

TACOMA PUBLIC UTILITIES

Advanced Meter Project

The Tacoma Public Utilities (TPU) Advanced Meter Project will provide you with greater control, choice, and convenience. Starting in mid 2020, TPU will begin upgrades to its electric and water meters with modern digital technology that brings many new customer benefits over time, including monthly billing, remote electric service reconnection, more options to control your costs, improved reliability through faster outage and leak detection, and more flexible payment options in a safe and secure way.

TPU has been a trusted service provider in the region for more than 125 years and will continue to provide you with the reliable, affordable, and environmentally-responsible service you expect by replacing and upgrading aging meters. With technology that is used in more than 75 million households nationwide, the advanced meter project enables a shift to a modern digital utility, making operations more efficient and helping the environment through reduced carbon emissions.

Your benefits over time



Your Control, Choice, and Convenience

Access more usage data anytime to manage your use and costs.



Automated Meter Reading

More accurate, timely bills based on real-time data.



Monthly Billing

Advanced meters will allow a switch to monthly utility bills, which most people prefer.



Enhanced Personal Privacy

No need for regular physical access to read your meter.



Easier Move In, Out, and Reconnection

Remote turn on and off of electric service saves you time.



Expanded Ways to Save

Providing data about your use increases your ability to save money, water, and energy.



Faster Outage and Leak Detection

Locating and fixing issues helps us restore service to you sooner.



Flexible Payment Options

More options over time include prepaid for electric service and custom due dates.



Improved Operational Efficiency

Better information about our systems helps us manage costs.



Reduced Environmental Impact

Fewer vehicle miles traveled for meter reading, basic field services, and outage detection lowers our carbon footprint.

[MyTPU.org/AdvancedMeters](https://www.mytpu.org/AdvancedMeters)



Advanced Meter technology has significantly matured over the past 20 years. Many other utilities and manufacturers have tested the systems and were able to solve problems with the technology years ago when it was new. TPU can now deploy advanced meters with confidence knowing the technology is safe, secure, and cost-effective.

Economic impacts

Cost: It's more expensive to maintain aging meters and continue manual reads than to replace them with advanced meters. Customers will not pay an additional fee for meter installation.

Rates: Costs for advanced meters are already factored into the current rates. The additional cost each year for the next ten years is about 8 cents per month for the average residential power customer, 11 cents per month for the average residential water customer in the City of Tacoma, and 13 cents per month for the average residential water customer outside the City of Tacoma.

Low income customers: Advanced meters will provide many options over time to better manage monthly budgets, including prepay for electric service, custom due dates, and monthly billing.

Utility jobs: TPU is retraining and transitioning meter readers to different roles where possible, adding short-term project staff, and hiring a few new long-term positions.

Health and safety

Radio frequency (RF): Typically, advanced meters only emit RF less than 1 minute per day when they are transmitting data. Cell phones and microwaves emit more RF than advanced meters.

Safety: Advanced meters are rigorously tested and include important integrated features to keep you safe. Electric meters come equipped with a variety of alarms and safety features in the rare event of a malfunction.

Medical equipment: Advanced meters do not interrupt critical care equipment.

Privacy and security

Automated meter reads: Advanced meters don't need manual meter reads, so TPU will no longer need to send someone to your home to read your meter.

Data: No customer-identifying data is stored in the advanced meters or transmitted over the network, and information is encrypted with multiple security layers.

Cybersecurity: TPU has a robust cybersecurity program that meets federal standards.

Opt-Out policy

Meter options: If you do not want an active advanced meter, you have the option to receive an advanced meter with RF communications disabled. Opting out will likely require you to pay a fee for ongoing manual meter reads, which is customary in the industry. Policy details are still in development.

Facts about Advanced Meters and Radio Frequency Emissions

Your concerns about radio frequency (RF) emissions are important. The intent of the information below is to help you better understand advanced meters and provide reassurance about the health and safety questions often associated with them.

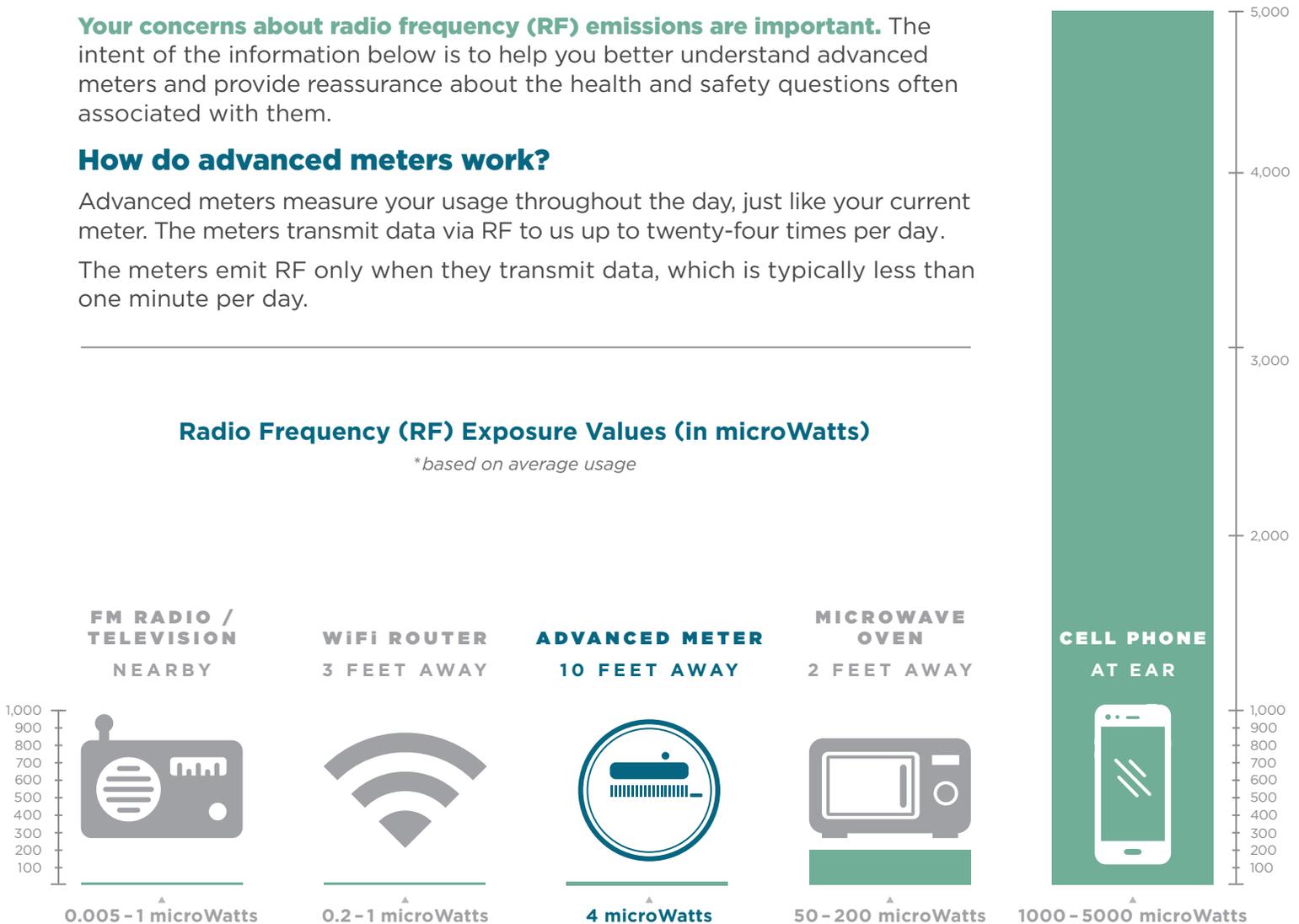
How do advanced meters work?

Advanced meters measure your usage throughout the day, just like your current meter. The meters transmit data via RF to us up to twenty-four times per day.

The meters emit RF only when they transmit data, which is typically less than one minute per day.

Radio Frequency (RF) Exposure Values (in microWatts)

**based on average usage*



Scientific Research about Advanced Meters and Health

- A study by Washington State University determined the amount of energy absorbed from advanced meter radio frequency is substantially less than the Federal Communications Commission (FCC) safety guidelines, even when a person stands close to a meter.
- Based on its review of scientific literature, The World Health Organization concluded there is no convincing evidence that the weak RF signals produced by advanced meters are harmful to human health.

continued on reverse ►

- According to a study conducted by the California Council on Science and Technology, “wireless smart meters result in much smaller levels of RF exposure than many existing common household electronic devices, particularly cell phones and microwave ovens.”

For over 50 years, researchers have studied the potential health impacts of RF energy. With the expansion of cell phone use in the last several decades, experts have published numerous studies about RF energy and cell phones. Research specific to advanced meters concludes that RF energy emitted from them is much lower than from cell phones.

Reputable organizations across the world have reviewed the scientific literature about RF energy. The conclusion among them is **advanced meters do not result in adverse health impacts.**

Your safety is important, and we will continue to review scientific research about the impacts of RF energy.

Scientific Literature

- **Washington State University**
Zhou, L. & Schneider, J. B. (2012). A Study of RF Dosimetry from Exposure to an AMI Smart Meter. *IEEE Antennas and Propagation Magazine*, Vol. 54, No. 6.
- **World Health Organization**
Electromagnetic Fields and Public Health: Base Stations and Wireless Technologies Backgrounder (2006). Retrieved from who.int/peh-emf/publications/facts/fs304/en/.
Electromagnetic Fields and Public Health: Mobile Phones (2014). Retrieved from who.int/mediacentre/factsheets/fs193/en/.
- **European Health Risk Assessment Network**
Valberg, P.A., van Deventer, E., Prepacholi, M.H. (2007). [Workgroup Report: Base Stations and Wireless Networks – Radiofrequency \(RF\) Exposures and Health Consequences](#), *Environmental Health Perspectives*, vol. 115 (number 3), pages 416-424.
- **International Commission on Non-Ionizing Radiation Protection**
Swerdlow, A., Feychting, M., Green, A.C., Kheifets, L. Savitz, D.A. (2011). Mobile Phones, Brain Tumors, and the Interphone Study: Where Are We now?, *Environmental Health Perspectives* (vol. 119), pages 1534-1538. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3226506/>.
- **California Council of Science and Technology**
California Council of Science and Technology (2011). *Health Impacts of Radio Frequency Exposure from Smart Meters*. <https://ccst.us/publications/2011/2011smart-final.pdf>.
- **Health Protection Agency (England)**
Health Effects from Radiofrequency Electromagnetic Fields. (2012). Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/333080/RCE-20_Health_Effects_RF_Electromagnetic_fields.pdf
- **European Commission**
SCENIHR Opinion on Potential health effects of exposure to electromagnetic fields (2015). Retrieved from http://ec.europa.eu/health/sites/health/files/scientific_committees/emerging/docs/scenihr_o_041.pdf.
- **Electric Power Research Institute (EPRI)**
Radio-Frequency Exposure Levels from Smart Meters: A Case Study of One Model (February 2011).

Opt-Out Policy

We are committed to high quality customer service and are developing a policy to provide you with options.

If you do not want a communicating advanced electric meter, you will have the option to receive an advanced electric meter with the radio frequency transmitter disabled. Opting out will likely require you to pay a fee for ongoing manual billing, which is an industry custom. You can sign up for our newsletter to receive updates about the policy.

Facts about Advanced Meter Data Security and Your Privacy

Advanced meters will measure the water and power usage data from your home or business and transmit it over an encrypted wireless network between the meter and TPU. With an advanced meter, you will receive more services and help us ensure the reliability of your water and power services.

During a time when data security breaches occur more frequently, and news outlets cover them regularly, it is natural for you to have concerns about the privacy and security of your data. The privacy and security of your data is our top priority. Here is what we are doing to address your concerns.

Data Privacy

We commit to safeguarding your information by ensuring:

- Only a limited number of trained and authorized utility personnel can access your account information.
- Advanced meters do not store or transmit your personal information (such as names and addresses).
- Advanced meters encrypt your water and power usage information when transmitting it over a wireless network with multiple layers of security.
- Each meter sends a unique identifier with your water and energy usage data. We compare the ID electronically against your account records to ensure that data comes from the meter we assign you.
- Advanced meters collect the same water and energy usage data your existing meter provides, just more often than possible via the current bi-monthly manual reads.
- We will not sell your data. RCW19.29A.100 prohibits utilities from selling private or proprietary customer information.
- We strictly control access to your data. You are the only person who may allow us to give third-party providers access to your usage data to enhance your services.

Data Security

We enhance cybersecurity through an FCC-licensed communications network that provides multiple layers of security to combat cyber threats. Per federal regulations, we are audited routinely by the Western Electricity Coordinating Council to ensure we adhere to strict operational and cybersecurity practices.

We accomplish additional security protection by:

- Monitoring data and our network at secure, world-class data centers 24 hours a day, every day of the year.
- Implementing layers of protections, like patching, anti-malware, and firewalls.
- Certifying and testing the security of our network through an independent third party.
- Applying industry security standards from organizations like the National Institute of Standards and Technology and The Center for Internet Security.
- Complying with regulations and implementing best practices for data security.

You can find up-to-date information about advanced meters at [MyTPU.org/AdvancedMeters](https://www.mytpu.org/AdvancedMeters).

