Health

smartmeters

Safe exposure levels

All Smart Meters being installed in Victoria are subject to regulatory arrangements made by the Australian Communications and Media Authority. This includes compliance with the electromagnetic exposure limits developed by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). The specific exposure limits are defined in ARPANSA Radiation Protection Standard 3 (RPS3).

The communications system associated with Smart Meters involves lower electromagnetic exposures than many other household devices, such as mobile phones and baby monitors.

Independent testing

To test actual levels of electromagnetic exposures from Smart Meters, and make sure these comply with the exposure levels set by ARPANSA, the Victorian Government commissioned an independent study by testing laboratory EMC Technologies.

Results show that radiofrequency electromagnetic exposures from single meters and groups of meters are well below the safe levels set by ARPANSA.

EMC Technologies found exposure levels from Smart Meters inside dwellings ranged from 0.000001% to 0.0113% of the General Public Limit specified by ARPANSA Radiation Protection Standards.

The report was reviewed by Australian Professor Andrew Wood of the Brain and Psychological Sciences Research Centre at Swinburne University of Technology. His conclusion was: "I would thus have high confidence in stating

that the meters comply with Australian standards in locations normally accessed by the general public even under worst case operating scenarios".

Both types of electromagnetic exposures produced from Smart Meters were tested. These are the electromagnetic fields generated by the operation of a Smart Meter, and radiofrequency emissions related to the built-in two-way communications.

The full EMC Technologies report is available at www.dpi.vic.gov.au/smartmeters

State Government Victoria

Health and Safety Standards

Victoria's Smart Meters meet health and safety standards set by ARPANSA, the Australian Government agency responsible for protecting the health and safety of people from the harmful effects of radiation.

In relation to Smart Meters, ARPANSA state that the combination of the low power of the transmitter, the meters location on the outside of buildings, and the very short time spent transmitting mean that the overall exposure is well below safe exposure limits – even when a number of devices are communicating simultaneously.

At its March 2012 meeting, the Victorian Ministerial Radiation Advisory Committee reiterated its position on Smart Meter radiofrequency radiation.

Victoria's Chief Health Officer has endorsed the advice of the Committee that, "there is no substantive evidence to suggest that exposure to radiofrequency radiation such as from Smart Meters can increase the risk of chronic health effects, such as cancer".

Victoria's Chief Health Officer has also endorsed the advice of the Australian Radiation Protection and Nuclear Safety Agency that "the overall exposure from Smart Meters is very low and well below exposure limits, even when a number of devices are communicating simultaneously".

Electromagnetic exposures safety standards

ARPANSA develops standards, codes of practice and safety guidelines that prescribe safe levels of radiation and radiofrequency exposures. They do this by taking into consideration any health and environmental impacts, in consultation with both scientific experts and the community.

ARPANSA's Smart Meter fact sheet is available at the ARPANSA website.

Other household devices

The EMC Technologies study found that radiofrequency exposures from Smart Meters are lower than other household devices such as mobile phones and baby monitors (as shown in Figure 1).

The ARPANSA Smart Meter fact sheet is available at www.arpansa.gov.au/ radiationprotection/Factsheets/ is_smartmeters.cfm

Comparing Smart Meters to other household appliances
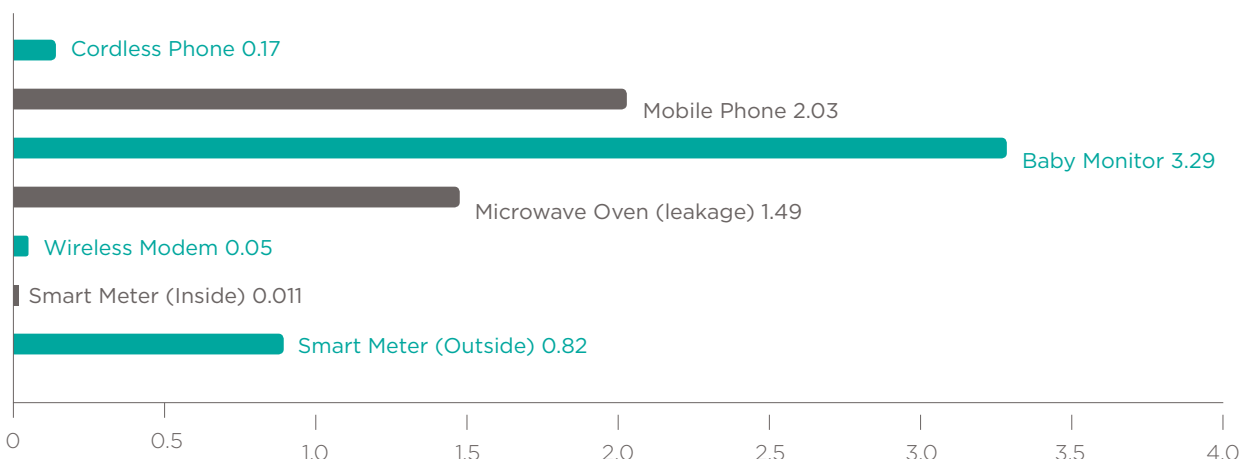
Percentage of the allowable standards for exposures – set by ARPANSA

Figure 1: Comparison of radiofrequency (RF) power density from Smart Meters with other household appliances (at 30cm)

Smart Meters

A major upgrade of Victoria's electricity infrastructure means all households and small businesses are scheduled to have their existing meter upgraded with a new digital Smart Meter by the end of 2013. Smart Meters present new opportunities not possible with existing meters.

New benefits

Smart Meters empower customers to make choices about how much energy they use as they can provide accurate real-time information about electricity consumption.

Unlike the old metering technology they replace, Smart Meters are two-way, digital communication systems that record electricity usage every 30 minutes and can automatically send this data to electricity suppliers. This will virtually bring an end to estimated quarterly bills and manual meter readings.

Connecting or disconnecting electricity, switching to a new electricity retailer or feeding electricity back in to the grid from roof-top solar panels, will all be cheaper and easier with a Smart Meter. You will no longer need to wait for your next scheduled meter reading when switching electricity companies, making services like this quicker and cheaper.

Smart Meter technology

Smart Meters measure and record how much electricity is used at different times of the day and week. There are different Smart Meter models but the basic functions are the same.

Smart Meters use a communications network to intermittently communicate meter readings to electricity distributors each day.

These meters are capable of measuring two-way flows of electricity, allowing households with renewable energy systems, such as solar panels, to be credited for the power they feed back into the grid.

Customer access to accurate information

Using a web portal or an in-home display connected to their Smart Meter, householders and businesses will be able to access accurate and more detailed information about their electricity use. This information will help consumers identify ways to save electricity, thereby reducing their energy costs. It will also help consumers to compare electricity pricing offers from competing providers to make sure they are getting the best deal.

A number of customer trials are currently underway to assist in delivering new services to the community in 2012.

Locating blackouts and restoring power

Smart Meters can notify your electricity distributor that your power is out in real-time.

These outage alerts can speed up power reconnection because the source of the problem can be pinpointed instantly. Repair crews can be allocated in a priority manner and repairs can begin sooner.

The new meters can then verify whether power has been restored to all meters.

Communicating with customers

Power companies can use Smart Meter technology to help keep the public informed quickly and more accurately. For example, they can better advise the public about the precise locations of power outages resulting from storms and bushfires.

Responsibility for the roll out

Digital Smart Meters are being rolled out by Victoria's five electricity distributors – CitiPower, Powercor, Jemena, United Energy and SP AusNet – who own and manage the poles and wires that deliver power to homes and businesses across the state.

Electricity meters are the property of the distribution businesses. As such, the businesses are allowed to replace their equipment, and there is an obligation on a property owner to provide reasonable access to their property for this to occur.

Your distributor will contact you prior to the installation of a Smart Meter, advising of a time period in which they will visit your property.

You do not need to be present for the installation of the meter but should you wish to make special arrangements please contact the distributor (or its nominated service provider) on the phone number provided in their letter.

To find out who your distributor is go to www.dpi.vic.gov.au/electricitydistributors or call 136 186.

Privacy

smartmeters

Privacy and security

Smart Meters collect information about electricity use, but there are strict guidelines in place for the use of this information. A recent review established that privacy controls are strong for the collection and disclosure of personal information associated with the implementation of the Smart Meter program.

Regulation

Energy businesses in Australia must comply with the *Federal Privacy Act (1988)*, which includes the National Privacy Principles. These Principles set clear restrictions on the use, disclosure and storage of personal information.

Access to electricity usage data and other information is restricted – compliance with the Act and Principles, including security processes and staff security checks, are mandatory.

The collection, use and disclosure of metering data by electricity companies is also subject to strict confidentiality rules set out by the Essential Services Commission's licensing framework and the National Electricity Rules.

For more information visit www.esc.vic.gov.au/public/Energy/

Privacy Impact Assessment Report

An independent investigation into privacy issues around Smart Meters, conducted by Lockstep Consulting, uncovered no unauthorised disclosures from the collection of personal information associated with the implementation of the Smart Meter program.

The report found that:

- privacy controls are strong and metering data is suitably protected

- the security of Smart Meters is well designed – all wireless links are encrypted and this cannot be disabled, and there are strong security governance practices to prevent access to metering data by third parties without consumer consent

- the industry has adopted good information security standards and practice

- in light of the extra data that will be generated as new applications become available, the study maderecommendations about ensuring future compliance with the privacy regime.

Secure technology

Smart Meters, and the associated communication networks being rolled out in Victoria, are equipped with security features to prevent unauthorised access.

The wireless links between the meters, distributors and home area networks (HAN) are encrypted and this cannot be disabled. The encrypted wireless link between the meter and the distributor does not use the internet, providing further security.

Electricity companies also have strong management practices in place to prevent access to metering data by third parties without customer consent.

Contact your local distributor for further information on the security measures it uses to protect your privacy.

State Government Victoria