



Smart Grid Consumer Charter

 Dr. Mani Vadari

August, 2010

Meet the Author:

An IEEE Fellow, electricity industry visionary, and leader, Dr. Mani Vadari delivers strategic services to a global set of utilities, vendors, and service providers seeking deep subject matter expertise in setting the business and technical direction to develop the next-generation electric/energy system. As a Business Architect, Dr. Vadari has been delivering solutions focusing on Transmission/ Distribution/ generation operations, Energy markets, and Smart Grid for over 35 years. In addition, he is an Adjunct Professor at Washington State University and an Affiliate Professor at the University of Washington. He has published two popular books, "[Smart Grid Redefined: Transformation of the Electric Utility](#)" and "[Electric System Operations – Evolving to the Modern Grid, 2nd Edition](#)", in addition to over a hundred industry papers, articles, and blogs. His books are serving as textbooks at several universities in the US and around the world

<https://www.moderngridsolutions.com/>

Smart Grid is a term with as much buzz as any I've heard lately. It's mentioned in conversations about climate change, renewable energy and new types of energy storage. It seems that just saying "Smart Grid" several times in a conversation makes people think you're smarter. But with all the buzz and money being spent to make our existing grid smarter, the least talked about but most important part of the Smart Grid is often left out – you. The American consumer's acceptance of this new, intelligent technology is of paramount importance.

The Smart Grid is coming, and sooner than you think. Around the world, countries such as Germany, Italy, China and England have been accelerating the use of technology to improve their electricity grids for years. Here in the U.S., with the help of the Department of Energy, billions of dollars are being invested by America's utilities to bring the benefits of Smart Grid technologies to consumers.

Change can be disconcerting, but think of the world 20 years ago, before the internet arrived. Now, it's difficult to imagine the world without it—and you can look at the Smart Grid as a permutation of the World Wide Web, because it will for the first time allow utilities and customers to have a two-way conversation. The Smart Grid won't change what your appliances do, but it will give end-users more information to make smart decisions and make the grid more reliable and efficient. While the Smart Grid will enable savings on monthly electricity bills now, it will help even more to curb future increases. It's time that we use our ingenuity and innovation to improve a system that we not only can, but should bring into the 21st century.

Our government, utilities, energy providers and leading scientists and engineers are in favor of the Smart Grid and are working very hard to make it a success. New technologies and alliances are being announced almost on a daily basis much of it focused on reducing peak energy demand and enabling greater energy efficiency. However, its ultimate success on a large scale will depend on its acceptance by you, the consumer. When the Smart Grid connects your home in the next five years or so, it can be as complex or as simple as you'd like it to be. In many cases it will succeed when the technology supports your lifestyle, your values and your pocketbook. Smart Grid technology is going to give consumers many options for managing home energy consumption, and providing these options in a way that fits our lifestyles is the ultimate goal. While there is always a place for technophiles who will constantly tinker with their energy use, in order to become mainstream it must be as easy as "set-it-and-forget-it."

As we rebuild our electricity infrastructure with 21st century technology, we need to help consumers adapt to change. While the Smart Grid will allow consumers and utilities to manage energy through better information, Big Brother shouldn't be watching your every move. No one should dictate when you use electricity and your privacy should not be impinged. An entirely new ecosystem of technology providers stands ready to introduce innovative new products and services directed at consumer energy management, and we need to accelerate that progress if we hope to affect the energy consumption patterns in this country.

Smart Grid Consumer Charter



Dr. Mani Vadari

SMART GRID CONSUMER CHARTER:

- *Expectation of privacy. The consumer billing and/or usage data should not be shared with any unauthorized third parties without the consumer's consent.*
- *Expectation of transparency. As the rate structures change, consumers will need a clear description of the new rates and its impacts to their lifestyles. It also would help if utilities could publish their quantifiable Smart Grid goals and metrics so consumers can view overall progress on areas like energy savings and carbon reduction across their regions.*
- *Expectation of security. The utility must secure all consumer data and be compliant with industry-standard cyber security protocols and best practices.*
- *Expectation of anonymity. Any customer information used for regional analysis, load growth projections or just stored for long-term and non-billing uses should be stripped of any personally identifying information including addresses, names, or consumer IDs.*
- *Expectation of choice. In the future utilities will be developing different rate structures and customers will be able to modify behavioral aspects of their in order to save money. Because one size doesn't fit all, the consumer must be given choices between rate structures. Utilities and regulators must design their systems to allow consumers to purchase their own controllers and equipment as new technologies emerge.*
- *Expectation of sharing. The benefits of the Smart Grid must be made apparent to all. Each of us has a right to know how big our carbon footprint is and how successful we are being in reducing it.*
- *Expectation of data. The utility must provide collected usage data back to the consumer.*

In this new era, where there is an expectation of a two-way communication between the utility and the consumer, we must be mindful of the change. I believe that consumer representation still plays a significant role, but the consumer will now be heard directly, with no intermediary. It's no longer adequate for the advocates to be the sole voice of the consumer.

Therefore, I think it is time to discuss a Smart Grid Consumer Charter. Such a charter can help this industry bring a level of transparency and fairness to the consumer, who currently does not have much control over the design, the content or the direction of the Smart Grid.

This is a complicated subject because of the coming changes. Today, there are advocates and officials who look out for electricity consumers. But as we move to implement the Smart Grid, consumers will need additional protection because the country's electricity infrastructure and the way it operates will change significantly. There will be a two-way conversation between consumers and utilities will strengthen the relationship when the expectations are clarified. It will expand the ties that exist today, ties represented only by the advocate and commissioner.

A charter also would protect the utilities. By being proactive in the enforcement of these expectations, utilities could go a long way towards instilling public confidence in their ability to allow the consumer to manage their energy in a responsible manner.

As American consumers, we have taken electricity for granted for a long time. For the better part of a century, the electric utility has made it convenient for us to consume electricity when we wanted it and how we wanted it, regardless of how much it cost to produce at any given time. By sharing the responsibilities of energy management with the utilities, we can all be better stewards of the environment. The Smart Grid is coming. Is America ready? Will we be responsible? Do we have a charter that we can rally behind?

I propose a Smart Grid Charter that will strengthen the customer's role in the Smart Grid rollout and provide an opportunity for an open dialogue between the utility and its consumers.