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| NPRR Number | [1191](https://www.ercot.com/mktrules/issues/NPRR1191) | NPRR Title | Registration, Interconnection, and Operation of Customers with Large Loads; Information Required of Customers with Loads 25 MW or Greater |
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| Date | January 11, 2024 |
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| Submitter’s Information |
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| Market Segment | Consumers  |

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| Comments |

The Data Center Coalition (DCC) appreciates the opportunity to submit these Comments[[1]](#footnote-1) on the Electric Reliability Council of Texas (ERCOT)'s proposed Nodal Protocol Revision Request (NPRR) 1191, specifically the voltage ride-through topic. DCC’s brief comments and recommendations are presented below.

1. ***Introduction***

DCC is the national membership organization for the data center industry, representing leading data center owners and operators who maintain data center infrastructure across the country and globe. DCC empowers and champions the data center community through public policy advocacy, thought leadership, stakeholder outreach, and community engagement. A majority of DCC’s member companies have investments and operations in Texas.

Traditional data centers provide the underlying infrastructure and services that support distance learning, remote work and collaboration, telehealth, video conferencing, exchange of news and urgent information, e-commerce, government agencies and programs, entertainment, and many other technologies central to our daily lives. They have materially different load profiles, business models, and operational characteristics from crypto mining and crypto staking firms, some of which have demonstrated an ability to rapidly vary demand. DCC’s membership does not include any companies that conduct cryptocurrency mining or cryptocurrency staking as their primary business.

1. ***DCC Comments on Proposed Voltage Ride-Through Standards***
2. **DCC Shares Concerns Expressed by Other Commenters**

The proposed voltage ride-through (VRT) standards have drawn concern from various end users since being proposed in August 2023. In particular, DCC echoes some of the same concerns expressed by Texas Industrial Energy Consumers (TIEC) in comments[[2]](#footnote-2) submitted on August, 28, 2023, including:

* Sufficient information has not been presented on referenced voltage events (including the low-voltage event on December 7, 2022 on the 138-kilovolt (kV) transmission lines near Odessa, in West Texas discussed in NPRR 1191[[3]](#footnote-3)) to support the proposed VRT requirements; and
* NPRR 1191 raises a number of technical and cost challenges for businesses, including the data center industry.

We further discuss data center industry-specific concerns regarding the technical and cost challenges associated with the VRT requirements in NPRR 1191 in the following sections.

1. **VRT Requirements Pose Technical Challenges for Data Centers**

DCC has three fundamental concerns with the VRT requirements outlined in NPRR 1191 and subsequent discussions within ERCOT’s Large Flexible Load Task Force (LFLTF): first, neither “computing loads” nor data center loads are homogenous; second, data centers and large loads use sophisticated equipment that is sensitive to power supply stability; and, third, new technologies may be unable to comply with VRT requirements.

1. *Neither “computing loads” nor data center loads are homogenous.*

Like other large loads in ERCOT, neither computing loads – nor data center loads – are homogenous. Data centers deploy a range of equipment, each with distinct VRT requirements, for safe and efficient operation.

1. *Data centers use highly sophisticated equipment sensitive to power supply stability.*

Just like industrial sites, data centers must protect equipment and ensure the safety of personnel. In previous ERCOT LFLTF discussions, it has been suggested that the standards are better suited for computing loads and data centers. DCC fundamentally disagrees with this assertion. Data centers often take high voltage service through customer-owned or utility-owned substations featuring highly sophisticated equipment. In this regard, data centers are very similar to large industrial loads. What ERCOT has proposed would be problematic for both large data centers and other large loads.

Data center hardware and power supplies, similar to other electronics, are very sensitive to power supply stability. They are designed to a specific operating voltage range specified by the manufacturers. Deviating from this range will deteriorate the optimal performance, reduce longevity, or damage the components beyond repair.

As a result, data centers are designed so that over/under voltage protection will switch the power supply from the utility to the built-in battery system to protect the equipment. The VRT requirements proposed under NPRR-1191, if approved, would result in significant costs for data centers as they would either need to: 1) replace damaged equipment; or 2) invest a significant amount of capital to identify, purchase, and install new equipment to comply.

1. *New technologies may be unable to comply with VRT requirements, including for data centers*.

As other commenters have noted, while these proposed requirements have been based on the Institute of Electrical and Electronics Engineers (IEEE) standards for low-voltage equipment, the proposed VRT requirements do not take into account the latest in equipment advancements. We disagree, however, with comments that assert that this proposal is only applicable for data center or computing load. Like industrial customers, data centers are not homogenous and consist of medium and high-voltage loads. The rapid pace of technological advancement in the data center industry means that new technologies may not be able to meet these standards, just like the newest technologies for large manufacturing loads.

Moreover, imposing a single VRT requirement for data centers could potentially put the equipment at risk of severe damage, a risk that is similar to industrial sites. This could lead to significant financial losses, given the high cost of data center equipment and the critical role it plays in data center operations.

1. **ERCOT Should Further Analyze the Voltage Issue, Evaluate Solutions, and Any Potential VRT Standards Should Include a Grandfathering Provision**

Given the concerns outlined above, we agree with other commenters that further analysis and ideation of solutions is necessary before proceeding.

After ERCOT has more closely analyzed the issue and evaluated solutions, DCC believes that any consideration of VRT standards should only apply to new loads coming into service well into the future. Data center development and interconnection projects take several years of planning, and any changes to equipment or operations made effective after development is underway create significant cost and timeline risks for customers. A sufficient grandfathering period would spare existing customers from new standards that would pose significant technical challenges and costs associated with compliance.

1. ***Conclusion***

DCC appreciates the opportunity to provide these Comments on the proposed VRT standards outlined in NPRR 1191. We respectfully request that ERCOT consider DCC’s concerns and recommendations outlined in both these and our previously submitted Comments.

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| Revised Cover Page Language |

None.

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| Revised Proposed Protocol Language |

None.

1. The Data Center Coalition ([www.datacentercoalition.org](http://www.datacentercoalition.org)) is a membership organization of leading data center owners and operators. Public testimony and written comments submitted by DCC do not necessarily reflect the views of each individual DCC member. [↑](#footnote-ref-1)
2. Texas Industrial Energy Consumers (TIEC), NPRR 1191 Comments, August 28, 2023, pages 3-4. [↑](#footnote-ref-2)
3. NPRR 1191, Registration, Interconnection, and Operation of Customers with Large Loads; Information Required of Customers with Loads 25 MW or Greater, August 1, 2023, page 4. [↑](#footnote-ref-3)