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The Honorable Ben Hueso  
California State Senate, District 40  
State Capitol Building, Room 4035  
Sacramento, CA 95814

RE: SB 649 Wireless and Small Cell Telecommunications Facilities

**Oppose**

Dear Senator Hueso,

EMF Safety Network (Network) and Ecological Options Network (EON) respectfully oppose SB 649 regarding wireless telecommunications facilities.

Network was founded in 2009, and is a coalition of business and property owners, and utility customers. We provide public education on health, environmental, and safety impacts associated with electromagnetic fields (EMFs) and wireless radiation (RFR) and offer resources in support of public policy change. We have participated in formal proceedings on utility smart meters at the California Public Utilities Commission (CPUC) since 2010.<sup>1</sup>

Ecological Options Network, founded in 2003, is a 501 (c) (3) organization that networks with utility customers and organizations to empower policy protecting health, environment and consumer rights.<sup>2</sup>

International scientists and doctors advise reducing EMFs and RFR exposure to protect public and environmental health. Many people are already suffering because of RFR, a proliferating

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<sup>1</sup> EMF Safety Network website: [www.emfsafetynetwork.org](http://www.emfsafetynetwork.org)

<sup>2</sup> Ecological Options Network website: <http://www.eon3.net/>

pollutant, in our 21st Century environment. 5G millimeter wave technology is scientifically shown to affect humans, penetrating the skin and affecting biological systems. Millimeter wave technology has been developed as a crowd control weapon which causes acute burning pain, as if the body is on fire.

We have learned over the past decade of our work that neither the CPUC, nor the Federal Communications Commission (FCC) can be relied on to serve the public interest because they are both regulatory captured agencies.

We strongly oppose attempts to expedite this, or any widespread RFR deployment which will thwart the public's right to participate in local decisions. The public has a constitutional right to protect their homes, health, and privacy from this involuntary onslaught of RFR exposure.

A "small cell" deployment may sound better than the current system of cell towers, however this deployment will not replace towers, but be in addition to, substantially adding to an already oversaturated and polluted environment.

**Independent scientific studies show harmfulness of wireless radiation on public health.**

Wireless disrupts cellular communication, damages immune and nervous systems, desynchronizes brain and heart rhythms, and causes headaches, sleep problems, tinnitus, anxiety and a host of other health problems.

- In 2011, wireless radiation was classified as a possible (2b) carcinogen by the International Agency for Research on Cancer at the World Health Organization.<sup>3</sup>
- The National Toxicology Program published a 25 million dollar study which is one of the largest and most comprehensive studies on cell phone radiation and cancer. In the study the rats exposed to cell phone radiation developed two types of cancers, glioma, a brain tumor, and schwannoma, a tumor in the heart. The summary includes, "*Given the widespread global usage of mobile communications among users of all ages, even a very small increase in the incidence of disease resulting from exposure to RFR could have broad implications for public health.*"<sup>4</sup>

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<sup>3</sup> [http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208\\_E.pdf](http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf)

<sup>4</sup> <http://ntp.niehs.nih.gov/results/areas/cellphones/index.html>

- 224 scientists have signed the International EMF Scientist Appeal: *“We are scientists engaged in the study of biological and health effects of non-ionizing electromagnetic fields (EMF). Based upon peer-reviewed, published research, we have serious concerns regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices. These include—but are not limited to—radiofrequency radiation (RFR) emitting devices, such as cellular and cordless phones and their base stations, Wi-Fi, broadcast antennas, smart meters, and baby monitors as well as electric devices and infra-structures used in the delivery of electricity that generate extremely-low frequency electromagnetic field (ELF EMF).”*<sup>5</sup>

- The BioInitiative Report updated in 2012, prepared by 29 authors from ten countries, reviewed 2000 studies and conclude, *“EMF and RFR are preventable toxic exposures. We have the knowledge and means to save global populations from multi-generational adverse health consequences by reducing both ELF and RFR exposures. Proactive and immediate measures to reduce unnecessary EMF exposures will lower disease burden and rates of premature death.”*<sup>6</sup>

- An analysis of studies on millimeter waves (MMWs) “State of knowledge on biological effects at 40–60 GHz”<sup>7</sup> states, *“At the cellular level, it stands out from the literature that skin nerve endings are probably the main targets of MMWs and the possible starting point of numerous biological effects.”* Effects reviewed include effects on capillaries and nerve endings, protein insults, epigenetic regulation, and the risk of homeostasis disruption, which would have dramatic consequences.

### **Independent scientific studies show harmfulness of wireless radiation on nature.**

- The US Department of the Interior states wireless radiation threatens birds, and they criticize the FCC’s radiation safety guidelines stating, *“the electromagnetic radiation*

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<sup>5</sup> <https://www.emfscientist.org/>

<sup>6</sup> [www.bioinitiative.org](http://www.bioinitiative.org)

<sup>7</sup> C. R. Physique 14 (2013) 402–411

*standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today.*” Two hundred forty one bird species are at mortality risk from both tower collisions and from exposure to the radiation towers emit. This includes birds that are endangered or threatened, Birds of Conservation Concern, migratory birds, and eagles. Studies of radiation impacts on wild birds documented nest abandonment, plumage deterioration and death. Birds studied included House Sparrows, White Storks, Collared Doves, and other species. Studies in laboratories of chick embryos documented heart attacks and death.<sup>8</sup>

- Scientists in Germany studied tree damage in relation to electromagnetic radiation from 2006-2015. They monitored, observed and photographed unusual or unexplainable tree damage, and measured the radiation the trees were exposed too. *“The aim of this study was to verify whether there is a connection between unusual (generally unilateral) tree damage and radiofrequency exposure.”* They found significant differences between the damaged side of a tree facing a phone mast and the opposite side, as well as differences between the exposed side of damaged trees and all other groups of trees in both sides. They found no tree damage in low radiation areas. The scientists concluded, *“Statistical analysis demonstrated that electromagnetic radiation from mobile phone masts is harmful for trees.”*<sup>9</sup>

- Studies show insects are harmed by radiation: Food collection and response to pheromones in an ant species exposed to electromagnetic radiation found exposure to radiation caused colony deterioration and affected social insects’ behavior and physiology.<sup>10</sup> Oxidative and genotoxic effects of 900 MHz electromagnetic fields in the earthworm concluded radiation caused genotoxic effects and DNA damage in earthworms<sup>11</sup>.

- Mobile Phone Induced Honey Bee Worker Piping. The study abstract states, *“The*

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<sup>8</sup> Dept of Interior letter and background: [http://www.ntia.doc.gov/files/ntia/us\\_doi\\_comments.pdf](http://www.ntia.doc.gov/files/ntia/us_doi_comments.pdf)

<sup>9</sup><https://www.ncbi.nlm.nih.gov/pubmed/27552133?dopt=Abstract#>

<sup>10</sup> <https://www.ncbi.nlm.nih.gov/pubmed/23320633>

<sup>11</sup> <https://www.ncbi.nlm.nih.gov/pubmed/?term=23352129>

*worldwide maintenance of the honeybee has major ecological, economic, and political implications.*” Cell phone RFR was tested for potential effects on honeybee behavior. Handsets were placed in the close vicinity of honeybees and the sound made by the bees was recorded and analyzed. The information revealed that active cell phone handsets induced the bees worker piping signal. *“In natural conditions, worker piping either announces the swarming process of the bee colony or is a signal of a disturbed bee colony.”*

### **The CPUC cannot be relied on to protect the public’s interest.**

In 2013 the City of Sebastopol passed an urgency ordinance banning smart meter installation because they are a threat to health, safety and community welfare.<sup>12</sup> A dozen other California cities also passed similar laws. The CPUC failed to adequately regulate the safety of smart meters, because they are a regulatory captured agency. The President of the CPUC, Michael Peevey, knew smart meters were causing people pain. He wrote to PG&E, *“There really are people who feel pain, etc., related to EMF, etc., and rather than have them becoming hysterical, etc., I would quietly leave them alone.”*<sup>13</sup> Even though Peevey knew this, he abetted PG&E’s pay to opt-out extortion scheme, and delayed CPUC regulation<sup>14</sup>, which is an unlawful response to smart meter problems, including privacy and property rights, radiation health risks, fire hazards<sup>15</sup>, and co-located meters.

### **The FCC is not protecting public health, safety or environment**

On October 30, 2013 Network submitted comments on FCC proceedings 13-84 and 03-137 which remain incomplete by the FCC. The FCC has not updated its wireless exposure guidelines since 1996. Meanwhile there has been an explosion of wireless devices in homes across America, and forced deployment of radiation on the general population. For example: cell towers, cell and cordless phones, wi-fi, wireless computers and printers, ipads in schools, smart

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<sup>12</sup> Chapter 8.58 SMART METERS (TEMPORARY MORATORIUM ON THE INSTALLATION OF SMART METERS) <https://goo.gl/49n4Yf>

<sup>13</sup> CPUC President Peevey to PG&E’s Brian Cherry: [ftp://ftp2.cpuc.ca.gov/PG&E20150130ResponseToA1312012Ruling/2010/09/SB\\_GT&S\\_0000529.pdf](ftp://ftp2.cpuc.ca.gov/PG&E20150130ResponseToA1312012Ruling/2010/09/SB_GT&S_0000529.pdf)

<sup>14</sup> Overview of PG&E/CPUC emails on smart meters <https://goo.gl/AzfMQU>

<sup>15</sup> Summary of Evidence on Smart Meter Fires: <https://goo.gl/ZQQH64>

meters, and smart grid. This rampant wireless explosion is set to get much worse with 5G millimeter wave deployment, Internet of Things, Smart Cities, and radar in all new cars. The federal government has taken sole responsibility for the radiation safety of personal wireless service deployment,<sup>16</sup> however, no federal agency is acting responsibly, or taking accountability for protecting the public and the environment from the health effects of radiation exposure. The FCC is criticized by investigative journalist Norm Alster in a report published by Harvard University. Captured agency: How the Federal Communications Commission is dominated by the industries it presumably regulates.<sup>17</sup> Alster calls on the FCC to acknowledge there may be wireless health risks, to back off wi-fi promotion, to acknowledge children and pregnant women may be more vulnerable and more. He writes, *“Personally, I don’t believe that just because something can be done it should heedlessly be allowed. Murder, rape and Ponzi schemes are all doable but subject to prohibition and regulation. Government regulators have the responsibility to examine the consequences of new technologies and act to at least contain some of the worst. Beyond legislators and regulators, public outrage and the courts can also play a role but these can be muffled indefinitely by misinformation and bullying.”*

### **California Environmental Quality Act (CEQA) laws apply**

The deployment of a denser “small cell” antenna system is a major change to the environment, not a minor one, and therefore subject to CEQA laws. There is no substantial evidence to support SB649’s determination that the deployment fits the CEQA exemption. There is substantial evidence in support of a fair argument that the project may create environmental impacts. Whenever it can be fairly argued on the basis of substantial evidence that there is a reasonable possibility that a project may have a significant effect on the environment, an exemption is not proper.

### **Telecoms’ interests do not outweigh local municipal, county and state jurisdiction**

Mobilitie, a Telecommunications company installing “small cell” petitioned the FCC claiming,

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<sup>16</sup> 47 U.S.C. § 332(c)(7); 47 C.F.R. 1.1307(b) and 1.1310, which are based on perceived harm of overheating of human tissues by RF radiation.

<sup>17</sup> <http://bit.ly/FCCcaptured>

*“Robust deployment of wireless facilities and networks demonstrably serves the public interest...”*(Petition p.2)<sup>18</sup> Contrary to Mobilitie’s assumptions, not all Americans want their homes, neighborhoods, towns, and rural country-sides to be polluted with millimeter waves so some people can have faster wireless service. On the contrary, the deployment serves the unbounded profit motive of telecom corporations. What is in the best public interest is to avoid unnecessary RFR exposures. There is a growing movement of educated Americans who are aware of cancer and other health risks associated with RFR. In California tens of thousands of utility customers have refused, or opted out of smart meters. Significant percentages of people, those already sickened, and those trying to avoid being injured, adamantly oppose being involuntarily exposed to more radiation for benefit of telecommunications profits.

Mobilitie writes, *“The Commission has found that all consumers require wireless broadband to have true and meaningful access to the Internet.”*(Petition pg.4) If the Commission found this to be true they are wrong, because wireless is not required in order to access the internet. True and meaningful access to the internet includes speed and security which is primarily provided by fiber optic and/or wires.

On July 14, 2016 FCC Commissioner Jessica Rosenworcel stated during her approval of 5G millimeter wave deployment, ***“By law and tradition we honor local control in this country.”***<sup>19</sup> SB 649 should be opposed because it will dishonor and impede local control and deliberately thwart public participation. In light off the FCC’s commitment to honor local control, Network and EON support the comments of The League of California Cities who state SB 649, *“unnecessarily and unconstitutionally strips local authority over public property and shuts out public input and local discretion by eliminating consideration of the aesthetic and environmental impacts of “small cells.”*

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<sup>18</sup> Mobilitie Petition <http://narc.org/wp-content/uploads/Mobilitie-253-Petition-AS-FILED-c1-c1.pdf>

<sup>19</sup> At 19: 27 <https://www.fcc.gov/news-events/events/2016/07/july-2016-open-commission-meeting>

Comments recently submitted to the FCC by cities in the state of Washington<sup>20</sup> illustrate the problem with expediting “small” cell deployment. They write, “*Mobility, on the other hand, proposes to construct not only small cell facilities in the public right-of-way but also macro facilities. Macro facilities are proposed by Mobilitie to be up to 120 feet tall with a four foot six inch base. This diameter is slightly smaller than a round table seating eight people. Placing these facilities on sidewalks and in other parts of the public rights-of way will likely violate ADA requirements. Further, even the small cell facilities that are proposed by Mobilitie are often on new poles in the public rights-of-way rather than on existing infrastructure.*”

**For the above stated reasons, Network and EON oppose SB649.**

Respectfully submitted on March 26, 2017:

/s/ \_\_\_\_\_

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<sup>20</sup> <https://ecfsapi.fcc.gov/file/10306236839591/1554923.PDF>