



The Green Button & the Future

Our Energy Use
My Energy Use

Get Connected!



Catherine J.K. Sandoval, Commissioner

California Public Utilities Commission, May 28, 2014



Access To Energy Usage Data

- May 2014 Commission Decision (14-05-016) provides access to energy usage data and usage-related data to:
 - Local government entities; Researchers; State and Federal agencies
- Decision enables new research and energy saving and education opportunities.
- Publicly posted zip code level data includes monthly sum and average of customer electricity and natural gas usage.
- Decision protects privacy by limiting access to anonymized, aggregated customer data





- Decision gave utilities several months to set up “data request portal” and data request process. The portal and process are ready to go.
- First research requests are coming this month (2/2015)
- Decision requires the utilities to establish a “Energy Data Access Committee” to advise the utilities on improving the data request process and informally helping to resolve issues between utilities and data requesters.
 - The committee consists of CPUC’s Energy Division, the Office of Ratepayer Advocates, the California Energy Commission and several stakeholder representatives.





Access To Energy Usage - MY Data

- **Apps for Energy, From Excel to Accessible**
- *Example: Home Energy Analytics*
- Data empowers the energy user to assess and optimize usage and see where easy conservation measures are possible
- What kind of creative solutions can we come up with to help people harness their energy usage?

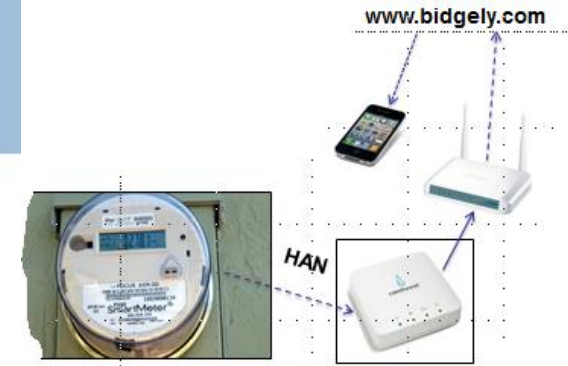




California LifeLine Expansion

- The CPUC expanded California Lifeline subsidized phone service to wireless in January 2014.
- Low-income Californians now have access to discounted wireless voice, text, and data services as well as smart phone apps when bundled with wireless voice.
- CPUC will utilize mobile phones to improve our subscription rates for our low-income energy discount and energy efficiency programs.





Get Connected

Advanced Metering Infrastructure (AMI) & Home Area Network (HAN)

- Home Area Network (HAN) made possible by CPUC ordered Smart Meter build out
- (example) *Bidgely* device (means “electricity” in Hindi) accesses smart meter data through HAN and sends the company server the data through the home’s router.
- *Bidgely*’s Iphone App populates the data on a platform to enable user to see own electricity use in Real Time!
- See size of plug –in load. By reducing plug-in load, can lower total plug-in load and reduce monthly electric bill.
- *Optimize your energy consumption with increased knowledge*





What makes the Smart Grid Smart? Communications!

- FCC in 2014 increased to 25 mbps down and 3 up minimum internet speed to classify an area as served by advanced communications services
- Need to enable the physical infrastructure to communicate with people, data managers and devices, and things
- Data, analysis and communications helps us manage what we've got!

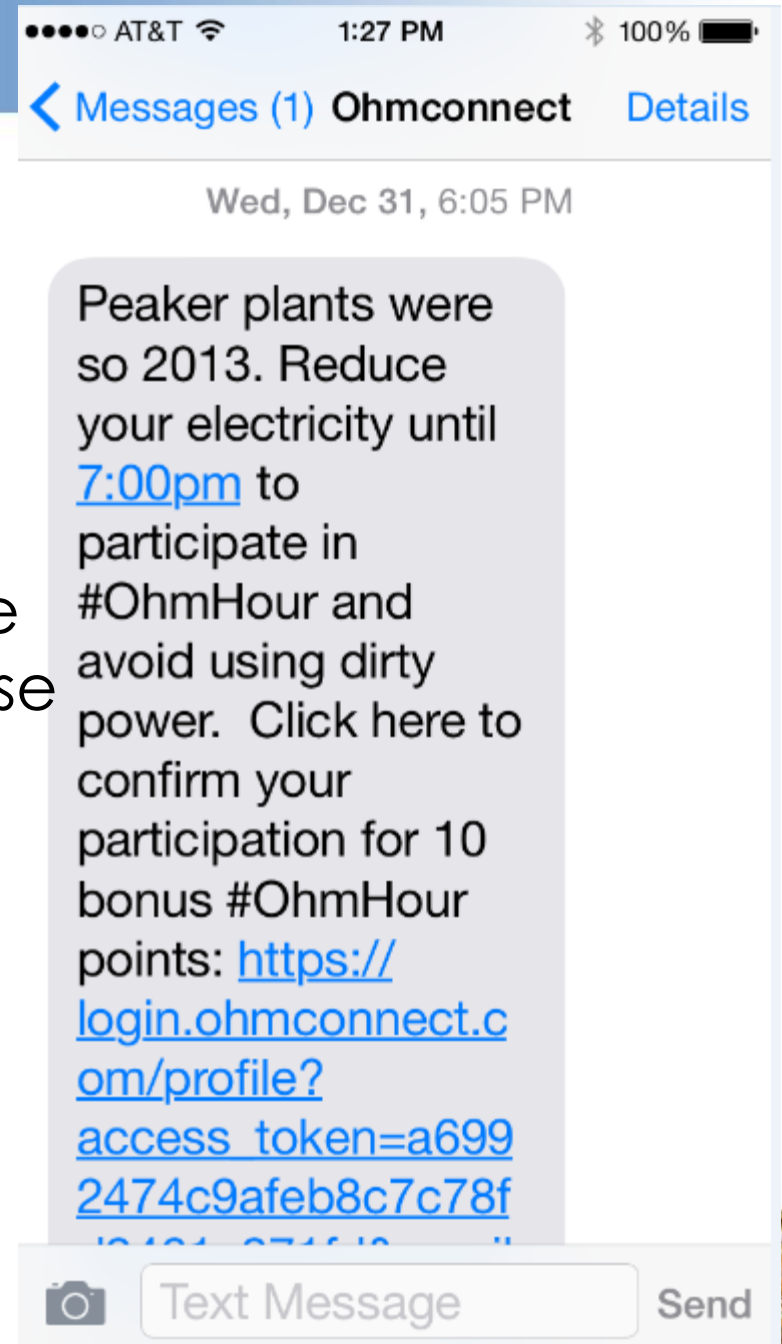




Communicate With the Energy User

Example:

- An *Ohmconnect* text message
 - A 3rd party Demand Response program that uses data from the *Bidgely* HAN device





Future: Line Extension

- Some Californians live beyond the reach of or cannot afford to connect to the electric grid, lack telephone and Internet access.
- Many off-grid residents are running diesel generators at a high financial, environmental, and health cost.
- Consider line extension affordability to expand access to cleaner energy and communication capabilities.





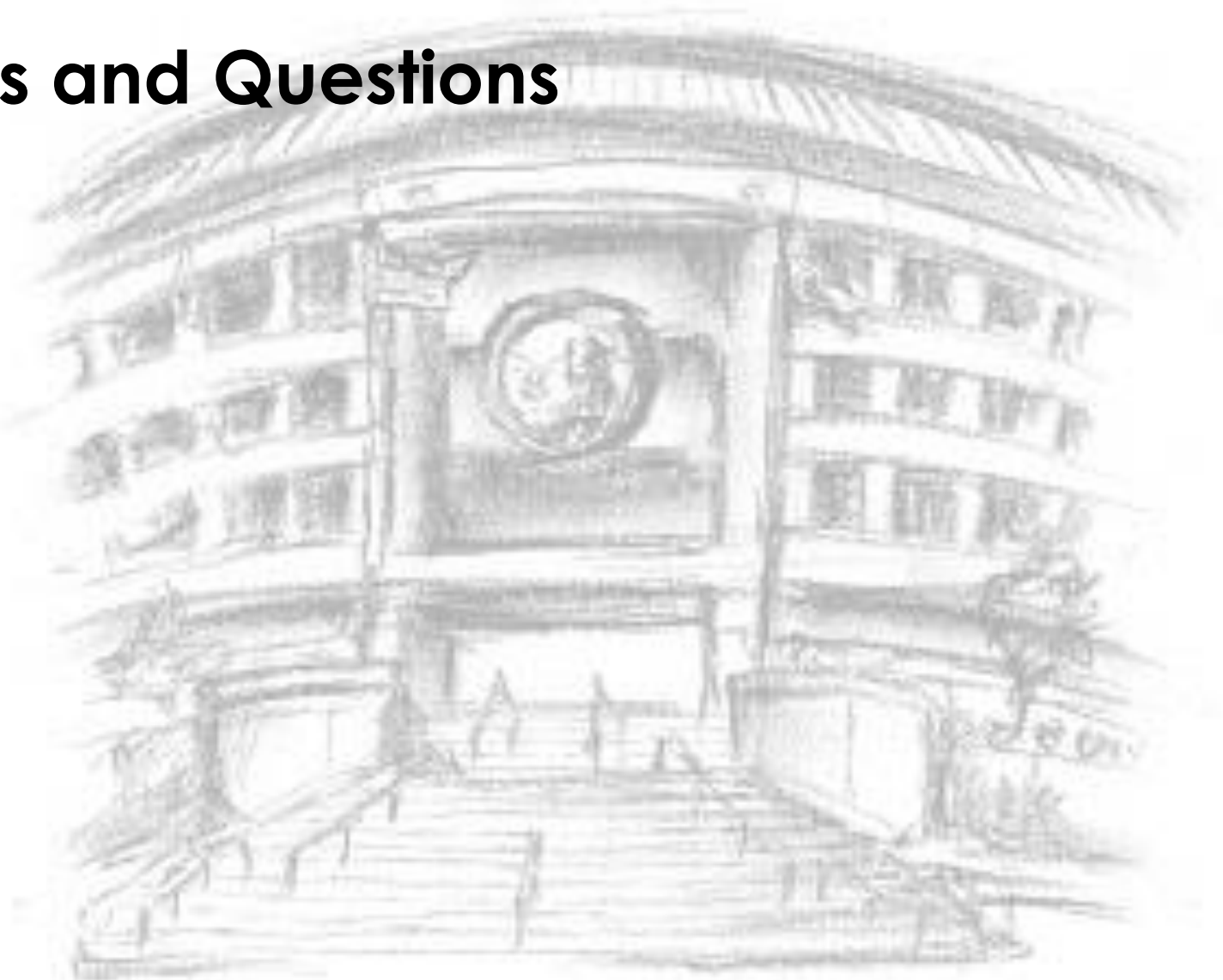
Future: Water-Energy-Telco Nexus

- Upwards of 19% of the state's electricity usage goes towards the movement and treatment of water – the largest aggregate user of power in the State.
- Proceeding will determine methodology to calculate embedded energy in water and consider more immediate actions to address the drought.
- Use technology to save water and energy:
 - Leak detection: non-zero usage
 - Irrigation sensors: remote water management





Thanks and Questions



Catherine J.K. Sandoval, Commissioner
California Public Utilities Commission

