

<http://smartmeterharm.org/2017/08/12/senate-bill-649-strikes-at-electric-grid/>

## Senate Bill 649 strikes at the electric grid, with utility workers in the crosshairs

by Nina Beety  
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The electrical grid can be crippled by several methods, including physical attack, hacking, solar electromagnetic pulses, and by disabling utility workers. This last method is a consequence of California's Senate Bill 649<sup>i</sup> and other 5G/"small cell" tower initiatives<sup>ii</sup> if they are adopted.

Under SB 649 and these initiatives, utility poles, light poles, traffic signals, and "vertical infrastructure" will be converted into cell towers. Cell towers will also be installed on public property including parks. Local regulatory authority will be virtually eliminated. Once these bills pass, the public will have no voice, and there will be cell towers on every block.

Microwave radiofrequency electromagnetic radiation is sensitizing and irritating. A single exposure can injure and sensitize a person, causing disabling health effects.<sup>iii</sup> Repeated exposure increases the likelihood of injury and disability. Electromagnetic sensitivities (EMS) were recognized in California by 1998<sup>iv</sup> and by the U.S. Federal Access Board in 2002, which issued a report on accommodating those with disabling EMS in 2005.<sup>v</sup>

Under SB 649, utility workers will work on and around these de facto cell towers every day.<sup>vi</sup> Research has found cancer clusters up to ¼ mile away from cell towers, but these workers will work within the envelope of highest microwave exposure and in the beam of the antennas. Wireless companies don't turn off power to cell towers when workers are present, and two national surveys also found that cell towers even frequently exceed FCC limits.<sup>vii</sup> Workers' exposure will routinely exceed FCC occupational exposure limits, which is based on a single 30 minute exposure not causing tissue heating. Cumulative, long-term, and non-thermal effects are not considered in FCC exposure guidelines.<sup>viii</sup> In addition, future 5G frequencies are used in military active denial systems and intensely absorbed by sweat ducts, causing acute burning pain.<sup>ix</sup>

Based on the research on microwave exposure, utility workers will be at extreme risk for cancers and tumors, cardiac problems including heart rhythm disturbances, DNA damage, changes in their blood, cellular stress and damage, breaches in the blood-brain barrier, neurological damage, brainwave changes and cognitive impacts, strokes, fertility impacts including having children with birth defects, electromagnetic sensitivity (EMS), seizures, blackouts, and what Europeans researchers call "burnout".<sup>x</sup> They will likely experience nausea and vomiting, dizziness, headaches and migraines, vision problems including cataracts, insomnia, difficulty concentrating and remembering, impaired immunity, pain, ringing in their ears and other hearing problems, hair loss, and

weakness and fatigue. The international literature from scientists and health care professionals is extensive.<sup>xi</sup> Last year the NIH National Toxicology Program announced significant carcinogenic effects from cellphone exposure levels after only two years of exposure -- malignant brain tumors and heart tumors, and precancerous lesions, as well as DNA damage.<sup>xii</sup> Utility workers will have much greater exposure on a daily basis.

If utility workers start becoming impaired and then disabled, what happens? How much job loss can utility companies absorb before vital maintenance and repair work is jeopardized?

Six firefighters living under a cell tower were studied in 2004.<sup>xiii</sup>

Each of the men who had their brains scanned showed a hyper-excitability of the neurons, or brain cells. This is considered to be a precursor to early cell death and potentially early onset Parkinson's, ALS, and Alzheimer's. Now, 8 years later, two of the men have had psychotic breaks with reality and all are suffering from memory impairment. All the men tested in 2004 had tremors, and some were still in their 20's.

These firefighters, among the least likely to admit pain or disability, after cell tower activation reported:

- mental confusion and difficulty concentrating
- lack of focus and motivation
- memory loss
- mood swings including depression, anger
- sleep disruption and lack of alertness
- chronic headaches
- vertigo
- ringing in the ears

They weren't working on cell towers. They weren't subjected to the intense daily exposure which utility workers will face under SB 649. But as a result of that study, firefighters internationally adopted a resolution calling for no more cell towers on their fire houses,<sup>xiv</sup> and they got an exemption from SB 649 "small cell" towers on their facilities. All of this because of the health hazards.

There will be no rest and recovery time for utility workers when they are off-duty. "Small cell" towers would be on the utility poles next to their homes. They will have 24/7/365 exposure and no escape. This will also put them at risk of developing disabling sensitivities from ordinary household current. That would be devastating for them and their families and could lead to homelessness.

It takes 3-5 years to train an electrical utility worker.<sup>xv</sup> This is a demanding and highly skilled profession. If workers become disabled or decide to take early retirement, there is no quick or easy replacement. How long before essential grid maintenance and repair

would fall behind, and power outages and dangerous conditions on the grid increase? What happens when weather or disasters cause large power outages if there are too few workers to repair the damage?

From the moment “small cell” towers on utility poles are activated, long-term consequences begin, and they cannot be easily fixed. Additional proposals to put broadband over powerlines would increase hazards and exposure. How much attrition of highly trained electrical workers can California’s grid tolerate, before utility companies cannot safely and reliably maintain power to our communities and to industry?

In the event of labor shortages, unqualified personnel would be rushed to fill vacancies, resulting in safety problems and accidents. Brownouts and extended power outages would result from a lack of qualified personnel. Coping with larger disasters could be impossible.

The end result would be huge social costs and a crippled economy due to an increasingly unreliable grid. Businesses would then flee California.

Industry claims billions in benefits and attraction of business to California. This is pure fiction. The hard reality is potentially trillions of dollars in costs and damage.

The costs of a crippled grid and a crippled economy cannot really be quantified. The financial costs to the state from disabled workers would include workers compensation, state and federal disability payments, unemployment, health care, re-training, rehabilitation, the costs of birth defects in workers’ children, medical expenses, shielding materials, and food stamps for the former workers who in many cases would sink toward poverty. There will be substantial disabling impacts to the general public and associated costs as well. The liability<sup>xvi</sup> issues will create winnable lawsuits – an enormous cost for the state -- because officials rushed into this despite many warnings on the record, did not exercise due diligence or careful deliberation, disregarded federal and state recognition of potential injury and electromagnetic disability, and ignored the science. Cities and counties may be on the hook because the “small cells” are part of their infrastructure, and hence, their liability issue.

Can Californians financially, socially, and economically bear this experiment on their bodies and their future? What would California look like if the impacts were immediate and dramatic?

Unions should be bitterly opposed to this threat to workers, and utility companies should be fiercely against this threat to grid safety and their profits. The Departments of Energy, Commerce, and Homeland Security should demand an immediate halt to this threat to our safety, security, and economy.

Even wireless executives and their marketing firms want their lights on. They want to heat and cool their homes and have their refrigerators, stoves, washers and dryers, and TVs operate. Their insatiable drive for power, money, and real estate has created a

great wall of denial, and they believe their own PR. But at the end of the day, they want their electricity on, too. Will their denial last until the power goes out and stays out? By then, it would be too late.

SB 649 is being rushed through the legislature, and it has one final committee hearing August 23 before a full Assembly vote. The California Senate already approved the bill. Wined, dined, and bribed with perks and campaign donations, agency officials and elected officials are incentivized to ignore realities.<sup>xvii</sup>

If SB 649 passes, CTIA – the wireless industry’s lobbying arm – and its corporate allies will create a wave of disastrous consequences that terrorists have only dreamed about, including disrupting the grid. This massive betrayal is a treasonous act, committed by those addicted to money and power, and indifferent to all else.

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