



ERCOT Request for Proposals (RFP) for Braunig Must-Run Agreement Questions & Answers – Updated 10/03/24
(includes additional questions and answers 8-12)

Question 1	What eligibility requirements will apply to DR resources?
Answer 1	Eligibility requirements that apply to Demand Response (DR) resources are provided in Sections 1 and 4 of the Governing Document.
Question 2	Can price responsive DR resources participate?
Answer 2	Yes. Price-responsive DR Must-Run Alternatives (MRAs) may participate. However, reductions in Load during the contracted time periods will be reflected in the calculation of a DR MRA’s availability. These calculations may affect the standby, event, and variable payments to the QSE.
Question 3	Can aggregations of customers participate as a DR resource?
Answer 3	Yes. Please refer to Section 2.3.1 of the Request for Proposal (RFP) that states in part, “Each MRA Resource must provide at least 5 MW of capacity; assets may be aggregated to create an MRA Resource.”
Question 4	Can ERS or LR customers participate as a DR resource?
Answer 4	A customer who has provided ERS or another DR service may participate as a DR MRA. However, if a customer is contracted to provide MRA service, it may not commit to provide ERS during any time periods that overlap with any hours for which the associated site has an MRA obligation. Please see Public Utility Commission of Texas rule 16 Tex. Admin. Code § 25.507(d)(4). Additionally, a DR MRA that is a Load Resources may not offer to provide AS during any hours for which the associated site has an MRA obligation.
Question 5	I had a question on these numbers (below). Is this based on a set number of hours per year like the hours in the MRA RFP or something? What is the expected total cost of RMRing the units? CPS Energy’s NSO Part III submissions indicate that the standby cost for the Braunig Resources are as follows: <ul style="list-style-type: none"> • BRAUNIG_VHB1: \$3,330 per hour for one year, \$2,263 per hour for two years; • BRAUNIG_VHB2: \$3,222 per hour for one year, \$2,203 per hour for two years; and • BRAUNIG_VHB3: \$4,171 per hour for one year, \$2,904 per hour for two years.



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	<p>This standby cost must be based on CPS Energy’s initial estimated budget.</p>
<p>Answer 5</p>	<p>Yes, this is based on the total number of hours per year during the contract period.</p> <p>Based on the information provided in the initial estimated budget and NSO Part III submitted by CPS Energy, and assuming the units were contracted to provide Reliability Must-Run (RMR) service for two years,</p> <ul style="list-style-type: none"> • BRAUNIG VHB1 estimated standby cost is \$39,647,760; • BRAUNIG VHB2 estimated standby cost is \$38,596,560; • BRAUNIG VHB3 estimated standby cost is \$50,878,080. <p>Totaling an estimated standby cost of \$129,122,400.</p> <p>ERCOT has informed CPS Energy that they must provide a revised NSO Part III to reflect more accurate costs as estimated Eligible Costs are revised. ERCOT will post any updated NSO Parts III after they are received. .</p>
<p>Question 6</p>	<p>XXXXXX is a supplier of active air emissions filter system’s that could be added to an existing diesel driven engine generator system.</p> <p>The addition of the filter would bring the GenSet into conformance with latest air effluent guidelines.</p> <p>Typical sizes in this retrofit range from 1-2 MW. Others can be reviewed.</p> <ol style="list-style-type: none"> 1. Are there GenSets available that we could review to assess cost for retrofit, and allow for an evaluation of number of GenSets, size of units, and total MW that could be offered?
<p>Answer 6</p>	<p>ERCOT does not know of any publicly available list.</p>
<p>Question 7</p>	<p>XXXXXX is a supplier of active air emissions filter system’s that could be added to an existing diesel driven engine generator system.</p> <p>The addition of the filter would bring the GenSet into conformance with latest air effluent guidelines.</p> <p>Typical sizes in this retrofit range from 1-2 MW. Others can be reviewed.</p> <ol style="list-style-type: none"> 2. Is there direction on the parties “QSE”, that could work with us on this retrofit solution?



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	<p>a. We would expect to offer the product/conversion to the QSE, and have the QSE supply the services to complete the conversion.</p>
Answer 7	<p><u>The list of QSE's is available on ERCOT.com</u></p>
Question 8	<p>a. Is there any geographic preference for an MRA? Does it need to be in the San Antonio area? b. Understanding the timing in the document says this will start in April 2025, is there appetite for something later, such as the end of 2025?</p>
Answer 8	<p>a. An MRA Resource does not have to be in the San Antonio area, but the effectiveness of a Resource is indicated by its shift factor. There is list of helping <u>shift factors by County and Bus</u>. b. Yes, it is possible that a proposal with a Resource that has an initial operational date later than April 2025 could still be helpful.</p>
Question 9	<p>a. Just want to re-confirm with ERCOT that the standby \$/hr price listed in Braunig's NSO, when trying to calculate the total payment over the life of the RMR contract, is multiplied by the number of hours in the year (8760 for the one-year cost and 8760*2 for the two year cost) and not the number of hours per season the MRA resource should be available. b. As a follow up question, is it correct to assume that the standby costs we submit in the XXX MRA submission form should be less than this total payment, converted to \$/MW.</p>
Answer 9	<p>a. See ERCOT's previous answer to Question 5 provided in this document. Note that the answer for Question 5 is based on the initial NSO Part III provided by CPS. CPS Energy has submitted an updated NOS Part III that ERCOT posted to the Secure Area in MIS. A market notice on this updated NSO was also posted on September 30, 2024. b. It is inappropriate for ERCOT to suggest how QSE's should develop their offers.</p>
Question 10	<p>In reviewing the variable payment for deployment, we noticed that since ESRs do not have any Fuel Price, adders, or a heat rate in the traditional sense, that the VPrice is the only tool we have at our disposal in the MRACVP variable. When attempting to calculate the MRAVMT, we noticed that if VPRICE is less than the settlement point price, it appears to us that an ESR, which has zero FIP, fuel adders, and heat rate would owe ERCOT money. And if the settlement point price is equal to VPRICE, the Variable Payment for Deployment is zero. Do we understand this correctly? As a follow up question, is there a limit to VPRICE? And as another follow up question, how does ERCOT compare the potential Variable Payment revenue for Braunig to an RMA? Is there an assumed average SPP and number of deployments per year that can be used to establish a payment floor?</p>

<p>Answer 10</p>	<p>As described in the Governing Document, Paragraph 2 of Section 2.1.3, Variable Payments for Generation Resource MRA or Energy Storage Resource MRA, the Variable Payment for Deployment for ESR MRAs shall be calculated similarly to a Generation Resource MRA as described in grey-boxed Paragraph (1) of Protocol Section 6.6.6.10. The key exception is that instead of the operating cost during MRA hours being calculated based on fuel price, fuel adder and heat rate, the ESR operating costs shall be based on the cost to recharge the ESR. The cost to recharge the ESR is based on the withdrawals (consumption) after the MRA Contracted Hours in which the ESR MRA injected due to ERCOT instructions.</p> <p>For a thermal GR MRA the formula in the grey-boxed of the Protocols for MRAGRCVP is as follows:</p> $\text{MRAGRCVP}_{q,r,h} = \sum_{i=1}^4 \text{Max} [\text{VPRICE}_{q,r}, (\text{FIP} + \text{MRACEFA}_{q,r}) * \text{MRAPHR}_{q,r}] * \text{Min}(\text{RTMG}_{q,r,p,i}, \text{MRACCAP}_{q,r,m} / 4)$ <p>For an ESR MRA, $(\text{FIP} + \text{MRACEFA}_{q,r}) * \text{MRAPHR}_{q,r}$ is replaced with the weighted average recharge cost.</p> <p>For an ESR MRA: $\text{MRAGRCVP}_{q,r,h} = \sum_{i=1}^4 \text{Max} [\text{VPRICE}_{q,r}, \text{weighted average recharge cost}] * \text{Min}(\text{RTMG}_{q,r,p,i}, \text{MRACCAP}_{q,r,m} / 4)$</p> <p>Example for MRA Contracted Hours with a deployment instruction:</p> <p>Example 1: VPRICE < Weighted Average recharge cost:</p> <p>VPRICE = \$40/MWh, Weighted Average recharge cost= \$45/MWh Injection price = \$50/MWh RTMG = 100 MWh</p> $\text{MRAVAMT}_{q,r,h} = (-1) * (\text{MRAGRCVP}_{q,r,h} - \text{MRARTREV}_{q,r,h})$ <p>And,</p> $\text{MRARTREV} = \text{RESREV} = \$50 * 100 = \$5,000$
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For the ESR MRA:

$$\text{MRAGRCVP} = \text{Max}(\text{VPRICE, Weighted Average recharge cost}) * \text{RTMG}$$

$$\text{MRAGRCVP} = \text{Max}(40, 45) * 100 = \$4,500$$

$$\text{MRAVAMT } q, r, h = (-1) * (\$4,500 - \$5,000) = \$500 \text{ (charge)}$$

The net revenue result is \$4,500 (\$5,000 - \$500) during the Contracted Hours with a deployment instruction, which exactly covers the cost to recharge. This is similar to the way a thermal Generation Resource would be compensated.

Example 2: VPRICE = Weighted Average recharge cost:

$$\text{VPRICE} = \$40/\text{MWh},$$

$$\text{Weighted Average recharge cost} = \$40/\text{MWh}$$

$$\text{Injection price} = \$50/\text{MWh}$$

$$\text{RTMG} = 100 \text{ MWh}$$

$$\text{MRAVAMT } q, r, h = (-1) * (\text{MRAGRCVP } q, r, h - \text{MRARTREV } q, r, h)$$

And,

$$\text{MRARTREV} = \text{RESREV} = \$50 * 100 = \$5,000$$

For the ESR MRA:

$$\text{MRAGRCVP} = \text{Max}(\text{VPRICE, Weighted Average recharge cost}) * \text{RTMG}$$

$$\text{MRAGRCVP} = \text{Max}(40, 40) * 100 = \$4,000$$

$$\text{MRAVAMT } q, r, h = (-1) * (\$4,000 - \$5,000) = \$1,000 \text{ (charge)}$$

The net revenue result is \$4,000 (\$5,000 - \$1,000) during the Contracted Hours with a deployment instruction, and this value exactly covers the cost to recharge. This is similar to the way a thermal Generation Resource would be compensated.

- There is no limit (cap) to the value of VPRICE that can be offered.



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	<ul style="list-style-type: none">• The primary criteria for evaluating the proposals as related to the MRA RFP are listed in Section 4.2, Evaluation Criteria, of the Revised MRA RFP for Braunig Resources.• There is no assumed average SPP and number of deployments per year that can be used to establish a payment floor.
Question 11	Is it possible for an ESR to bid a fraction of its capacity as an RMA?
Answer 11	No. For the MRA hours the capacity of the Energy Storage Resource MRA shall be the entire capacity of the Resource and all of the capacity of the ESR is seen as the ESR MRA and no other capacity can be available to ERCOT from that Resource during the MRA hours. Note the limitation on how much capacity can be offered in the RFP. (The capacity shall be the net maximum rating that can be sustained for 3 consecutive hours.)
Question 12	Are there any limitations or guidance ERCOT has on an ESR’s participation in ancillaries outside of the RMR hours of availability? Aggressively one could assume that an ESR could participate in all hours outside of the RMR hours. More conservatively, one could assume a buffer of +/-3 hours outside of the RMR hours of availability. RTC+B go live date of Dec 2025; this adds to the complexity of the question. We are just looking for what ERCOT would deem a decent set of assumptions about participation in ancillaries and to what extent an ESR could make a realistic case for lost revenue for ancillary service participation (to some degree, this goes back to the question about how many deployments might one realistically expect, and if there is a low, med, and high case already established).
Answer 12	<ul style="list-style-type: none">• Outside of the MRA Contracted Hours, ESR’s (and GR’s) can participate in ancillary services in accordance with the ERCOT Protocols.• The ESR MRA shall be fully charged at the beginning of each MRA period it has an obligation. For example, for the Summer, the ESR MRA shall be fully charged at 1600 and capable of providing 3 full hours at its contracted output level for any 3 hours during that 5-hour period of HE 17 through HE 21.• The resource can participate in the market in the hours outside of the MRA hours, but the resource needs to meet the state of charge requirements described above and is obligated to meet contracted MRA commitments during MRA hours.