Sustainable Energy Initiative Update

Millennial Consumers and Energy Users

America's "Millennial" -- or "Gen Y" -- generation has been a popular topic of discussion, and it's not hard to see why. Encompassing those born roughly between 1980 and 2000, Millennials are the country's largest generation by population size (nearly 80 million people, or one quarter of the U.S. population), and are just now coming into their own as trend-setters, political mobilizers, and -- as explored here -- energy consumers.

As a generation, Millennials have been identified by their digital connectivity, affinity for #selfies and social media, and tireless optimism in the face of bleak economic prospects. According to the Pew Research Center, one-third of Millennials have a four-year college degree or more and about 43% identify as non-white -- making this generation the most educated and racially diverse group in U.S. history. On the one hand, researchers have described Millennials as noncynical, civic-minded, and politically active, while on the other, additional studies have shown them to be inwardly-focused, apathetic toward politics and social issues, and, perhaps surprisingly, the least environmentally-minded of any previous generation.

Whether this cohort will ultimately be known as "Generation We" or "Generation Me" remains a driving question behind the ever-expanding body of research into the Millennial psyche. Meanwhile, data on the group's consumer habits is much more straight-forward -- providing useful insights for businesses interested in this multi-billion-dollar market, and giving electricity utilities a glimpse at what their future ratepayers value.

Millennials as Consumers and Energy Users:

Of the multiple drivers behind Millennial consumer spending, two stand out the most for this generation: cost-savings and connectivity. While product quality matters to a certain degree, Millennials tend to care most about price -- not surprising, considering that they are saddled with staggering student debt in the face of lackluster job prospects. Furthermore, as the first "digital natives", Millennials embrace technology and expect high-performance and usability from their products and websites.

Being cost-conscious and digitally-connected have led Millennials to develop a unique value-set. Traditional "adult" markers prized by previous generations -- homeownership, marriage, retirement savings, etc. -- are being delayed or forgone entirely due to changed values and limited economic opportunities. Instead, as shown by the rise of Uber, Airbnb and other "sharing economy" companies, many Millennials value flexibility and experiences -- especially when they can be arranged on the go from their smartphones. As summed up by one market strategist, in addition to cost-savings, Millennial consumers value "happiness, passion, diversity, sharing and discovery."

This new "Millennial value-set" could have profound implications for the electric utility industry. "Consumer energy markets are really posed to be totally upended," said NRG CEO Steve McBee in a recent interview. He likened the energy sector to other consumer categories like transportation or tourism or retail or entertainment or publishing or media, which have all been disrupted over the past couple decades "in part by the new products and services and technologies that mostly insurgent competitors have brought to market."

In addition to utilities like NRG, the software-as-service company, Opower, has also taken an interest in Millennial consumers. Those familiar with the "disruptive" forces at work in the utility sector (increasing integration of electric vehicles, rising demand for rooftop solar fueled by reduced solar PV costs, etc.) will agree with Opower that "the traditional utility experience is pretty much over." Perhaps taking a cue from Millennials, more and more customers want a wider range of energy products and services from their utilities, including personalized information on their energy usage and smart metering capabilities.

Some Perspective From Students:

Those expectations track not only with what the wider research on Millennials indicates, but also what some local GW Law students think as well. Recently, SEI Research Associate Adrienne Thompson spoke and corresponded with a few current GW energy law students about what they value as energy consumers and what expectations they have for their utilities.

GW Law students Jacques LeBris Erffmeyer (3L), Regine Baus (3L), and Matt Bly (2L), chat with fellow classmates Julia Dreyer (3L), left, and Nathaniel Green (LLM), right, during a break in their Environmental Law Seminar with Donna Attanasio.

"I would like to see my utility be as high-tech as I am," notes 3L Jacques LeBris Erffmeyer, holding up his smartphone as he spoke to Adrienne. As Jacques put it, being able to see tailored, "granular-level," information on his energy usage would helpful for him as a cost-conscious consumer looking for ways to conserve.

That sentiment was echoed by 2L, Matt Bly, who said he was most interested in getting personalized energy usage information from his utility. As Matt sees it "increased information invariably leads to better consumer decisions." Having that information available will not only save money, but importantly, will lead to less electricity generation and the associated greenhouse gas pollution. "Increasing the availability of personalized energy usage information makes sense not only economically, but also environmentally."

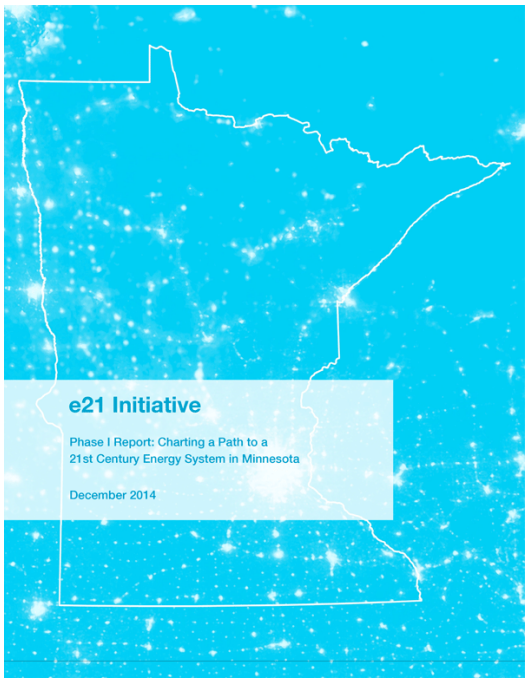
"I think utilities should prioritize lower cost services," said Regine Baus another 3L, and who's headed to FERC after graduation. According to Regine, as a consumer, net metering and distributed generation make sense only if they can actually off-set a substantial portion of a customer's bill.

A central value reiterated by all three law students was the need for utilities to engage more with tech-savvy Millennials. From online communication functions (like chat features with utility representatives) to using eye-catching visuals to hold our interest, they all agreed that the utility of the future should interact more with consumers. Like power in the net-metering context, information sharing should be a two-way street.

Why This Should Matter to Electric Utilities and Regulators:

As utilities begin to adopt more customer-centric business models, they would be wise to reexamine just who their customers are -- or soon will be. By 2025, Millennials will make up 75% of the workforce in the U.S., and as a result, they will be calling a lot of the shots as consumers and energy users. Although some consumers may not share a desire for "granular-level" energy data (indeed, the average consumer annually spends only 6-9 minutes interacting with their utility), Millennial consumers as a whole do want to be more engaged with the product and services they buy. The sooner utilities shift to a more customer-centered, interactive, business model, the greater their advantage will be in the new energy economy.

Lessons from e21: How Does Change Happen?



How do you change a complex system with multiple stakeholders in a way that is enduring? The problem can be anything from a dysfunctional company to a government in transition. Yet the solution in all cases needs a robust plan that will withstand any of a number of uncontrollable and perhaps unknowable future events. The plan also needs broad support from the stakeholder community so that they will work for the plan's success rather than against it. That was the e21 Initiative's challenge.

Minnesota's e21 Initiative is a collaborative stakeholder effort to develop business and regulatory models to help transition the electric system in Minnesota into a more sustainable and customer-responsive network. e21 was not led by or originated by a governmental agency, and much of the work was funded directly by the organizations that participated, with only a small amount of external funding, so it was truly a stakeholder-driven process. In December 2014, after a year's work, the e21 Initiative set forth a set of recommendations, and is now working to flesh out the recommendations with more detail and working with decision-makers to implement them.

It's a bit early to claim e21 has found the yellow brick road to the future, since the collaborative's recommendations are only now coming before the decision-makers - the Minnesota Public Utilities Commission, the Minnesota Department of Commerce and the Minnesota Legislature - whose actions are necessary to implement those ideas. But nevertheless, it's instructive to examine how e21 came to the point at which a diverse group of stakeholders that included utilities, local governments, advocates for renewable energy, representatives of ratepayers ranging from large industrials to small customers, and others, reached consensus on a broad set of recommendations that address customer options, utility rate recovery, rate design, innovation and planning.

The e21 Initiative's success has been dependent on both the participants and the process. As can be expected from any successful endeavor, e21 benefits from the unwavering commitment of all the participants and strong leadership. But also having the participation of people with the power to effect change - the utilities that ultimately are the ones who initiate rate filings and dockets and participants with extensive experience and political "savvy" relative to the institutions that must be involved - has been essential to creating a set of actionable recommendations.

The Initiative also benefited from concepts derived from a process called "Transformative Scenario Planning." e21 representatives were introduced to this process at an eLab Accelerator workshop sponsored by Rocky Mountain Institute in April 2014. Adam Kahane, the author of a book by that name, set forth a process through which a diverse group of participants first come to a common understanding of the problem and the need for change, then develop scenarios about what could happen, and then use their shared learning to identify a path forward and act upon their findings. The process grew out of Royal Dutch Shell's adaptive scenario planning work, developed several decades ago; which was expanded to include transformative properties and applied during South Africa's transition from apartheid.

The e21 participants spent the first couple of meetings struggling to assess the electric system as it exists and determine what change was desired and the characteristics of the desired system. This analysis and discussion resulted in the General Principles set forth in the report. Simply trying to describe the system as it exists, using the various perspectives in the room, helped build the relationships, respect and understanding necessary to move to the more difficult tasks. Scenario building helped the group build a shared understanding of the weaknesses and strengths of various possible courses of action and select a path forward. The lack of a hierarchical structure within the collaborative meant no one entity could force an issue. The relationships and respect built while traveling this path together were essential to being able to negotiate consensus recommendations.

Two very important lessons emerged from this work: (1) It is not necessary to agree on why a system needs to change if the participants can agree on the changes that are needed; and (2) when dealing with complex issues such as changing the electric system, there are points at which the process is simply "messy" and there is no clear path forward; but with persistence, the path will clear. This was analogized during our eLab work to a school of fish moving forward in formation, intersecting with another school into what appears to be a chaotic mess, and then reshaping themselves again into a different, but orderly, school that is again moving forward in formation. When you're in the midst of the chaos, it's hard to see the path forward. Only by working closely with the others in the group can a new path be determined and selected.

The e21 effort was facilitated by Great Plains Institute (GPI), a non-profit organization, which worked tireless hours to organize and lead each meeting and served as the primary drafters of the report. GPI relied on a core Project Team to help move the process forward, which included GW Law's Sustainable Energy Initiative. The full listing of the Project Team and all the participants is set forth in the report.

Faculty and Staff Updates

On February 25 and 26, Associate Dean Lee Paddock gave two presentations on private environmental regulation and hydraulic fracturing to students at the University of New Mexico School of Law, and Arizona State University College of Law, respectively. In late April, Dean Paddock will give a presentation on hydraulic fracturing at the University of Oslo and a presentation on environmental enforcement at Erasmus University Rotterdam in the Netherlands.

Professor Hammond recently published a new article, *Administrative Law's Asymmetries of Statutory Origin*, 93 Tex. L. Rev. See Also 75 (2015). She was also selected to join the Stegner Center at the University of Utah's S.J. Quinney College of Law as the tenth annual Stegner Center Distinguished Young Environmental Scholar. Professor Hammond was resident at the Center on March 11 and 12, 2015 where she gave two talks involving nuclear power: *Risk Regulation and Stakeholder Engagement* and *The Regulatory Contract in the Marketplace*. She will publish an article in the Utah Law Review in connection with her residency at the school.

On March 3rd, the Energy Bar Association and GW Law co-sponsored the EBA's annual "Enforcers and Defenders Conference." Assistant Dean for Student Affairs, Robin Juni, facilitated a panel discussion at the conference titled "Negotiation Skills: Resolution of Agency Enforcement Proceedings."

On March 26, Donna Attanasio will discuss SEI's work and GWU's solar purchase as a panelist at the "New Developments in DC Energy" event sponsored by the DC Women's Bar Association, Energy & Environmental Law Forum and Energy Bar Association. The next day, March 27, she will serve as a panelist on the topic of "Evolving Industry Structure" at the NIST Grid 3.0 Workshop, Gaithersburg, MD. Donna will also be the dinner speaker at the PJM Public Power Coalition's Annual Meeting in Wilmington DE, on April 22, 2015.

On May 8, 2015, Associate Dean LeRoy Paddock, Professor Emily Hammond and Donna M. Attanasio will serve as panelists for the Sustainability Conference of American Legal Educators at Arizona State University's Sandra Day O'Connor College of Law. Their topic is titled "The Ev[rev]olution of the Electricity Sector in Response to Environmental and Sustainability Concerns."

Upcoming Events

March 26-27, 2015:

GW Law along with the EPA, Environment Law Institute, Erasmus University Rotterdam, and the International Network for Environmental Compliance and Enforcement will co-sponsor the 2015 J.B. & Maurice C. Shapiro Environmental Law Symposium on **"The Role of Advanced Monitoring, Remote Sensing, and New Forms of Information Gathering, Analysis, and Disclosure in Environmental Compliance and Enforcement."** A follow-up conference will take place at the Erasmus University in Rotterdam, Netherlands in April 2015. More information will be forthcoming.

May 5-6, 2015:

GW Law will be a marketing co-sponsor of the **Energy Bar Association's 2015 Annual Meeting & Conference** at the Renaissance Washington, DC Downtown Hotel. Click here for more information.

May 18, 2015:

GW Law will host the **Cybersecurity Summit for Critical Infrastructure Industries**, sponsored by ABA's Section on Energy & the Environment. This Summit will focus on threats and protections pertinent to the electricity and water-services industries. Stay tuned for more information.

Recommended Reading

- The NY PSC issued its Order on Track 1 of the Reforming the Energy Vision (REV) proceeding on February 26, 2015:

For more information on the GW Law Sustainable Energy Initiative, please click here.

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The George Washington University Law School
2000 H Street NW
Washington, DC 20052

www@law.gwu.edu | http://www.law.gwu.edu