

C A N A D A

PROVINCE OF QUEBEC

DISTRICT OF MONTREAL

DOCKET No. R-3770-2011

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RÉGIE DE L'ÉNERGIE / ENERGY BOARD

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AUTHORIZATION OF AN INVESTMENT BY  
HYDRO-QUEBEC DISTRIBUTION –  
ADVANCED METERING PROJECT  
PHASE 1

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HYDRO-QUEBEC  
As Electricity Distributor

Petitioner

-and-

STRATEGIES ENERGETIQUES (S.E.) /  
ENERGY STRATEGIES (E.S.)

ASSOCIATION QUEBECOISE DE LUTTE  
CONTRE LA POLLUTION ATMOSPHERIQUE  
(AQLPA) / QUEBEC ASSOCIATION TO FIGHT  
AGAINST AIR POLLUTION

Intervenors

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**UNITED KINGDOM HEALTH PROTECTION AGENCY**

*HPA Response to the 2012 AGNIR Report on the Health Effects from Radiofrequency  
Electromagnetic Fields.*

April 25, 2012.

[http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb\\_C/1317133825459](http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1317133825459)

Recommends application of Precautionary Principle and Precautionary Measures.

Referred to in **David O. CARPENTER**, *Expert Report*, Revised on May 14, 2012,  
C-SE-AQLPA-0072, SE-AQLPA-7, Doc. 1.1, parag. 62a.

Filed on May 15, 2012

**Régie de l'énergie / Quebec Energy Board - Docket no. R-3770-2011**

**Authorization of an investment by Hydro-Quebec Distribution – Advanced Metering Project Phase 1**

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**Exhibit SE-AQLPA-7 - Document 23**

**UNITED KINGDOM HEALTH PROTECTION AGENCY. Response to AGNIR Report. April 25, 2012.**

**Attachment to the Expert Report of David O. Carpenter**

**Filed by Stratégies Énergétiques (S.É.) / Energy Strategies (E.S.) and the AQLPA**



## HPA Response to the 2012 AGNIR Report on the Health Effects from Radiofrequency Electromagnetic Fields

The Health Protection Agency welcomes this comprehensive and critical review of scientific studies prepared by the independent Advisory Group on Non-ionising Radiation (AGNIR) [1]. This is the Group's 14th major report since it was set up in 1990 to review work on the biological effects of non-ionising radiation relevant to human health and to advise on research priorities. The Group last performed an in-depth review of exposure to radiofrequency (RF) electromagnetic fields in 2003 [2] and this new report takes into account research published since that time. It forms an important 'touchstone' against which to consider the HPA's present advice on RF field exposures, including precautionary measures.

The report is timely because carefully managed research programmes have investigated the health implications of RF field exposures, especially those from mobile phones and their associated base stations, in a co-ordinated international effort over recent years. The UK has played its part in this work through the Mobile Telecommunications and Health Research Programme [3], which maintains a website where information on supported projects can be found. The main phases of these research programmes are now complete and the results from the many high quality scientific studies that have been published were available for review by AGNIR.

AGNIR's main conclusion is that, although a substantial amount of research has been conducted in this area, there is no convincing evidence that RF field exposures below guideline levels cause health effects in adults or children. These "guideline levels" are those of the International Commission on Non-Ionizing Radiation Protection, which already form the basis of public health protection in the UK and in many other countries. Therefore, a recommendation to follow the ICNIRP guidelines will remain central to HPA's advice on exposures to RF fields. HPA considers the reasons set out in 2004 for recommending adoption of these guidelines in the UK remain valid [4].

AGNIR considers there are still limitations to the published research that preclude a definitive judgment. In particular, AGNIR refers to possible effects on the electroencephalogram (recorded electrical signals from the brain) that have been reported at exposure levels similar to the highest ones that can occur when using mobile phones. AGNIR cautions that these effects have not been conclusively established, and considers it is unclear whether they would have any health consequences. In this regard, HPA notes that unconfirmed suggestions of effects occurring within exposure guidelines was one of the reasons that the UK's Independent Expert Group on Mobile Phones (IEGMP) recommended a precautionary approach to mobile phone technologies in its 2000 report [5]. However, as AGNIR explains, in general, the quantity and quality of the research available on this subject has increased greatly from the situation ten years ago and adverse effects of RF field exposure below guideline levels have not been demonstrated.

Whether mobile phone use could be linked to the development of cancer is an important topic that occupies a substantial part of the AGNIR report. The various strands of evidence relating to cancer are complicated to interpret and draw together, and HPA appreciates AGNIR's thorough consideration of this subject. AGNIR concludes that, although some positive findings have been reported in a few studies, overall the evidence does not suggest that using mobile phones causes brain tumours or any other type of cancer. The data, however, are essentially restricted to periods of less than 15 years from first exposure because mobile phones have only been in widespread use for that long. AGNIR considers it will be important to continue monitoring the evidence over the coming years, including that from national brain tumour trends, which have so far given no indication of any risk.

HPA's view is that the continuing possibility of: (a) biological effects, although not apparently harmful, occurring at exposure levels within the ICNIRP guidelines, and (b) the limited information regarding cancer effects in the long term, together support continuation of the UK's long-standing precautionary approach to mobile phones. While technology has developed substantially over the ten years since the IEGMP report, the principles behind the IEGMP recommendations should continue to be observed. Excessive use of mobile phones by children should be discouraged, while adults should make their own choices as to whether they wish to reduce their exposures, but be enabled to do this from an informed position.

Measures that could be taken to reduce exposures were described in the IEGMP report and in the subsequent Mobile Phones and Health 2004 report [6], but the technology continues to develop, which alters the options available. Moving the phone away from the body, as when texting, results in very much lower exposures than if a phone is held to the head. Also, the use of the more recent 3G mode of transmission instead of the older 2G mode will produce much lower exposures. Other options to reduce exposure include using hands-free kits, keeping calls short, making calls where the network signals

are strong, and choosing a phone with a low specific energy absorption rate (SAR) value quoted by the manufacturer. Exposures from devices held further away from the body such as wireless-enabled laptop computers, and transmitter masts in the community are very much lower than those from mobile phones and community or individual measures to reduce exposures are not necessary.

Whether certain people are especially sensitive to exposures to RF fields, leading to unpleasant symptoms which affect their health, has been considered carefully in the AGNIR report. Many studies have now been carried out, reflecting the importance ascribed to understanding the condition and making appropriate help available to sufferers. AGNIR concludes there is increasing evidence that RF fields below guideline levels do not cause symptoms and cannot be detected by people, even those who consider themselves sensitive to RF fields. HPA agrees with AGNIR that this does not undermine the importance of the symptoms that are experienced, but it does suggest causes other than those directly related to RF fields should be considered. HPA published a review of the public health aspects of this condition in 2005 and this which included comments on the management of affected individuals and evaluation of treatment options [7].

In summary, HPA supports and appreciates this thorough review of the evidence prepared by AGNIR. It will be important to carry forward the research recommendations made by AGNIR, especially to gain understanding of longer term effects. HPA will continue to monitor carefully the emerging scientific evidence and will not hesitate to provide any necessary advice. HPA will undertake another comprehensive review of the scientific evidence and its advice when sufficient new evidence has accumulated.

## References

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