30 May 2024

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Submitted online

Dear Julia

# **ERC0378** Accelerating smart meter deployment

Rule Proponents: Intellihub, SA Power Networks and Alinta Energy

Thank you for the opportunity to submit comment on the AEMC's Accelerating smart meter deployment draft rule.

Stop Smart Meters Australia (SSMA) is a volunteer-based advocacy group which incorporated as an Association in April 2013 in response to widespread community objection to the Victorian State Government mandated Advanced Metering Infrastructure (AMI) rollout. SSMA members are now drawn from across Australia. This means that some of our members will immediately be subject to the impact of the draft rule if it proceeds.

# Long-term interests of electricity customers are NOT achieved

SSMA considers that the roll out of smart meters in general, and key aspects of the draft rule in particular, are not congruent with the relevant energy objectives under which the Commission is obligated to act. The legislative requirements imposed by section 7 of the National Electricity Law (NEL) and section 13 of the National Energy Retail Law (NERL) put the long-term interests of consumers at the forefront with respect to price, quality, safety, reliability and security of supply, along with the reliability, safety and security of the national electricity system and the achievement of targets for reducing Australia's greenhouse emissions. SSMA maintains that some, if not all, of the provisions of these Acts are not met under the proposed rule. Our reasoning as to why the draft rule is not effective in meeting the relevant objectives follows.

### Price of electricity

The September 2022 and August 2023 cost-benefit analyses which the AEMC appointed Oakley Greenwood to undertake has confined itself to considering the economies of scale that might be achieved by accelerating the current 'new and replacement' approach to smart meters.

SSMA considers this to be a blinkered approach. Rather than tinkering with a model that clearly favours the interests of industry over those of consumers, SSMA considers that the AEMC should re-evaluate whether there should be, in the first instance, *any* encouragement for the rollout of wireless smart meters.

The replacement of electromechanical meters with digital technology has resulted, time and again, in locking consumers into a continuing cycle of higher electricity bills. Accumulation meters have a lifespan that is measured in the decades. In that same time period smart meters and their components will need to be replaced multiple times. Smart meters rely on sophisticated technology. An army of resources (communication networks, data storage, software applications and technical expertise) underpin advanced metering infrastructure. Who pays for this? As stated in an article titled 'Who benefits from AMI?' contained in Appendix B of the 2011 Advanced metering infrastructure cost benefit analysis report prepared for the Victorian Government, 'In the end of course the customer will ultimately pay the cost – they always do'.

NSTAR Electric Company and Western Massachusetts Electric Company summed up the lack of benefit for consumers who transition to smart meters, stating 'For customers who will pay the price of this system, there is no rational basis for this technology choice'.<sup>1</sup>

The pitfalls<sup>2</sup> of relying on cost-benefit analysis are readily apparent in large-scale projects such as smart meter rollouts. Despite multiple cost-benefit analysis studies<sup>3</sup> making a positive case for the roll out of smart meters in Victoria, including one undertaken by Oakley

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<sup>&</sup>lt;sup>1</sup> NSTAR Electric Company and Western Massachusetts Electric Company 2014, *D.P.U.* 12-76-A – *Investigation into Modernization of the Electric Grid,* Filed comments, Available: <a href="https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B17FA0F1D-69CE-444F-84DE-37B7ECB15B6C%7D">https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B17FA0F1D-69CE-444F-84DE-37B7ECB15B6C%7D</a>

<sup>&</sup>lt;sup>2</sup> Caruso, D. 2008, The Myth of Cost-Benefit Analysis, *The U.S. government's method for evaluating risk isn't as objective as it's made out to be*, Available: <a href="https://www.strategy-business.com/article/08103">https://www.strategy-business.com/article/08103</a>

<sup>&</sup>lt;sup>3</sup> The Victorian Auditor-General's 2009 report, which slammed Victoria's roll out of smart meters, refers to a Victorian 2005 study and a national AMI cost-benefit report that found a positive case for Victoria: <a href="https://www.audit.vic.gov.au/report/towards-smart-grid-roll-out-advanced-metering-infrastructure">https://www.audit.vic.gov.au/report/towards-smart-grid-roll-out-advanced-metering-infrastructure</a>

Greenwood (authors of the current cost-benefit analyses) in 2010<sup>4</sup>, Deloitte found in 2011 that the program would 'result in net costs to customers of \$319 million (NPV at 2008)' over the 2008-28 time-period. This, despite earlier analysis promising \$775 million in net benefits. What might the outcome now be, in terms of actual costs (which have escalated) and benefits (which, from the viewpoint of consumers, remain substantially unrealised) in 2024 dollars? It seems that the problematical roll out of smart meters in Victoria is a matter that government would prefer not to shine a light on. <sup>5</sup>

A number of the benefits of the core and supporting reforms outlined by the Commission appear to be motherhood statements, lacking any real foundation in terms of conferring benefits to consumers. The Commission has assumed that its leading benefit, which promises the possibility for 'innovative products and services, expanding customers' control of and choices around their energy use' is something that consumers are able to avail themselves of and value.

A 2010 report titled, *Smart Meters, Smart Justice? Energy, Poverty and the Smart Meter Rollout,* pointed out that time-of-use and critical peak pricing tariffs penalise low-income families. <sup>6</sup> This cohort has a limited ability to respond to price signals and has little discretionary consumption of electricity. The uptake of 'innovative products and services' also relies on customer engagement. However, the majority of customers don't want to be engaged customers. They simply want a reliable electricity supply at a reasonable price and want to spend as little time as possible in getting this outcome. Customers don't want to be manipulated and bamboozled with complex tariffs. <sup>7</sup> And with the possibility for things to

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<sup>&</sup>lt;sup>4</sup> Deloitte cover the Oakley Greenwood analysis on p. 25 of the 2011 *Advanced Metering Infrastructure Cost Benefit Analysis report,* Available: <a href="https://stopsmartmeters.com.au/wp-content/uploads/2023/04/deloitte-final-cba-2-august.pdf">https://stopsmartmeters.com.au/wp-content/uploads/2023/04/deloitte-final-cba-2-august.pdf</a>

<sup>&</sup>lt;sup>5</sup> A second, highly critical, audit of Victoria's roll out of smart meters was concluded by the Victorian Auditor-General in 2015. Available: <a href="https://www.audit.vic.gov.au/sites/default/files/20150916-Smart-Meters.pdf">https://www.audit.vic.gov.au/sites/default/files/20150916-Smart-Meters.pdf</a> No further audits have occurred. However, the Victorian government commissioned KPMG to prepare the 2019 *AMI Benefits Realisation Report*. Government officers refused to make this report publicly available, despite repeated requests from SSMA. A redacted version was eventually obtained by a SSMA member via a FOI request. Available: <a href="https://stopsmartmeters.com.au/wp-content/uploads/2021/05/kpmg-2019-ami-benefits-realisation-report-redacted.pdf">https://stopsmartmeters.com.au/wp-content/uploads/2021/05/kpmg-2019-ami-benefits-realisation-report-redacted.pdf</a>

<sup>&</sup>lt;sup>6</sup> McGann, M. & Moss J. 2010, p. 62, *Smart Meters, Smart Justice? Energy, Poverty and the Smart Meter Rollout,* University of Melbourne, Available: <a href="https://stopsmartmetersau.files.wordpress.com/2017/10/smart\_meters\_smart\_justice.pdf">https://stopsmartmetersau.files.wordpress.com/2017/10/smart\_meters\_smart\_justice.pdf</a>

<sup>&</sup>lt;sup>7</sup> Hunn N. 2012, Fifty Shades of Tariff, Available: https://www.nickhunn.com/wp-content/uploads/downloads/2012/12/Fifty-Shades-of-Tariff.pdf

go pear-shaped, how many customers actually want their appliances, even when offered incentives, to be remotely controlled?<sup>8</sup>

In 2014 Ontario's Auditor General passed scathing comment on the lack of success in reducing peak demand from its own smart meter rollout. The 2014 Annual Report stated:

'The Smart Metering Initiative has spent nearly \$2 billion of electricity ratepayers' money, but the intended outcomes of significantly reducing electricity peak demand usage using smart meters and time-of-use pricing (TOU) rates, and of reducing the need for new sources of power generation, have not yet been achieved. Under the initiative, ratepayers were supposed to use less electricity during peak times; as a result, Ontario would not need to immediately expand its power-generating capacity. Peak demand reduction targets set by the Ministry of Energy have not been met, ratepayers have had significant billing concerns, and ratepayers are also paying significantly more to support the expansion of power-generating capacity while also covering the cost of the implementation of smart metering.'9

Victorian electricity consumers were fed a similar spiel to the Commission's claim that an accelerated deployment of smart meters 'opens new possibilities for innovative products and services, expanding customers' control of and choices around their energy use'. The Department of Primary Industries, the then government department responsible for Victoria's mandated rollout, held an information session that the writer attended in December 2011 at which in-home displays and home area networks were touted as being the magic bullet that would empower consumers to make choices around electricity use. Moving along to 2019, KPMG's 'AMI Benefits Realisation Report', revealed that a paltry 11,000 in-home devices had been installed in Victoria.<sup>10</sup>

SSMA also considers that customers are facing unfair barriers to selection of a Type 4A meter under the current legislation. The AEMC needs to address this situation. Customers

<sup>&</sup>lt;sup>8</sup> Durden, T. September 2022, Power Company Seizes Control of Thermostats in Colorado During Heatwave, *ZeroHedge*, Abridged article available: <a href="https://stopsmartmeters.com.au/2022/09/03/power-company-seizes-control-of-thermostats-using-smart-meters/">https://stopsmartmeters.com.au/2022/09/03/power-company-seizes-control-of-thermostats-using-smart-meters/</a>

<sup>&</sup>lt;sup>9</sup> Office of the Auditor General of Ontario 2014, *Annual Report 2014*, p. 6, Available: <a href="https://www.auditor.on.ca/en/content/annualreports/arreports/en14/2014AR">https://www.auditor.on.ca/en/content/annualreports/arreports/en14/2014AR</a> en web.pdf

<sup>&</sup>lt;sup>10</sup> KPMG 2019, AMI Benefits Realisation Report, prepared for Department of Environment, Land, Water and Planning, p. 77. (Redacted version obtained by an SSMA member via a FOI request), Available: <a href="https://stopsmartmeters.com.au/wp-content/uploads/2021/05/kpmg-2019-ami-benefits-realisation-report-redacted.pdf">https://stopsmartmeters.com.au/wp-content/uploads/2021/05/kpmg-2019-ami-benefits-realisation-report-redacted.pdf</a>

seeking to protect their health and/or privacy should not be subject to meter reading fees because they prefer a Type 4A meter. This is especially true in the case of vulnerable consumers, consumers with a disability (symptoms experienced by people living with electromagnetic hypersensitivity fall under the provisions of Australia's *Disability Discrimination Act 1992*) and consumers in areas of the NEM which lack competition. As pointed out in *Smart Meters, Smart Justice?*,

'It is often regarded as discriminatory to charge people more for an essential service, such as education, simply because it costs more to provide them with this service. For instance, it is illegal for schools— even private schools—to charge higher fees to students with intellectual disabilities and learning difficulties on the basis that it costs more to meet these students' learning needs. A school that did so would be in breach the Disability Discrimination Act 1992.'11

# Notice to customers on deployment of new electricity meters

SSMA commends the AEMC on its proposed amendment to Rule 59A (3)(b) of the National Energy Retail Rules. It is important that notices to customers about the deployment of a new meter alert customers to the fact that it will entail a power outage. Extending this subclause to add 'and of any associated supply outage' to 'the expected date and time on which the retailer proposes to replace the customer's *meter*' is a good addition.

The notice to customers of deployment of a new meter should also include information about customer rights in regard to requesting a Type 4A meter. The current lack of transparency in making this information readily available to customers particularly disadvantages some customers, such as those who do not have the means, skill or time to understand the provisions of the National Electricity and National Energy Retail Rules. This is a situation that the AEMC must address if it is serious about improving customer experience.

The notice to customers should also declare that Type 4 smart meters emit radiofrequency radiation, which has been classified as a Group 2B possible human carcinogen. This would empower customers to make their own choices about whether they wish to avoid or limit exposure to their meter's emissions and is in line with growing community expectations in regard to disclosure of information.

<sup>&</sup>lt;sup>11</sup> McGann, M. & Moss J. 2010, p. 63, *Smart Meters, Smart Justice? Energy, Poverty and the Smart Meter Rollout,* University of Melbourne, Available: https://stopsmartmetersau.files.wordpress.com/2017/10/smart\_meters\_smart\_justice.pdf

The notice to customers should also clarify precisely what data will be collected by the meter, who has ownership of this data, how it will be used and what protections are in place for consumers. Deployment of smart meters provide a funnel for gathering unprecedented amounts of data about households. Near real-time surveillance can occur and inferences can be drawn about highly personal household activities.<sup>12</sup>

SSMA is alarmed that the draft rule would both reduce the number of customer notices ahead of smart meter replacements *and* shorten the minimum notice period. This amendment serves industry by reducing installation barriers. It does not consider customer interests.

The draft determination states that, 'Retailers must provide customers with this single notice in writing or electronically'.<sup>13</sup> Communications relying on electronic means are easily overlooked or apt to go astray. SSMA is askance that a single electronic notice, which might be provided with as little as four days' notice, would be considered to be serving customer interests. SSMA recommends that a second hard copy should be given to customers who have nominated to receive notices by electronic communication.

SSMA strongly recommends that the current minimum notice period of fifteen business days should *not* be reduced to four days' notice. Power outages of any sort, including planned, have the potential to be highly disruptive for customers. Customers should be granted the maximum time possible to accommodate them.

In the case where an analogue meter is being replaced with a smart meter, it is not only the power outage which impacts customers, but also because a device with entirely new properties, that go beyond meter reading, is to be installed on a customer's property.

Customers must be given the opportunity to consider their options. Four business days does not provide sufficient time for customers to investigate what their best course of action might be and may lead to customers incurring unnecessary costs if they subsequently decide to replace a Type 4 meter with a Type 4A meter.

<sup>&</sup>lt;sup>12</sup> For instance, see 'Privacy, Smart Meters and Electricity Usage Data', a 2022 Public Information Paper from the Australian Privacy Foundation, Available: <a href="https://privacy.org.au/privacy-smart-meters-and-electricity-usage-data/">https://privacy.org.au/privacy-smart-meters-and-electricity-usage-data/</a>

<sup>&</sup>lt;sup>13</sup> AEMC April 2024, Draft rule determination National Electricity Amendment (Accelerating Smart Meter Deployment) Rule, National Energy Retail Amendment (Accelerating Smart Meter Deployment) Rule, p. 26, Available: <a href="https://www.aemc.gov.au/sites/default/files/2024-04/draft">https://www.aemc.gov.au/sites/default/files/2024-04/draft</a> rule determination - accelerating smart meter deployment.pdf

### Safety

Across the world, wherever rollouts of smart meters have occurred, people have had their health adversely affected. For some, the outcome has been catastrophic. A significant portion of this cohort is now also sensitised to other sources of anthropogenic electromagnetic radiation (EMR). Those who have been most severely affected have effectively lost their voice, unable to avail themselves of the means by which they might communicate their plight or seek help.

Using a computer, even a wired one, may be a challenge due to low frequency electrical and magnetic fields. Attending public places, with their contingent plethora of human-made frequencies, may be out of the question. 22.7% of submissions to the 2021 Premises Standards Review undertaken by Australia's Department of Industry, Science, Energy and Resources on the *Disability (Access to Premises – Building) Standards 2010* brought up electromagnetic hypersensitivity as being a factor in accessing public buildings.<sup>14</sup>

Deprivation of accessibility in these circumstances is in itself a major issue. How much worse must it be for people who are impacted within their own homes by smart meter emissions? The Physicians' Health Initiative for Radiation and Environment (PHIRE), an independent association of medical doctors and associated specialists, states on its website that, 'The mainstay of management [of electromagnetic hypersensitivity] is to avoid the EMR triggers'.<sup>15</sup>

How is this possible with smart meters? Households have agency over other devices on their property. They can switch them off. Some people turn off *all* power to their homes during sleeping hours. However, customers can't switch off smart meters. Type 4 meters emit pulsed radiofrequencies 24/7.<sup>16</sup>

<sup>&</sup>lt;sup>14</sup>Department of Industry, Science, Energy and Resources, 2021 Premises Standards Review, Key themes emerging from the review, Available: <a href="https://www.industry.gov.au/publications/premises-standards-review-2021/key-themes-emerging-review">https://www.industry.gov.au/publications/premises-standards-review-2021/key-themes-emerging-review</a>

<sup>&</sup>lt;sup>15</sup> PHIRE, Accessed 30 May 2024: https://phiremedical.org/electromagnetic-hypersensitivity-ehs/

The adverse effects of nighttime RF exposure on melatonin secretion are particulary disturbing. The nocturnal rise in melatonin levels supports the natural function of sleep, and disrupting this cycle can produce insomnia. Melatonin helps to repair damaged DNA and heal the body from other effects of oxidant stress. It's protective against the growth of cancer cells, and disruption of the circadian melatonin cycle has been shown to lead to increased tumour growth in a variety of cancer types: Dart, P., Cordes, K., Elliott, A., Knackstedt, J., Morgan, J., Wible, P. & Baker, S. 2013, *Biological and Health Effects of Microwave Radio Frequency Transmissions, A Review of the Research Literature,* A Report to the Staff and Directors of the Eugene Water and Electric Board, June 4, 2013, Executive summary, p. i, Available: <a href="http://www.national-toxic-encephalopathy-foundation.org/wp-content/uploads/2012/01/Biological and Health Effects of Microwave Radio Frequency Transmissions.pdf">http://www.national-toxic-encephalopathy-foundation.org/wp-content/uploads/2012/01/Biological and Health Effects of Microwave Radio Frequency Transmissions.pdf</a>

As shown by a technical study commissioned by the Victorian government, smart meter emissions can represent the dominant radiofrequency exposure source within the home.  $^{17}$  The study covered three different smart meter communication technologies. Emissions from six  $3G^{18}$  smart meters were measured, with one of them found to be emitting an average of 176,201 microwave pulses per hour.  $^{19}$ 

Written evidence submitted to the UK Parliament in 2013 attested to the fact that the pulsed radiation from smart meters has resulted in thousands of health complaints worldwide. More than 10,000 health-related complaints were submitted to the California Public Utilities Commission alone, and included personal testimonies from medical doctors, psychotherapists and nurses regarding their own symptoms.<sup>20</sup>

Courts, such as in France, have been ordering the removal of smart meters for medical reasons. For instance, in July 2019, a court demanded the removal of smart meters in 13 households and that electricity be delivered without the device. In November 2023 the Court of Appeal in Lyon upheld a ruling ordering the removal of a smart meter in regard to a man claiming to be suffering from headaches.

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<sup>&</sup>lt;sup>17</sup> Total Radiation Solutions 2015, *Quantifying Smart Meter RF EME Levels in Victorian Homes*, p. 18. This result assumes greater significance because it was not only considering radiofrequency radiation in the microwave spectrum, such as pulsed emissions from smart meters, but also included lower radiofrequencies, such as from TV and FM radio. Available: <a href="https://stopsmartmetersau.files.wordpress.com/2019/04/ami quantifying smart meter rf eme levels in victorian homes 2015-2.pdf">https://stopsmartmetersau.files.wordpress.com/2019/04/ami quantifying smart meter rf eme levels in victorian homes 2015-2.pdf</a>

<sup>&</sup>lt;sup>18</sup> SSMA notes that 3G modems on existing smart meters are currently being replaced with 4G modems ahead of the decommissioning of 3G networks. (Victorian power distributors primarily rely on mesh smart meter communications, rather than 3G/4G networks, as occurs in other NEM jurisdictions.)

<sup>&</sup>lt;sup>19</sup> Ibid. p. 80.

<sup>&</sup>lt;sup>20</sup> Stop Smart Meters! 2013, Written evidence provided to the Energy and Climate Change Committee, UK Parliament, *Parliamentary business, Publications & records*, Available: <a href="http://www.publications.parliament.uk/pa/cm201314/cmselect/cmenergy/161/161vw107.htm">http://www.publications.parliament.uk/pa/cm201314/cmselect/cmenergy/161/161vw107.htm</a>

<sup>&</sup>lt;sup>21</sup> The Connexion, 31 July 2019, French court rules against Linky for health reasons, Available: <a href="https://www.connexionfrance.com/news/french-court-rules-against-linky-for-health-reasons/384997">https://www.connexionfrance.com/news/french-court-rules-against-linky-for-health-reasons/384997</a>

<sup>&</sup>lt;sup>22</sup> Ibid, 27 December 2023, Available: <a href="https://www.connexionfrance.com/news/court-orders-removal-of-mans-linky-electricity-meter/608682">https://www.connexionfrance.com/news/court-orders-removal-of-mans-linky-electricity-meter/608682</a>

Hundreds of Australians have reported to SSMA a variety of adverse symptoms, some of which have been life-threatening, as a result of exposure to smart meter emissions. This cohort is viewed as being the 'tip of the iceberg'. The majority of the population and medical fraternity have no previous experience, nor training, in identifying biological changes as a result of increased radiation exposure and are unlikely to link the rollout of smart meter technology with the symptoms which have been triggered. Emissions from smart meters appear to have caused the exacerbation of existing symptoms, as well as triggering new symptoms in parts of the population that had not previously exhibited sensitivities to wireless technology.

A PubMed-listed, peer-reviewed study titled *Self-reporting of Symptom Development from Exposure to Radiofrequency Fields of Wireless Smart Meters in Victoria, Australia: A Case Series* hypothesises that 'some people can develop symptoms from exposure to the radiofrequency fields of wireless smart meters'.<sup>23</sup> David O. Carpenter, MD, director of the Institute for Health and the Environment at the State University of New York at Albany's School of Public Health, a Collaborating Centre of the World Health Organization, and author of more than 450 peer-reviewed studies, referred to Dr Lamech's report in a paper titled *Excessive Exposure to Radiofrequency Electromagnetic Fields May Cause the Development of Electrohypersensitivity*. Dr Carpenter contends that the Lamech report provides support for the possibility that a sudden increase in RF exposure results in electrohypersensitivity (EHS), and 'raises the important question of what characteristics of smart meters, compared with other sources of RF, may be responsible for provoking EHS'.<sup>24</sup>

The retention of the right to select a Type 4A (non-communicating) smart meter is a positive step. However, this offers cold comfort to those customers who have little choice but to be in close proximity to a neighbour's Type 4 smart meter. SSMA has heard countless heartbreaking stories from people, particularly from those living in a block of units who have been affected by a bank of transmitting meters lining the outside of one of their own walls. This is a particular issue when the wall is a bedroom wall. Children have had to be relocated and parents have ended up sleeping in the lounge, instead of their own bedrooms.

The Determination states that in the Review the 'Commission recommended that governments consider financial support options to encourage remediation, particularly for

https://www.researchgate.net/publication/269184131 Excessive Exposure to Radiofrequency Electromagnetic Fields May Cause the Development of Electrohypersensitivity

<sup>&</sup>lt;sup>23</sup> Lamech, F. 2014, Self-reporting of Symptom Development from Exposure to Radiofrequency Fields of Wireless Smart Meters in Victoria, Australia: A Case Series, p. 38, *Altern Ther Health Med. 2014 Nov;20(6):28-39*, Available: <a href="http://www.ncbi.nlm.nih.gov/pubmed/25478801">http://www.ncbi.nlm.nih.gov/pubmed/25478801</a>

<sup>&</sup>lt;sup>24</sup> Carpenter, D. O. 2014, Excessive exposure to radiofrequency electromagnetic fields may cause the development of electrohypersensitivity, *Altern Ther Health Med. 2014 Nov-Dec;20(6):40-2*, Available:

vulnerable customers', where there are site defects that prevent the installation of a smart meter as 'A customer cannot be compelled to remediate their site'. SSMA asks that the Commission makes a similar recommendation to government where people are being impacted by other customers' radiating meters. Moving electricity meters is a costly exercise. SSMA members in Victoria (where non-communicating meters are not provided as an option) have outlaid sums reaching more than \$10,000 to relocate their own meters in order to reduce exposure to emissions. It should not fall on individual customers, especially vulnerable ones, to remediate sites where lax building regulations have allowed meters to be placed on the perimeter of walls, in particular bedrooms.

Type 4A meters, although a significant improvement on Type 4 meters, are not a panacea. All electronic meters have the capacity to create 'dirty' electricity (noise voltages) if unwanted frequencies are not filtered. These frequencies, which ride along (in Australia) 50 Hz waves, are not only capable of damaging electronic equipment but also may cause adverse health effects.

Measurements of two different types of smart meters that were conducted in Germany at Bajog, a leading manufacturer of measurement instruments, revealed that the meters 'produce relatively large amounts of noise voltages in a very wide frequency range'.<sup>25</sup> The authors of *Smart Meters, Dirty Electricity, Pulses and Health*, a Norwegian publication, state that, 'It seems reasonable to assume that this noise alone is enough for some people to get acute health problems from Aidon AMS meters – *even after the radio module has been removed...'*.<sup>26</sup>

SSMA asks that the Commission consider how it might be possible to require similar assessments about smart meters deployed in the NEM to be made available to the general public. These measurements should, in particular, show what noise patterns looks like when there are large numbers of meters installed in the same neighbourhood or on a common transformer from the same manufacturer.

# Security of supply of electricity

Research undertaken at Oregan State University shows one of the ways that hackers can use smart meters to destabilise electricity grids. The paper, which was published in IEEE Access, points out that increased smart meter deployments increase the likelihood of cybersecurity

<sup>&</sup>lt;sup>25</sup> Flydal E. & Else Nordhagen E. 2023, *Smart meters, dirty electricity, pulses and health*, pp. 124-126, Foreningen for EMF-reform, Available: PDF downloadable at https://bit.ly/45fKV3c)

<sup>&</sup>lt;sup>26</sup> Ibid, p. 125.

breaches. The particular attack method that the researchers investigated could involve very few meters.<sup>27</sup>

A 2017 report titled, 'Smart Meters: What does a connected house really mean?' from the University of Canberra's Centre for Internet Safety states that, 'Like all computers, smart meters are also vulnerable to malware attacks', pointing to researchers who have devised 'a worm capable of rapidly spreading from one infected AMI smart meter in a home to another, eventually infecting a whole neighbourhood and plunging it into darkness'. <sup>28</sup>

Clearly, smart meters offer unparalleled opportunities for bad actors to devise new ways in which they might disrupt the supply of electricity to consumers. Given that even Australia's most trusted institutions have failed to protect customer interests, how might electricity customers fare any better? It would seem that it is not a question of if, but when, this might occur with an increasing deployment of smart meters.

## Reducing greenhouse emissions

The Commission sees smart meter data as being necessary for 'an orderly transition to net zero'. Has the Commission considered the amount of energy that is required to collect data and then subsequently store this data? As pointed out in a 2023 report from the UTS Institute for Sustainable Futures (ISF) in partnership with Pure Storage, data centres are significant users of energy, mainly because they use energy for cooling. <sup>29</sup> The report poses the question that, 'as data centres energy demand rises, do we risk instability of Australia's energy grid (which is happening in Ireland), that could result in a serious conundrum on extreme heat days; do we cool our data centres or cool our homes?'.

It is unfortunate that the proposed means to tame greenhouse gases is, in itself, contributing to emissions. SSMA trusts that the Commission has and continues to carefully consider the ramifications of gathering ever-increasing amounts of data.

https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=10098782&tag=1

 $\underline{07/Pure\%20Storage\%20 and\%20 Institute\%20 of\%20 Sustainable\%20 Futures\%20 Report.pdf$ 

<sup>&</sup>lt;sup>27</sup> Alanazi F., Kim J. & Cotilla-Sanchez, E. 2023, *Load Oscillating Attacks of Smart Grids:Vulnerability Analysis*, IEEE Access, Available:

<sup>&</sup>lt;sup>28</sup> Centre for Internet Safety 2017, *Smart Meters: What does a connected house really mean?*, Available: <a href="https://stopsmartmeters.com.au/wp-content/uploads/2019/10/smart-meters">https://stopsmartmeters.com.au/wp-content/uploads/2019/10/smart-meters</a> final.pdf

<sup>&</sup>lt;sup>29</sup> Noble, G. Atherton, A and Berry, F. 2023, *Data Centre sustainability in Australia*, Report for Navigate Corporate Affairs Pty Ltd (acting for Pure Storage, Inc.), Prepared by the Institute for Sustainable Future (ISF), University of Technology Sydney, July 2023. Available: https://www.uts.edu.au/sites/default/files/2023-

#### Social licence

Maintaining social licence for the smart meter acceleration program has been flagged as an important consideration in the draft rule. This is at odds with the draft rule's provision that retailers must use their best endeavours to meet interim targets and, moreover, will suffer financial penalties if a final target of universal penetration is not met on 30 June 2030.

The directive for Victorian power distributors to use their 'best endeavours' to install smart meters in Victoria led to unprecedented threats and bullying of customers by installers.

A few of the stories that people related to SSMA are in the following post:

https://stopsmartmeters.com.au/2013/10/09/this-abuse-of-our-rights-has-to-stop-now/

SSMA fails to see how social licence might be retained if the Commission insists on placing these constraints on retailers.

#### **Concluding comments**

SSMA recommends that the deployment of smart meters be de-accelerated rather than accelerated. At the very least, all customers should have the right to either retain an electro-mechanical accumulation meter or request one as a replacement meter. A solution also needs to be found for the vexed issue facing people who are hosting a neighbour's smart meter on the adjoining wall of their own property.

People's lives matter. It beggars belief that the AEMC would promote amendments that, rather than adding to the greater good, will have the unintended effect of causing abject misery for some members of the community.

We hope that the Commission will carefully consider our recommendations.

Yours sincerely

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