG.pdf> or **OTHER** languages. It would be great that many people get on board. Our little association founded in 1983 is frail but we would be happy to use our accumulated expertise and help. Please accept our **best regards and wishes** for your challenging task.

Yours respectfully. The scientific board of ACHED.

¹ Different names are used, some of which carry significant emotions. Summertime & DST (Daylight Saving Time) are advanced times. Winter time often coincides with the original standard time, with exceptions like France where wintertime is ahead by 1 hour.

² Council of Europe 1999. <http://assembly.coe.int/nw/xml/XRef/Xref-DocDetails-EN.asp?FileID=16732&lang=EN> **DOC 854, REC 1432, REPLY**

³ Matthew J. Kotchen & Laura E. Grant, 2011. "Does Daylight Saving Time Save Energy? Evidence from a Natural Experiment in Indiana" The Review of Economics and Statistics, MIT Press, vol. 93(4), <https://www.nber.org/papers/w14429>

⁴ Osea Giuntella, Fabrizio Mazzonna; Sunset Time and the Economic Effects of "Social Jetlag" Evidence from US Time Zone Borders ; Journal of Health Economics May 2019 Vol 65 <https://doi.org/10.1016/j.jhealeco.2019.03.007>

⁵ DST statement October 2018, European Biological Rhythm Society <https://www.ebrs-online.org/news/item/dst-statement-ebrs-endorsed> endorsed as well by European Sleep Research Society (ESRS) and Society for Research on Biological Rhythms (SRBR)