**Concerns with the currently approved ASDC**

The current ASDC was approved in 2019, which predates material changes to ERCOT operations (modifications to the ORDC, conservative operations backstopped by RUCs, more experience operating in tight grid conditions, changing ECRS use cases, changes to the EEA trigger points, and the addition of 2hr/4hr duration requirement for ECRS/NSRS, respectively). This creates two main concerns:

* The currently approved ASDC framework would not appropriately value different types of AS based on the duration requirements
	+ After deployment, ECRS energy is supposed to be available for 2 hours and NSRS energy is supposed to be available for 4 hours while RRS energy is only available for 1 hour. Based on that, we can’t clearly say that ECRS and NSRS are lower quality ancillary service products than RRS and RegUp especially under longer duration scarcity events. Hence, we can’t say that the ECRS & NSRS demand curves should come completely and exclusively after the RegUp & RRS ASDCs.
* Since the currently approved ASDC framework would result in many hours with prices below current DAM AS clearing price at the total AS requirement, there is greater potential that the ASDC will not procure the total AS Plan or incentivize self-commitment of generation resources, especially in hours when ERCOT operations has, in recent history, been preferring more and not less reserves. In other words, the ASDC framework could result in ERCOT operating closer to the “edge” than it has for the past three years.
	+ Does ERCOT operations have concerns with DAM and RTC parameters set in a way to systemically under procure the total AS requirement which were determined based on reliability needs? Similarly, will ERCOT operations continue to seek a 6,500 to 7,000 MW committed capacity margin post-RTC go-live?
	+ The currently approved ASDC would cause many time blocks during which the system would have to utilize out-of-market actions such as RUCs to commit the needed reserve capacity as DAM and RTC would not clear the full AS Plan. This would also have a significant impact on market investment signals.

**Consideration in determining the ASDC**

* AS MW requirement is a conservative average value that is determined by studying historic need. That is, the requirement is an approximation of the need and the last MW of the requirement is less valuable than the first MW of the requirement. Therefore, the ASDC for each AS should, to the extent reasonably feasible, reflect that diminishing marginal utility (i.e., be a sloping demand curve).
* Regulation could continue to be protected by the current ASDC approach of valuing the opportunity cost of all RegUp at SWCAP, or it could be valued based on the power balance penalty curve (PBPC), which is a current proxy for the RegUp ASDC.
* Regulation is available in 5 minutes while some part of RRS like FFR is available in 30 cycles. Some part of RRS could therefore be considered more valuable than some amounts of RegUp.
* RRS from load resources is not deployed until EEA2
* ECRS capacity is currently reserved and per the ECRS deployment criteria ECRS is completely deployed between EEA1 & EEA2
* Offline NSRS is deployed when PRC< 3200MW
* EEA1 is triggered based on PRC <2500

 **Proposed ASDC option**

* Leave RegUp ASDC as-is; alternatively, allocate first block of ASDC to (Reg req – 200 MWs) of RegUp and allocate 200MWs of RegUp to ASDC based on PBPC price points
* Allocate second block of ASDC to max(X% of RRS , (2500-first block of reg)
	+ Set X to 60% to represent the % of RRS that can be provided from Load Resource for the season
* Allocate third block of ASDC to Y% of ECRS
	+ Set Y to 50% to represent the % of ECRS that can be provided from Load Resource for the season
* Split the remaining curve between the remaining requirements of RRS/ECRS/NSRS based on exponentially decreasing % for RRS, linear curve for ECRS and exponentially increasing % for NSRS. For example: this can be done by allocating the % of different AS one after the other in blocks based on the % shows in the table below

For illustrative purposes, the table below shows the % of remaining AS requirement that will be split into blocks and graph shows a generic example of how the corresponding block MWs for each AS type might translate into individual ASDCs. The example assumes all MWs of RegUp is put in the first block.

|  |
| --- |
| **% of capacity in each block from each AS** |
| **Blocks** | **RRS%** | **ECRS %** | **NSRS %** |
| 1 | 40 | 21.25 | 1 |
| 2 | 25 | 18.75 | 2 |
| 3 | 15 | 16.25 | 3 |
| 4 | 9 | 13.75 | 5 |
| 5 | 5 | 11.25 | 9 |
| 6 | 3 | 8.75 | 15 |
| 7 | 2 | 6.25 | 25 |
| 8 | 1 | 3.75 | 40 |



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