

JAN 17 2020

A BILL FOR AN ACT

RELATING TO 5G.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. 5G refers to fifth-generation wireless
2 technology intended to provide faster and higher capacity
3 transmissions to carry the massive data load generated by smart
4 devices, the Internet of Things, robotics, artificial
5 intelligence, driverless cars, and other machine-to-machine
6 connections.

7 Consumers have expressed concern about possible health
8 effects of radiation in everything from microwaves to cellphones
9 for many years, prodded by claims that radio airwaves cause
10 cancers, reduced fertility, depression, headaches in children,
11 and other illnesses.

12 There are additional concerns that are specific to 5G, due
13 to the super high-frequency millimeter wavelengths used. These
14 concerns have been expressed by government officials in foreign
15 countries, numerous cities and municipalities in the United
16 States, experts, consumer and public health activists, and
17 private citizens. These voices have urged caution, further



1 research, enhanced monitoring, and in some cases, a moratorium
2 on the deployment of 5G.

3 Although 5G is expected to use some of the same frequency
4 bands that previous generations of wireless have used, including
5 low-band 600MHz and mid-band 2.5GHz, 3.5GHz, and 3.7-4.2GHz
6 bands, the Federal Communications Commission has already
7 auctioned off airwaves in the 24GHz and 28GHz bands, and is in
8 the process of auctioning off licenses in the 37GHz, 39GHz, and
9 47GHz bands for use in 5G.

10 Because signals transmitted over millimeter waves are
11 limited in range and cannot penetrate obstacles like walls or
12 even leaves on trees, networks using these frequencies will
13 require radios on every city block, versus 4G infrastructure
14 that transmits signals over miles. Therefore, 5G will require up
15 to five times the amount of infrastructure that 3G or 4G
16 deployment requires. Furthermore, there is limited research on
17 the effects of radiation of these higher frequency bands.

18 The United States Department of Defense sponsored some
19 studies in the late 1990s and early 2000s looking at the use of
20 millimeter wavelengths as a non-lethal weapon. The Institute of
21 Electrical and Electronics Engineers has used this research to



1 set safety limits for the use of 5G millimeter waves. The
2 Federal Communications Commission uses guidance from the
3 Institute of Electrical and Electronics Engineers to establish
4 appropriate levels of radio frequency exposure. Nevertheless, a
5 member of the Institute of Electrical and Electronics Engineers'
6 standards committee for setting radio-frequency exposure limits
7 has said that "we need more systematic reviews of the existing
8 research and more well-done studies focusing on health-related
9 endpoints" regarding exposure to millimeter wavelengths.

10 While 5G promises faster speeds and the ability to power
11 diverse new technologies, concerns about its potential adverse
12 health hazards have yet to be fully addressed. Regulatory
13 frameworks may be outdated, as well. For example, the Federal
14 Communications Commission has not updated its cellphone safety
15 standards since 1996. Contemporary lawmakers run the risk of
16 authorizing the deployment of a 21st century technology to be
17 operated according to 20th century safety standards.

18 Therefore, the purpose of this Act is to establish a
19 moratorium on the deployment of 5G until a definitive research
20 base exists finding that 5G poses no significant public health
21 hazard.

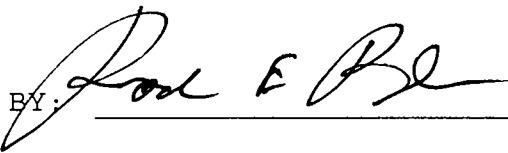


S.B. NO. 2460

1 SECTION 2. 5G shall not be deployed in this State until
2 the department of health certifies that a definitive research
3 base exists finding that 5G poses no significant public health
4 hazard.

5 SECTION 3. This Act shall take effect upon its approval.

6

INTRODUCED BY: 



S.B. NO. 2460

Report Title:

5G Technology; Deployment; Health Hazards

Description:

Prohibits the deployment of 5G in the State until a definitive research base exists finding that 5G poses no significant public health hazard.

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