[Commenter 2]

Comments on Draft ISC Contract and Preliminary Proposal Requirements

From: [Commenter 2]
Sent: Wednesday 5/13/2026 9:48 AM
To: Illinois-RFP <Illinois-RFP@nera.com>
Subject: [Commenter 2] Energy Storage Comments on Draft ISC RFP

Good morning,

Thank you for the opportunity to provide feedback on the Draft ISC RFP. [Commenter 2]'s feedback in contained in the attached document.

Please do not hesitate to reach out if you have any questions or requests for clarification.

Many regards,

[Commenter 2]

[redacted]

[redacted]

[redacted] **Comments on Illinois Power Authority Energy Storage RFP**
May 13, 2026

To: Illinois Power Authority
Illinois-RFP@nera.com
12 May 2026

To whom it may concern,

[redacted] is pleased to submit the below comments to the draft Summer 2026 Index Storage Credit (ISC) Energy Storage RFP. [redacted] we appreciate the opportunity to provide feedback on steps the IPA can take to allow Illinois consumers to realize the benefits of non-lithium energy storage systems (such as VFB) through this competition.

Specifically, the benefits of [redacted] VFBs include:

- Can deploy power nominally from 2-24 hours
- Last 30 years without degradation
- Are non-flammable and have no thermal run-away
- Have no limitation on cycling
- Have no Chinese supply chain components and are non-FEOC
- Work effectively in extremely cold (-40 F) and extremely hot (+110 F) environments
- Can respond to system signals in less than 5 ms.

For these reasons, more and more developers are deploying VFBs both behind and in front of the meter. If you would like any clarification on our comments below, my contact information is shown below.

Regards,

[redacted]

[redacted]

[redacted]

Background on [redacted]

Vanadium flow batteries

Vanadium flow batteries (VFBs) store their energy in liquid electrolyte solutions containing vanadium ions. When charging or discharging, the electrolyte is pumped through a cell stack where electricity is generated or stored. Unlike Li-ion batteries, power and energy are independent, scalable variables. A VFB's cell stack determines the battery's power. The amount of electrolyte, which can be increased or decreased, determines the amount of energy a VFB can supply.

- **No risk of thermal runaway**- VFB present no risk of thermal runaway, explosion or fire. [redacted] VFB have been tested under UL9540A fire safety and building code requirements for battery energy storage systems. With low noise and no toxic gas release, the battery can be deployed in urban and even residential environments. [redacted] batteries are also built with an advanced leakage prevention and containment system, and deployed systems have experienced no water-based recorded leakage incidents in 25 years of operation.
- **Better cycle life and depth of discharge** – VFB can deliver tens of thousands cycles with virtually no degradation – even with repeated cycles of deep discharge. [redacted] internal test data substantiates battery performance over 30,000 full discharge cycles. System performance has also been independently validated in a Journal of Energy Storage paper documenting a [redacted] battery with stable performance and almost no capacity loss over (at the time) 12 years of operation.[1]
- **No augmentation required**- [redacted] batteries deliver stable round-trip efficiency (RTE), high availability, and do not degrade over time. Unlike Li-ion batteries, [redacted] VFB do not require augmentation.
- **Secure supply chain** - Vanadium is a widely available, non-rare earth element found on every continent. It is not a heavy metal and is non-toxic. The supply chain for [redacted] batteries is 50 percent US and completely independent from Foreign Entities of Concern (FEOC), one reason why [redacted] batteries have been selected by the Department of Defense for deployment on multiple military installations, including the Marine Corps Mountain Warfare Training Center in Bridgeport, California.
- **Sustainability** - [redacted] batteries do not contain rare earth materials and are engineered for easy repair and refurbishment. The vanadium electrolyte does not

[redacted]

[redacted]

[redacted]

degrade, enabling reuse and supporting circular economy. More than 85 percent [redacted]'s system is reusable and remaining material is almost entirely recyclable.

Illinois Power Authority Request for Proposals

A. Comments on 1 May Redline of "Indexed Storage Credit Agreement (DRAFT)"

Sections 2.5 "Initial Contract Capacity and Operational Characteristics" and 2.6 "Minimum Operational Requirements"

Section 2.5 and 2.6 require that battery systems:

(1) *are able to operate for a duration of 4 hours of continuous discharge of the Initial Contract Capacity per hour*
(2) *operate at a minimum RTE of seventy percent (70%) provided that the RTE shall be at least eighty-five (85%) for the first Delivery Year"*
(3) *be capable operating for a minimum Availability of four thousand three hundred twenty hours (4,320) hours per Delivery Year of the Contract Capacity.*

[redacted] **Comment:** [redacted] manufactures standardized modular container systems (0.25 MW / 1 MWh to multi-MW / 100+ MWh configurations) that can be deployed across diverse use cases. We regularly design multi-megawatt capacity systems that are capable of 8 or 12 hours of continuous operation and full depth of discharge with virtually no degradation over the lifetime of the battery. [redacted] VFB significantly exceed the minimum number of operating hours stipulated in the Draft Indexed Storage Credit Agreement. The batteries have a maximum RTE or 84 percent but that is only achieved under ideal conditions. A more realistic RTE for VFB in real-world operating conditions is 70 percent. A trade-off that VFBs present is that they have a 100% depth of discharge (i.e., there are no performance penalties realized by running the battery from 0% to 100% state of charge or vice versa). VFBs also do not degrade due to cycling, and can be cycled 24x365. In future acquisitions, the Authority might consider qualification parameters that permit trade-offs between operating parameters such as RTE, hours of continuous operation and depth of discharge to encourage solutions to a range of grid support requirements.

B. Comments on 22 April "Invitation to Comment"

Topic 1: Commercial Readiness

A Bidder must provide evidence that the Seller or Bidder has notice to proceed in owning or operating energy facilities with a combined nameplate capacity of at least 100 MW. The required supporting documentation for each energy facility includes the notice to proceed, which must indicate the Bidder or Seller as the entity that owns or operates the facility.

[redacted]

[redacted]

[redacted] **Comment:** Please clarify that it is the project developer that is required to have 100MW under management rather than the technology provider. [redacted] Deployments support microgrid operations (commercial, industrial, military), and community power. [redacted] While that system was originally designed for resilience purposes, it now supports peak shaving and participates in PJM's frequency regulation market. [redacted] batteries are operating on every continent (except Antarctica) and in every climate, including arctic conditions – with no impact on capacity or performance.

Topic 4: Double Payment

The Agency is interested in learning more about various pieces of the capital stack for energy storage projects, especially those pieces that may have instructions or operational requirements that are counter to the requirements in the ISC Contract. Additionally, the Agency is looking to inform the understanding of potential incentives/benefits/sources of additional support that could impact ISC calculation formula.

[redacted] **Comment:** The capital stack for a VFB project is different from that of a Li-ion battery. In a typical flow battery system, the electrolyte can account for roughly 50 percent of the total system cost. However, a feature of the electrolyte used in [redacted]'s VFB is that it does not degrade through operation of the battery. At the end of the battery's useful life, [redacted]'s electrolyte can be reused in the next battery or, alternatively, be reclaimed and used to make high-grade steel. Incentivizing utilities to establish strategic reserves of electrolyte, similar to critical, long-lead-time equipment needed to recover from natural disasters, physical attacks, or supply chain disruptions could reduce battery costs and mitigate battery supply chain risk – particularly given China's dominant position in the Li-ion supply chain. The IPA might also consider establishing criteria that value reuse and/or recycling of battery components in future solicitations.