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**We Don't Need Capacity Markets or any "Texas Emergency Power Reserve":
Sierra Club is opposed to Proposals for either a Capacity Market (HB 4378) or
Guaranteed Levels of Reserves**

The Sierra Club is strongly opposed to the idea of creating a capacity market or a required power reserve, which would not be the most cost-effective solution to our electric issues and undermines our competitive market.

During Uri, major issues with ERCOT were revealed, including the lack of communication and coordination, the lack of weatherization of power plants and the natural gas supply chain. In addition, we do believe ERCOT and the PUC should relook at our existing ancillary service market and Emergency Response Services and consider whether changes are needed.

**What the ERCOT analysis now reveals: Not a lack of capacity or reserves – a
problem of the weather**

This week ERCOT finally released a more in-depth analysis of the problems with supply that occurred during URI. Their conclusion – more than 50,000 MWs of capacity were unavailable and the vast majority was related to weather-related failures. That analysis is available here - http://interchange.puc.texas.gov/Documents/51878_20_1120255.PDF

ERCOT Derating and Outage Report: What happened at the height of our problems (51,173 MWs derated or out) at 8 AM on February 16th.

Category	MWs in Outage
Existing Outages	7,487
Weather Related	27,472
Fuel Limitations	6,124
Equipment Related	6,986
Transmission Loss	1,259
Frequency Related	1,260
Other	585

So given this situation what does Texas need?

First, we need to assure that both power plants are weatherized through bills like HB 11, and that the fuel supply (ie gas) is weatherized as well.

Second, given the transmission and frequency-related losses, we should revisit our transmission system and our ancillary services to assure we have sufficient fast frequency response available in our MARKET.

Third, we must prioritize not just our supply side but our demand side. The vast majority of our peak demand is driven by residential and small commercial demand to either cool our homes in the summer and heat our homes (and businesses) in the winter. Prioritizing demand response, local energy solutions and energy efficiency, including new building codes is the way to meet our energy needs.

But what about investment going forward?

Every month, ERCOT publishes a GIR (Generation Interconnection Report). Good news. There is more solar, wind, storage and gas resources lining up to continue to provide energy based on our ENERGY-ONLY market, and there is no need for an expensive capacity market or a required power reserve. Indeed, there is over 29,000 MWs of new generation in the final phase of development, and over 150,000 MWs of proposed new development.

There is not need to pay existing generation a capacity payment to keep older **generation online.**

Major GINR Milestone Status by Fuel/Technology Type, MW

Includes only those projects for which a Screening Study (SS) has been requested and are not Inactive.

Fuel Type	Technology Type	SS Completed	SS Completed	SS Completed	TOTAL INCLUDING DEVELOPMENT PHASE
		FIS Completed No IA	FIS Started IA	FIS Completed IA	
Gas	Combined-Cycle		45	475	
Gas	Combustion Turbine		140	1,435	3,966
Gas	Internal Combustion Engine				163
Gas	Compressed Air Energy Storage				324
Gas	Steam Turbine			14	694
Gas	Fuel Cell				
Gas	Total gas		185	1,924	7,897
Nuclear		13			13
Coal					
Wind		371	4,436	9,501	23,859

Solar		2,616	7,965	16,300	88,856
Biomass					
Other	Battery	116	376	1,873	30,301
Other*					400
TOTAL		3,116	12,961	29,598	151,326

Indeed, in March alone, there a number of new resources being commercialized

Commissioning Category	Project Name	Fuel	County	MW **
Commercial Operation Approved by ERCOT*	PES1	Gas	Harris	306
Synchronization Approved by ERCOT	RE Maplewood 2b Solar	Solar	Pecos	28
Synchronization Approved by ERCOT	Capricorn I & III repower	Wind	Sterling	32
Synchronization Approved by ERCOT	Titan Solar	Solar	Culberson	270
Synchronization Approved by ERCOT	Horse13 CallID repower	Wind	Taylor	44
Energization Approved by ERCOT	Phoenix Solar	Solar	Fannin	82
Energization Approved by ERCOT	East Blackland Solar	Solar	Travis	144
Energization Approved by ERCOT	Prospero Solar II	Solar	Andrews	250
Energization Approved by ERCOT	Chisholm Grid	Other	Tarrant	102
Energization Approved by ERCOT	Aragorn Solar	Solar	Culberson	187

If we don't need a capacity market, wouldn't it be nice to have a guaranteed reserve like that being offered by billionaire Warren Buffet?

Creating a guaranteed rate of return and major investment in eight new natural gas plants outside the regular market and ancillary market structure is not the right solution to our challenges. It would create costs to consumers that would be better served

through our market structure and picks one type of technology – gas plants – even though other technologies exist to serve our needs.

What Are Ancillary Services?

Ancillary services are the services we need within ERCOT to make sure our system works and to adjust to sudden losses of power or problems with frequency. ERCOT presently has four different services (Regulation Up, Regulation Down, Spinning Reserves (sometimes called Responsive or Frequency Response) and Non-Spinning Reserves (sometimes also called contingency reserves). These are products that are provided by the market through both a day-ahead market and real-time market. Within these four products, recently ERCOT has added some new categories best served by electric battery storage, including fast frequency response. Some of these products are more immediate -meant to respond within minutes to problems on the grids, while others are longer meant to respond to larger issues over longer periods of time.

Non-Spinning Reserves are the product most equivalent to a power reserve and can include both power plants and loads. They must be available within 30 minutes.

We do believe that it might make sense for PUC and ERCOT to be redirected to look at all of our products, and the amounts to see if adjustments are needed. As an example, in the past Sierra Club has suggested we may need an additional four-hour product that is flexible for those times there may be sudden losses of power or sudden changes in load or variability from renewable resources. We would be happy to provide language to the committee directing the PUC and ERCOT to begin a discussion about this.

What are Emergency Response Services?

ERS are out-of-market tools that ERCOT uses occasionally during an emergency event. They are contracts with back-up generators and large loads which can come off-line to balance supply and demand. In ERCOT we have both 10-minute and 30-minute products. They are only used in emergencies.

While ERS fulfills an important role, we agree that Texas should consider expanding its ERS budget. Currently, under PUC Rules, the annual budget for ERS is capped at \$50 million even though there are many other back-up generators and demand response products. We believe changes to ERS could be handled through rulemaking at the PUC.

What about demand response and energy efficiency?

Texas is behind other states with our investments in demand response and energy efficiency. Rather than only focusing on the Supply Side, we should be raising our residential and consumer energy efficiency goals to at least 1 percent (SB 243/HB 4556), and allowing demand response to play a larger role in our energy markets and in

ancillary services. We should also be continuing to allow distributed energy resources to contribute to our supply side options, as several bills that have been introduced would help accomplish.

ERCOT is making strides toward incorporation of storage, demand response and distributed resources through their PASSPORT project and stakeholders are hard at work. ERCOT is also moving toward co-optimization of energy and ancillary markets which should make resources better allocated to keep our lights on.

Requiring either a capacity market or a larger reserve with one particular technology is the wrong solution for the wrong time.

The Legislature is taking very important steps to weatherize our plants and weatherize our gas supply. That – along with more attention to our demand side and local energy solutions – should be our focus.