**Testimony of Suzanne L. Bertin**
**on behalf of the Advanced Energy Management Alliance**
**in Support of**
**CSHB 3343, by Turner**
**Relating to the Development of Electricity Demand Response Programs**

**House State Affairs Committee**
**March 25, 2015**

Good morning Mr. Chairman and Members. My name is Suzanne Bertin. I am Director of Regulatory Affairs at EnerNOC, representing the Advanced Energy Management Alliance. I am here today to testify in support of CSHB 3343.

Advanced Energy Management Alliance

The Advanced Energy Management Alliance (AEMA) is a national association of demand response providers, end-user customers, suppliers, and affiliated businesses united to overcome barriers to demand response. AEMA advocates policies that empower and compensate customers to manage their energy usage and make the electric grid more efficient, more reliable, more environmentally friendly and less expensive. Some of our members active in Texas include Comverge, C-Power, EnerNOC, Johnson Controls, Landis & Gyr, Nest Labs, and WalMart. (A full list of AEMA's members can be found at http://aem-alliance.org/about/members/.)

How Demand Response Works

Demand response is the reduction of customer demand on the electricity system through voluntary customer curtailments in power consumption in response to system conditions, pricing, or payments. Typically, customers sign up with a demand response

provider, which may be either a company that specializes in demand response or their retail electric provider, and agree to reduce energy consumption at certain times, usually during peak winter or summer periods of demand.[1] For example, emergency demand response was called on August 4, 2011, when Texans were experiencing one of the hottest summers in decades, and again on January 6, 2014, when the whole country was in the throes of the so-called "polar vortex." In these instances, emergency demand response helped ERCOT avoid rolling blackouts across the state.[2] Demand response creates a more efficient electricity market by incorporating demand reductions as an alternative for generation resources – or stated differently, by enabling customers to compete against generators.

A business can reduce energy use by controlling a broad range of equipment, such as lighting, manufacturing processes, heating and cooling equipment, battery chargers, pumps and industrial refrigeration. One example of how businesses can reduce the impact of a curtailment is by shifting or modifying their operation schedules by a few hours. Similarly, residential customers can control their air conditioners, heaters or pool pumps for minutes or hours at a time through the use of high-tech thermostats and other devices when the system peaks. Demand response providers work with customers to create customized reduction strategies and pool those customer capabilities together to maximize the value to the grid while minimizing the impact on the customers' day-to-day activities.

[1] Large commercial and industrial customers may participate directly in some demand response programs.

[2] In fact, in its 2013 Assessment of Reliability Performance for the Electric Reliability Council of Texas, Inc. (ERCOT) Region (April 2014), the Texas Reliability Entity declared that: "In light of the projected resource adequacy issues in the region, expansion of the Emergency Response Service program is vital to ensure the continued reliability of the electric system in the ERCOT region."

Participation is **always voluntary**, and customers who participate receive an economic benefit. Customers who participate in demand response may receive payments to compensate them for being available to support reliability of the grid and for reducing consumption when required. The money that customers receive through participation in demand response can be spent on other household or business needs, to implement other efficiency measures or to help defray the cost of monthly electricity bills. In addition to the direct customer benefits, the market efficiencies that demand response brings can provide overall economic benefits to non-participants, including state and local economies.

It is important to note that customer compensation only occurs based upon verifiable performance. Under effective market rules for demand response—which is what this bill seeks to achieve in Texas—demand response customers are compensated only when, and only in an amount such that, the benefits they create for all Texas consumers exceed their direct compensation. In other words, customers participating in demand response are only paid when they offer comparable services to a generator at a lower price. In short, the participation of demand resources in Texas lowers the overall cost of producing electricity, benefitting all of the state's electricity consumers and its economy more generally.[3]

[3] These savings can be substantial – for example, the PJM market monitor has estimated that without demand response, electric system costs would be *billions of dollars higher each year*. See Monitoring Analytics, *Analysis of the 2016/2017 RPM Base Residual Auction* 37 (Apr. 18, 2014) Similarly, on a single hot day in 2006, PJM's use of demand response saved the system $230 million in energy costs by avoiding the need to dispatch generation. *See* FERC, *2007 National Assessment of Demand Response and Advanced Metering* 6 (Sept. 2007)

Why Legislation is Needed

CSHB 3343 will make the ERCOT energy market more competitive, efficient and allow demand response to play a greater role in helping ERCOT maintain the reliability of the electric grid. A 2012 study by The Brattle Group that ERCOT commissioned to comprehensively evaluate the market concluded that "the energy-only wholesale market will not dependably support ERCOT's current reliability target until sufficient demand response penetration is achieved."[4] Brattle also concluded that significantly more demand reduction can be achieved in ERCOT. In its 2012 study, The Brattle Group estimated peak load reductions from demand response in ERCOT were approximately 2,600 MW, or about 4% market penetration.[5] The Brattle Group also estimated that ERCOT has the potential for demand response to equal 8-15% of peak load, or up to almost four times more than 2012 levels.[6]

For demand response to be able to achieve its full potential in Texas, it will be critical to break down the barriers faced by customers who want to participate. While it is easy to say that customers and generators should face exactly the same rules in the market, the reality is that customers do not have the same incentives or operational ability to participate in the electricity market. Generators are solely in the business of generating, while customers are not. Customers are primarily interested in consuming energy, whether it is to air condition their homes, or to make a product in a manufacturing facility. But many of those customers are willing to participate in the market to support reliability when the benefits to participate outweigh the costs. The rules should take these realities into account.

[4] The Brattle Group, *ERCOT Investment Incentives and Resource Adequacy* (June 1, 2012) at 3-4.
[5] *Ibid.* at 90.
[6] *Ibid.*

Some examples of barriers in existing rules and protocols that prevent Texas from achieving its full demand response potential include:

- A cap on the ERCOT Emergency Response Service budget, which limits the amount of emergency demand response ERCOT can procure, regardless of its reliability needs.
- Participation in responsive reserves, an ancillary service, is limited to 50 percent of the total amount ERCOT procures.
- Required response times are relatively fast, with the longest response time being 30 minutes. Increasing the response times would allow more homes and businesses to participate without undermining the benefit to the electric grid of their reduced electricity demand.
- Third-party demand response providers are prohibited from participation in the energy market, even though these entities supply the majority of demand response resources in other markets.
- Energy market rules allow participation only by loads that are capable of increasing or decreasing energy consumption every five minutes. This requirement eliminates participation for many customers, especially those that are “blocky” in nature or that have additional constraints.
- Telemetry requirements could be more flexible without undermining ERCOT’s need to receive the information that measures and verifies performance by demand response participants.

It is now 2015, three years after the 2012 Brattle study, and yet little progress has been made to achieve the significantly greater demand response that is needed to support the market. The proposed legislation would spur development of additional demand response by exploring and removing these barriers, resulting in more reliable and competitive electricity markets. Demand response is and should be a key component of the state's portfolio of energy resources, including nuclear energy, fossil fuels, renewable generation, and energy storage. As the Texas economy continues to grow, ERCOT will need all of these resources to play a role in maintaining a reliable and efficient electricity grid.

Finally, it is important to emphasize what this bill is not. CSHB 3343 is not a mandate for demand response. It does not create subsidies. The bill would not bypass competition, but rather it would open competitive opportunities for customers to participate in the market through demand response. It is about eliminating barriers to competition, lowering costs, and increasing the reliability of the grid.

Thank you for your attention, and I would be glad to answer any questions.