



Cyrus Reed, Lone Star Chapter, Sierra Club (Cyrus.reed@sierraclub.org)
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The Sierra Club opposes efforts to charge intermittent generation ancillary services and or “power reserves” as contemplated by **HB 4466** by Phil King, and its potential substitute.

Both the original HB 4466 and SB 1782 by Hancock as substituted, are based on the premise that generation that is intermittent should be charged “ancillary services” and/or power reserves to make it up for their intermittency. First we would note that the concept of power reserves is not one that is contained within our market structure. In addition, it is important to note that in addition to generation which can be variable, loads are also variable, and some loads also change suddenly, including loads such as steel mills. Even generation based on fossil fuels can be variable in its output as we learned during the recent weather situation. Indeed many of the requirements of ancillary services are due to sudden outages from traditional generation resources. You only have to read the monthly operations report from ERCOT which show the use of ancillary services on a monthly basis.

As an example, in February, there were 12 times when responsive reserves were called upon, ranging from a low of 300 MWs to a high of 2,000 MWs during the worst of Uri. In none of those events was the issue related specifically to a sudden change in wind or solar output. Most of these events lasted less than one hour.

Thus, that is why we have a market – to provide needed services for both loads and generation and make sure supply and demand operate within acceptable levels and that frequency levels are maintained so wires don’t overheat.

While renewable energy resources are variable – it is in their nature after all – the idea that they must be “charged” or allocated the costs of ancillary services, which are a service provided by a variety of products, including gas plants, demand response, storage and even some renewable energy, is not in keeping with how our market works. Recently, ERCOT has been expanding the type of ancillary services to provide more flexible, faster resources to make sure loads and generation are balanced. While renewable energy is variable, it is predictable and ERCOT assures that there are

enough resources available to keep supply and demand balanced -- except in some extreme cases like we experienced in February.

Indeed, while ERCOT continually looks at the levels needed for ancillary services, the truth is that even as the amounts of renewable has increased – equaling more than 25% of total energy produced in 2020 – the need for ancillary services or their costs has remained relatively steady. Indeed, ERCOT continually watches levels of frequency drops and system inertia and has not found issues with the level of inertia.

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.

Are changes needed in how we secure ancillary services?

Maybe. **We have provided some language to the author that would require the PUC and ERCOT to look the types and levels of ancillary services and consider whether we should change the way we allocate ancillary service costs.** The Commission would be directed to come back with a report to the Legislature and what changes might be needed.

Thus, we 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.