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Subject: What Smart Grid and Broadband really are, and the health risks the 2045 General Plan does NOT explain
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I apologize for my ignorance. I am new to researching, and trying to understand what the Hawai'i Planning Department wants to do in its 2045 General Plan is extremely hard because they don't make their plan clear for the average person to understand.

I mentioned that Broadband and Smart Grid were Wi-Fi; they are not. I apologize for my misunderstanding. Researching is challenging. I've found what these really are, and I've included links to where I found my information.

Please read the last links below. They discuss the health risks and give examples of what has happened worldwide.

In the **2045 General Plan page 149 30.12 Plan for broadband infrastructure to support smart grid development**: <https://www.planning.hawaiicounty.gov/home/showpublisheddocument/308136/638597487229830000>

<https://www.geeksforgeeks.org/difference-between-wi-fi-and-broadband/> :

"Difference Between Wi-Fi and Broadband

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:

What is Wi-Fi

Radio frequencies and signals are utilized by **Wi-Fi** technology to transmit and receive data wirelessly between two devices. Wi-Fi can be thought of as a wireless method of accessing broadband. The two frequency bands that all Wi-Fi connections operate on are 2.4 GHz and 5 GHz. Whereas the 5Ghz frequency range is used for shorter distances and higher bandwidth, the 2.4Ghz frequency band is used for longer distances.

What is the process of a Wi-Fi connection?

All Wi-Fi connections operate in two easy steps: sending and receiving data on the 2.4 and 5 GHz frequency bands. Initially, your modem and router get a request to access the internet in order to retrieve data. After that, the modem sends the desired response back to the router. The information is then wirelessly transmitted back to the device by the router.

What is broadband

Broadband data transmission is represented by a large bandwidth. Consider the internet as a channel for data transfer between two devices. In this case, the passway that the data is traveling over is broadband. Broadband connections come in a variety of forms: ASL, DSL, Cable, Fiber, etc. The **goal of all these technologies is to provide customers with high-speed internet.** For example, the greatest technology available to users is fiber optic lines, which provide high bandwidth and symmetrical speeds."

<https://www.investopedia.com/terms/b/broadband.asp> :

"What is Broadband?

Broadband refers to various high-capacity transmission technologies that transmit data, voice, and video across long distances and at high speeds. Common mediums of transmission include coaxial cables, fiber optic cables, and radio waves."

<https://www.howtogeek.com/865706/what-is-wi-fi/> :

"Wi-Fi is a networking technology primarily used to connect to the internet. It uses radio waves to transmit data wirelessly and is supported by various modern electronic devices, including computers and smartphones."

Here is my research that cables will be put underground and in the **2045 General Plan 30.5 Siting of new communications facilities shall comply with performance standards and site colocation as stated in the Code. page 149 and Page 150 30.b Develop standards for the siting and construction of wireless telecommunication facilities. They do not explain what "siting of new communications" means.** This is what I've found it to mean:

<https://pulsefibre.co.uk/2023/06/15/when-more-is-less-the-risks-and-downsides-of-overbuild/> :

Fibre overbuilds in the 21st century are becoming a widespread problem, with more fibre cable being laid on streets than can ever be utilised by the residents. Not only does this often cause mayhem on the roads, with closures and roadworks slowing traffic, but fibre overbuilds can lead to countless negative effects on the environment and the eventual rise in cost to the consumer and developer.

Here we explore fibre overbuild in property developments and share what effect it has on telecommunication infrastructure. Read on to **discover the risks, the downsides, and workable solutions to overbuild form the ultra-fast broadband experts at Pulse Fibre.**

<https://primex.com/fiber-optic-internet-going-underground/> :

"The widespread adoption of Internet of Things (IoT) and smart home technology has internet service providers (ISPs) and integrators on the hunt for the most effective **methods of broadband delivery for many scenarios.**

The **cable will be closer to the surface and more vulnerable to damage.** In this case, a more expensive cable that can withstand contact will be required. **Cables buried in clay will also need to be of higher quality because the clay can hold stones and push them against the cable. In clay, the trench will also need to be much deeper.**

In developed areas, the existing infrastructure can be problematic. **Digging through concrete sidewalks and roads is costly and disruptive."**

<https://www.prysmian.com/en/insight/sustainability/what-is-a-smart-grid-and-how-does-it-work>

"What is a smart grid?

A smart grid is an advanced and digitally enhanced electricity distribution network that uses technology and two-way communication to efficiently manage energy supply and demand. While traditional grids rely on one-way electricity flow and limited monitoring, smart grids employ sensors and automation to gather real-time data on energy usage and grid conditions."

<https://www.rfwireless-world.com/Terminology/Advantages-and-Disadvantages-of-Smart-Grid.html>

"Drawbacks Or Disadvantages Of Smart Grid

Following are the drawbacks or disadvantages of Smart Grid:

Continuous communication network should be available.

During emergency situation, network congestion or performance are big challenges in smart grid system.

Cellular network providers do not provide guaranteed service in abnormal situations such as wind storm, heavy rain and lightening conditions.

Some **smart meters can be hacked which can be used to increase or decrease the demand for power.**

It is expensive to install smart meter compare to traditional old electricity meter".

A smart grid uses sensors throughout the grid. **"Smart sensors are devices that take information from a physical environment and use embedded microprocessors and wireless communication to monitor, examine, and maintain various systems."** <https://www.fierceelectronics.com/electronics/what-are-smart-sensors>

<https://blushield.com/blogs/education/the-health-safety-and-privacy-concerns-of-smart-meters> :

"Of course, just like 5G, smart meters are advertised to mainly benefit the end user, but the truth is that the user is ultimately put at risk in several ways, and the biggest benefits are reaped by the power companies and the government."

I was wrong in saying it was wifi, and it is a kind of network that uses radio waves, at least this is what I've researched and found. If you find something else please contact me because I am tryin to get the correct information out there.

The Hawai'i Planning's **2045 General Plan doesn't explain broadband or a smart grid**, from what I read, **and they have no information on any health risks research.**

Here are **links that explain the health risks of smart meters because they emit RFR (Radio Frequency Radiation) waves. It's not wifi, and I will apologize to the community because I said it was wifi:**

<https://stopsmartmeters.org/frequently-asked-questions/radio-frequency-radiation-issues/> :

"Q: My utility says "smart" meters emit less than my cell phone or WiFi. Is this true?

In some cases this is true, and in some cases not true. The figures for RF exposure given by utilities are time-averaged numbers which hide the peak power of the "smart" meter, and disguise the fairly continuous nature of the pulses. **"Smart" meters are unlike cell phones or WiFi in their bizarre pattern of sharp spikes of RF.**

Both of those consumer devices (cell phones and WiFi) can be strong RF emitters. But **people are becoming increasingly aware of the potential harm done by chronic exposure to RF radiation-emitting devices** and are taking [steps to change how they use them](#). Growing public awareness of RF exposure has led people to choose a wired internet connection or use a wired phone at home. But most people are not offered a wired "smart" meter. And you can't turn it off once it's installed."

<https://www.westonaprice.org/health-topics/environmental-toxins/smart-meters-not-so-smart/#gsc.tab=0> :

"Electric "smart" meters were installed in Cindy deBac's Scottsdale, Arizona, neighborhood in 2012. She recalls the day a new meter was mounted on her home as a sort of digital Pearl Harbor attack. "I've never been so sick in my life," she says. "Nausea, a crushing migraine headache, and painful heart palpitations laid me low right away."

<https://smartmeterscience.substack.com/p/expert-letter-on-risks-of-smart-meters> :

- **"The Federal Communication Commission's safety standards do not apply to low intensity RFR.**
- **There is no safe level of exposure established for RFR.**
- **People around the world are suffering from low intensity RFR exposure, being at increased risk of developing both cancer and EHS."**

<https://ehtrust.org/educate-yourself/health-risks-posed-by-smartmeters/> :

"There is no doubt that smart and digital meters create pulsed RF emissions and these emissions, from the smart meters' antennas and the RF created by the SMPS, both enter the house's electric system. The result is that the entire house is transformed into a radiating RF antenna."

<https://www.emfanalysis.com/smart-meter-health-effects/> :

"In nearly every community where wireless smart meters have been installed, a percentage of residents complain of health effects that started after installation. The residents often did not know that smart meters had been installed. The most common symptoms are:"

<https://www.safespaceprotection.com/news-and-info/health-warnings-on-smart-meters/> :

"Groups such as, **The American Academy of Environmental Medicine (AAEM)**, an international organization representing physicians who specialize in Environmental Medicine issued the following recommendations listed below in their 2012 position paper, **"Electromagnetic and Radiofrequency Field Effect on Human Health.**

The AAEM calls for:

- **Immediate caution on smart meter installation due to potentially harmful RF exposure**
- **Accommodation for health considerations regarding EMF and RF exposure, including exposure to wireless smart meter technology**
- **Independent studies to further understand the health effects from EMF and RF exposure**
- **Use of safer technology, including for smart meters, such as hard-wiring, fiber optics, or other non-harmful methods of data transmission**
- **Recognition that electromagnetic hypersensitivity is a growing problem worldwide**
- **Understanding and control of this electrical environmental bombardment for the protection of society**
- **Consideration and independent research regarding the quantum effects of EMF and RF on human health"**

<https://www.sej.org/publications/tipsheet/many-are-claiming-health-problems-caused-smart-meters> :

"The concepts sound good to many people, but **serious flaws are becoming apparent as utilities rapidly install smart meters across the country, according to a rising chorus of critics. They are concerned about privacy** (since they say utilities can interpolate many behavioral aspects of building occupants via the detailed reporting of utility use), **security** (since any utility's system could be hacked), and **accuracy** (with reports of very inaccurate readings from a small percentage of meters). Each of these issues warrants investigation and coverage.

Another major issue is possible human health impacts from smart meters. That is the focus of the remainder of this Tip.

SMART METER HEALTH IMPACTS?"

<https://smartmeterscience.substack.com/> :

I sincerely apologize for saying it was Wi-Fi. The General Plan has no research on the health risks of a smart grid and broadband. We all have a right to fully understand the possible consequences of their plan.

Please vote UNFAVORABLE.

Rebecca Melendez