CBM: Does it help or hinder reliability?

*This is **the minority opinion** of the ATCT Drafting Team. Although this paper may not apply to all Transmission Service Providers (TSPs), it does apply to several in the eastern interconnection.*

The design of the Capacity Benefit Margin (CBM) product as it is today does little to enhance reliability. In fact, one could deduce that the preservation of CBM actually hinders reliability. CBM is intended to be an instrument to ensure the availability of transmission during a local generation resource shortage, but until the industry can agree to coordinate these efforts, the result may be making things worse instead of better. In fact, current interpretations of the calculation and use of CBM by several TSPs cause several concerns:

1. **CBM is a partial path reservation without a designated generation source.**

   CBM is an import quantity only. There are no arrangements between TSPs for the reservation and use of CBM on neighboring transmission systems. This means that when CBM is being utilized on a TSP's system during emergency conditions, there still needs to be arrangements made with all external TSPs for the use of *their* transmission systems. There is absolutely no assurance that the transmission service will be available on that other TSP's system. Furthermore, since emergencies occur in real-time, firm service is not available due to timing requirements. In fact, the only service that is available is non-firm hourly service or non-firm secondary service. With TLR occurrences being the rule, rather than the exception, the risk of curtailment of the emergency import is very probable due to the use of non-firm transmission. There are currently no provisions in either the TLR procedure or any TSPs tariff that allow for special treatment for external Load Serving Entities (LSEs) to use their system for emergency (CBM) purposes. In addition to the transmission availability risk, there is also no assurance that generation resources will be available on the interfaces (or impact flowgates) on which CBM is reserved.

2. **Use of CBM can restrict adequate resource planning.**

   Another problem with the current CBM methodology employed by some TSPs is that a LSE that expects to have a capacity deficit is now less likely to be able to make a long-term capacity purchase to ensure resource adequacy. The shortage can almost be seen as a self-fulfilling prediction. The LSE may be forecasting a shortage based on a Loss of Load Expectation (LOLE) calculation, so CBM is added to the interface (or flowgates) to ensure deliverability during emergencies. Since CBM is on the interface (or flowgates), the LSE can not get firm transmission service to purchase capacity and is forced into an emergency situation. This seems to be an illogical approach and does not appear to be in the best interest of the LSEs who are trying to hedge against generation shortages and price risk.

The opposite problem can also occur. The LSE (or TSP) may calculate a CBM of 100 MW to maintain the correct LOLE and later the LSE can make a firm transmission and generation purchase (import) of 25 MW. The CBM should actually be decremented by 25 MW down to 75 MW. However, the CBM may not be calculated every time an LSE makes a firm capacity purchase. In this case, the CBM requirement would be 75 MW, but the TSP is reserving 100 MW. This would limit others from making firm economic purchases to hedge against price risk. Again, this is not in the best interest of the LSEs.

3. LSEs that can choose which interfaces to reserve CBM could restrict competition in that area.

Some TSPs have affiliated LSEs and allow LSEs to determine which interfaces utilize CBM. A TSP's decision to set aside transmission capacity for emergency imports pursuant to either long-term reserve sharing arrangements or probabilistic LOLE calculations reduces the firm import capacity available to its competitors. Whether to reduce ATC/AFC for a CBM reservation, at which interface and in what amount, is a competitively significant decision that is driven by commercial choices which may be made by the large incumbent LSE. It reflects tradeoffs made by the LSE (and its generation/merchant function) as to reliance on internal vs. external generation for sources of energy and reserves. This procedure invites abuse.

4. CBM should not be used as a substitute for "real" reserves.

There could be cases where LSEs are physically "short" real reserves, but use CBM to justify resource adequacy.

Clearly, the current use of CBM has questionable reliability value. The lack of transparency, standardization, and auditable definition, coupled with the absence of procedures for CBM to be reserved and paid for like other transmission reservations, invites abuse. It also may provide a false sense of security that CBM will provide the transmission needed to import emergency generation.

Proposed Solution

The current use of CBM by some TSPs should be discontinued. Today, Capacity Benefit Margin (CBM) is defined as:

The amount of firm transmission transfer capability preserved by the transmission provider for load-serving entities (LSEs), whose loads are located on that transmission provider's system, to enable access by the LSEs to generation from interconnected systems to meet generation reliability requirements. Preservation of CBM for an LSE allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation reliability

requirements. The transmission transfer capability preserved as CBM is intended to be used by the LSE only in times of emergency generation deficiencies.

For some LSEs, the current use of CBM may be better than no CBM (although it may be harming some LSEs). Instead of setting aside CBM on a TSP's system as a reliability quantity without the appropriate charges, it would be more reasonable and reliable to require the LSE(s) to obtain a firm transmission path from source to sink and obtain contracts from outside generation to ensure resource adequacy.

Those entities that currently allow for the use of CBM to reduce generation reliability requirements would be better served by this approach than the CBM approach which "assumes" that uncommitted external resources will be there when you need them. This ensures that not only is transmission available in the event of an emergency, but generation will also be available because it is contracted for. It also assigns the cost of the transmission reservations and the cost of capacity to the LSE(s) who directly benefit. A CBM "assumption" about external capacity may be an unrealistic expectation in this time of shrinking capacity margins.