

Régie de l'énergie - Dossier R-3770-2011

Autorisation d'investissement - Projet Lecture à distance (LAD) – Phase 1 d'Hydro-Québec Distribution

CANADA

PROVINCE DE QUÉBEC
DISTRICT DE MONTRÉAL

DOSSIER R-3770-2011

RÉGIE DE L'ÉNERGIE

AUTORISATION D'INVESTISSEMENT
PROJET LECTURE À DISTANCE (LAD) –
PHASE 1
D'HYDRO-QUÉBEC DISTRIBUTION

HYDRO-QUÉBEC
En sa qualité de Distributeur

Demanderesse

-et-

STRATÉGIES ÉNERGÉTIQUES (S.É.)

ASSOCIATION QUÉBÉCOISE DE LUTTE
CONTRE LA POLLUTION ATMOSPHÉRIQUE
(AQLPA)

Intervenantes

EMF-PORTAL,

Mobile-phone related epidemiological studies (Liste de 9 pages d'études épidémiologiques avec résumé des constatations), à jour le 28 mars 2012.

http://www.emf-portal.de/overview/mp_epi.php?l=e&explode=3&tab=2#alle

Pièce déposée par:

Stratégies Énergétiques (S.É.)

Association québécoise de lutte contre la pollution atmosphérique (AQLPA)

Le 29 mars 2011

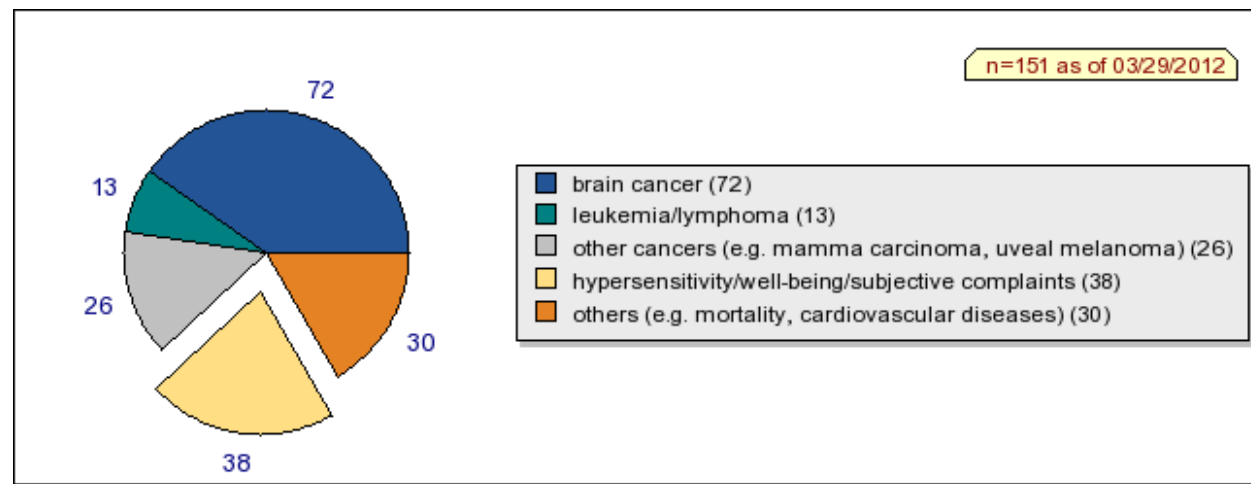
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Mobile-phone related epidemiological studies

View articles of one endpoint (aim of the study) by clicking on its associated segment or caption.



Mobile-phone related articles are

- studies with mobile phone exposure, i.e. studies dealing with all frequencies within the frequency range of mobile phones (800 MHz - 2200 MHz) and
- studies that were explicitly designed to investigate the effects of mobile phone-related frequencies.

How are epidemiological studies of diseases conducted?

Hypersensitivity/well-being/subjective complaints

Studies		Background information
list	table with further details	not available at this time

Click on the headline of a column to sort the specific parameter in chronologic or alphabetical order. Click on a particular author to view the full summary.

Authors	Year	Study Type	Study Group	Investig. Period	Country	Endpoints	Parameter
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Frei P et al.	2012	cohort study	men, women, 30 to 60 years	2008, follow-up in 2009	Switzerland	non-specific health symptoms (e.g., headache, fatigue, loss of appetite, lack of energy or concentration) and tinnitus	mobile phone, cell phone base station, DECT, cordless phone, W-LAN/WiFi, Radio/TV transmitter
Chu MK et al.	2011	cross-sectional study	men, women, 21 to 25 years	2005	Korea	headache	mobile communication system, mobile phone, CDMA
Meg Tseng MC et al.	2011	cross-sectional study	men, over 18 years	August 2007	Taiwan	hypersensitivity	mobile phone, cell phone base station, 50/60 Hz (AC), power transmission line, high voltage
Munezawa T et al.	2011	survey	children, 13 to 19 years	December 2008 - January 2009	Japan	sleep duration, sleep quality, excessive daytime sleepiness, insomnia	mobile phone
Baliatsas C et al.	2011	cross-sectional study	men, women, over 18 years	2006	Netherlands	non-specific physical symptoms	cell phone base station, power transmission line, high voltage
Heinrich S et al.	2011	cross-sectional study	children, 8 to 17 years	2006 - 2007	Germany	chronic symptoms over the last 6 months: headache, irritation, nervousness, dizziness, fatigue, and fear, sleep disturbances	mobile communication system, mobile phone, digital mobile phone, cell phone base station, GSM, UMTS, radio frequency field, DECT, W-LAN/WiFi
Röösli M et al.	2010	cohort study	men, women, 30 to 60 years	2008, follow-up in 2009	Switzerland	daytime sleepiness, hypersensitivity, headache, tinnitus	mobile phone, cell phone base station, cordless phone, W-LAN/WiFi, Radio/TV transmitter
Heinrich S et al.	2010	cross-sectional study	children, 8 to 17 years	2006 - 2007	Germany	headache, irritation, nervousness, dizziness, fatigue and concentration problems	mobile communication system, mobile phone, cell phone base station, GSM, UMTS, radio frequency field, DECT, W-LAN/WiFi

Eger H et al.	2010	survey	men, women, over 18 years	January 2009	Germany	depression, headache, cerebral symptoms, joint illnesses, infections, skin changes, dizziness, cardiovascular symptoms, disorders of the optical and acoustic sensory systems, nosebleed, hormonal disorders, gain and loss of weight, disorders of the gastrointestinal tract , sleep disturbances	cell phone base station, DECT
Hutter HP et al.	2010	case-control study	men, women, 16 to 80 years	Nov 2003 - Nov 2004	Austria	tinnitus	mobile phone
Breckenkamp J et al.	2010	cross-sectional study	men, women, 15 to 71 years	March - August 2006	Germany	headache, health complaints, mental, and physical health, sleep disturbances, risk perception (not concerned, concerned, attributed own adverse health effects to base stations)	mobile communication system, digital mobile phone, cell phone base station, GSM, UMTS, TETRA/TETRAPOL, DECT, W-LAN/WiFi, TV broadcast (VHF/UHF), FM broadcast
Mohler E et al.	2010	cross-sectional study	men, women, 30 to 60 years	May 2008	Switzerland	sleep disturbances and daytime sleepiness	mobile communication system, mobile phone, cell phone base station, GSM, TETRA/TETRAPOL, radio frequency field, DECT, cordless phone, W-LAN/WiFi, TV broadcast (VHF/UHF), FM broadcast
Milde-Busch A et al.	2010	cross-sectional study	children, 13 to 17 years	not stated	Germany	headache (migraine, tension-type headache, miscellaneous	mobile communication system, digital mobile phone

						headache)	
Johansson A et al.	2010	cross-sectional study	men, women	December 2005 - April 2006	Sweden	sleep disturbances, dizziness, discomfort, concentration, memory loss, fatigue, headaches, warmth behind/around ear, warmth on ear, burning skin, tingling/tightness, tinnitus, numbness, anxiety, depression, somatization, exhaustion and stress	mobile phone, magnetic field, 50/60 Hz (AC), PC/TV monitor, domestic appliance
Augner C et al.	2009	survey	men, women, 18 to 67 years	not stated	Austria	hypersensitivity, EMF-health concerns; biological parameters alpha-amylase, cortisol, immunoglobulin A, and substance P	cell phone base station
Korpinen LH et al.	2009	survey	men, women, 18 to 65 years	October 2002	Finland	pain in several joints and back, sleep disturbances, self-reported physical symptoms: headache, earaches, warmth sensations, skin symptoms, depression, exhaustion at work, substance addiction, anxiety or fear situations	mobile phone
Schüz J et al.	2009	cohort study	men, women, over 18 years	January 1982 - December 1995, followed up through 2003	Denmark	Alzheimer disease, dementia, Parkinson disease, amyotrophic lateral sclerosis, multiple sclerosis, epilepsy, migraine, vertigo	mobile communication system, analog mobile phone, digital mobile phone
Berg-Beckhoff G et al.	2009	cross-sectional study	men, women, 15 to 71	March - August 2006	Germany	headaches, health complaints, mental, and physical health,	mobile communication system, cell phone base station, GSM,

			years			sleep disturbances, risk perception (not concerned, concerned, attributed own adverse health effects to base stations)	UMTS, TETRA/TETRAPOL, Bluetooth, DECT, W-LAN/WiFi, TV broadcast (VHF/UHF), FM broadcast, DVB-T
Blettner M et al.	2009	cross-sectional study	men, women, 14 to 69 years	2004	Germany	concerns; health complaints e.g. cognition problems, pain, sleeping problems, skin reactions, gastrointestinal affections, visual problems	cell phone base station
Khan MM	2008	survey	men, women	not given	Kingdom of Saudi-Arabia	chronic headache, impaired concentration, impaired memory, fatigue, hearing problem, skin disease, warmth around the ear, sleeplessness, self-rated health condition, relation of symptoms to mobile phone use	mobile phone
Söderqvist F et al.	2008	cross-sectional study	children, 15 to 19 years	october 2005	Sweden	sleep disturbances, health symptoms such as tiredness, stress, headache, anxiety, and concentration difficulties	mobile communication system, analog mobile phone, digital mobile phone, GSM, UMTS, NMT, DECT, W-LAN/WiFi
Thomas S et al.	2008	cross-sectional study	men, women, 18 to 65 years	January 2005 - August 2006	Germany	headache, neurological symptoms (e.g., tinnitus), cardiovascular symptoms (e.g., tachycardia), concentration problems, fatigue, sleep disturbances	mobile communication system, digital mobile phone, cell phone base station, GSM, UMTS, DECT, W-LAN/WiFi

Davidson HC et al.	2007	survey	men, women, 18 to 30 years	not given	United Kingdom	hearing, tinnitus, and balance difficulties	mobile phone
Mortazavi SM et al.	2007	cross-sectional study	men, women	spring 2005	Iran	headache, vertigo/dizziness, myalgia, palpitation, fatigue, tinnitus, difference in concentration, attention disorder, nervousness, and low back pain	mobile communication system, digital mobile phone, PC/TV monitor
Schreier N et al.	2006	cross-sectional study	men, women, over 14 years	May - July 2004	Switzerland	sleep disorders, headache, concentration difficulties, nervousness, rheumatism/muscle pain, respiratory problems, dizziness	mobile communication system, digital mobile phone, cell phone base station, cordless phone, Radio/TV transmitter, microwave oven/heating device, magnetic field, 50/60 Hz (AC), power transmission line, high voltage, PC/TV monitor, domestic appliance
Schüz J et al.	2006	survey	men, women	October 2003 - March 2005	Germany	headache, tiredness, concentration difficulties, increased heart beat, vertigo, impaired vision, loss of appetite, anxiety, and other symptoms, sleep disturbances, self-classified hypersensitivity	mobile communication system, analog mobile phone, digital mobile phone, cell phone base station, cordless phone, electric field, magnetic field, 50/60 Hz (AC), power transmission line, high voltage, electrical utility, train, domestic appliance
Meo SA et al.	2005	survey	men, women, 18 to 46 years	not given	Kingdom of Saudi-Arabia	hearing and vision complaints: impaired hearing, ear ache and/or warmth of the ear; decreased vision and/or blurred vision	mobile phone

Meo SA et al.	2005	preliminary study	men, women, 18 to 42 years	2002 - 2004	Kingdom of Saudi-Arabia	hearing and vision complaints: earache, heating around the ear, decreased hearing, decreased or blurred vision	mobile phone
Balik HH et al.	2005	survey	men, women	not given	Turkey	blurring of vision, redness on the eyes, vision disturbance, secretion of the eyes, inflammation in the eyes and lacrimation of the eyes	mobile phone
Balikci K et al.	2005	survey	men, women	not given	Turkey	headache, dizziness, extreme irritation, shaking in the hands, speaking falteringly, forgetfulness, neuro-psychological discomfort, increase in the carelessness, decrease of the reflex and clicking sound in the ears	mobile phone
Salama OE et al.	2004	cross-sectional study	men, women, 20 to 60 years	not stated	Egypt	headache, earache, burning sensation of the face, fatigue, concentration difficulty, sleep disturbances	mobile phone
Al-Khlaiwi T et al.	2004	study	men, women, 18 to 42 years	2002 - 2003	Kingdom of Saudi-Arabia	sleep disturbances, fatigue, headache, dizziness, tension	mobile phone
Navarro EA et al.	2003	preliminary study	men, women, over 15 years	January 2001	Spain	microwave sickness: fatigue, irritability, headache, nausea, appetite loss, insomnia, depression, discomfort, difficulty in concentration, memory loss, skin alterations, visual + auditory dysfunction, dizziness, gait	mobile communication system, cell phone base station, GSM

						difficulty, cardiovascular alterations	
Santini R et al.	2003	survey	men, women	not given	France	symptoms of discomfort, sleep disturbances, fatigue, irritability, headaches, nausea, loss of appetite, depressive tendency, concentration difficulties, memory loss, skin problems, visual + hearing disturbances, dizziness, movement diff, cardiovasc. problems, libido lowering	cell phone base station
Santini R et al.	2002	survey	men, women	not given	France	general symptoms (headache, concentration difficulties, loss of memory, tiredness, sleep disturbance); symptoms during use (discomfort, burning sensation of the face, pricking sensation on the ear, warmth of the ear)	mobile communication system, digital mobile phone, GSM, PC/TV monitor
Sandström M et al.	2001	cross- sectional study	men, women	1996	Sweden, Norway	subjective symptoms: dizziness, discomfort, concentration, memory loss, fatigue, headaches, warmth behind ear, warmth on ear, burning skin, tingling/tightness	mobile communication system, analog mobile phone, digital mobile phone, GSM, NMT
Oftedal G et al.	2000	cross- sectional study	men, women	1996	Sweden, Norway	sensations of warmth on the ear and behind/around the ear, burning sensations in the facial skin and headaches	mobile communication system, analog mobile phone, GSM, NMT, PC/TV monitor

Hocking B	1998	survey	men, women	1996	Australia	cranial symptoms, neurological symptoms, atypical symptoms, waist symptoms	mobile communication system, analog mobile phone, digital mobile phone
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