



The impact of arbitrary EMF exposure limits in Brussels

Despite the science-based advice of the World Health Organisation (WHO) that

*"Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects."*¹,

some European countries, including Belgium have implemented arbitrary EMF exposure limits. These measures appear to have been taken solely for political reasons in response to claims made, with no scientific basis, by a small but vocal number of individuals.

As in other countries where governments have taken such action, these measures have failed to reassure the vocal minority, instead reinforcing a perception that the science-based limits were not safe.² In Belgium, the Government has now reduced the limits three times,³ despite being unable to justify the reduced limit values beyond simply stating that they are a 'political' decision. Limits are now at a point where they prevent the deployment of networks using the latest technologies. This approach will deprive the people of Brussels the enormous personal, economic and societal benefits that the latest generation of mobile communications offers.

The CEO of the largest, partly state-owned operator in Belgium recently expressed his concerns by saying: *"The Capital of Europe threatens to be the only place in Europe to be without 4G."*⁴ Arbitrary exposure limits, such as those in Brussels, impede the deployment of next generation networks at the expense of users and the economy at large⁵ because such low exposure limits, e.g.,

- make compliance distances unnecessarily large,
- reduce possibilities of co-location and site-sharing,
- reducing the output power of existing antennas which affects network coverage and results in the need for more antennas; all together resulting in

¹ <http://www.who.int/mediacentre/factsheets/fs193/en/index.html>

² Barnett J, Timotijevic L, Shepherd R, Senior V (2007): Public responses to precautionary information from the Department of Health (UK) about possible health risks from mobile phones. Health Policy 82:240-250; Peter Wiedemann et al, EMBO reports Vol 8, N° 7 (2007), 613

³ <http://www.belgopocket.be/content/ondes-radio-et-utilisation-du-gsm>,
http://www.bruxellesenvironnement.be/Templates/download/20070301_Ord_protect_radiation.pdf?langtype=2060,
http://www.bruxellesenvironnement.be/uploadedFiles/Contenu_du_site/Particuliers/02_Thèmes/Ondes_électromagnétiques/091008_AGRBC_Mesure.pdf?langtype=2060

⁴ «La capitale de l'Europe risque d'être le seul endroit en Europe où il n'y a pas de 4G», a averti le patron de l'entreprise publique. ("The capital of Europe will be the only place in Europe without 4G", warns the CEO of Belgacom, which is a public company.), source in French:

⁷ http://www.lavenir.net/article/detail.aspx?articleid=dmf20130129_00261700

⁵ <http://ht.ly/bHq1u> (in French)



- substantially higher costs for network roll-out which have to be covered by customers via elevated service prices.⁶

Moreover, arbitrary exposure limits have policy implications for governments and communities, including:

- increasing, rather than lowering public concern wherever they have been introduced,
- creating the impression that base stations are operating at higher power levels as they become 'closer' to the limit,
- an increase in the number of base stations needed compared to that ordinarily required for good network coverage and capacity; and
- the risk of adversely affecting emergency services where gaps in coverage may occur due to the forced changes in network configuration.⁴

MMF believes that the best strategy to reconcile public health protection and the need of working mobile communication services is for science-based exposure limits to be implemented, as recommended by respected health authorities such as the World Health Organisation (WHO).

Background

EMF exposure limits in Belgium vary from region to region. In Brussels, the norm limits EMF exposure caused by mobile communication networks to 3 volt per metre (V/m).

At the time of introducing the lower limit the relevant authority assigned one quarter of the "exposure budget" to each operator. As these operators have offered 2G and 3G services, they had to further split their "exposure budget" between the services offered, ending up with only a tiny fraction of the available 3 V/m for each service technology.

Given the demand and usage pattern (e.g. in Belgium many users still use 2G services), operators can hardly cut off the "exposure budget" from 2G and 3G services in order to roll out 4G.

In effect, these operators are left with reducing the service for about 80 % of their customers in order to offer 4G services which due to the limited "exposure budget" available cannot deliver the user experience expected. After years of negotiation EMF exposure politics did not change which is why a Belgian operator and Belgian industry organisations saw no other way out than to publicly address the topic and to demand a more science-based public health policy in future.

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⁶ <http://www.mmfa.org/public/docs/eng/MMF%5FGSMA%5FImplications%20of%20Lower%20Limits%2Epdf>