DER-VET Task Force

02/02/2023

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- To the use, promotion or endorsement of particular vendors, contractors, consultants or products.

Webcast and Recording Notification

- The webcast is being recorded along with all Q&A. Your participation provides consent to that recording.

- As a result, please make sure your phone is on mute throughout the webcast unless speaking. Do not place your phone on hold.

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Agenda

- Polling Follow Up
- Public DER-VET Case Studies

2023 Polling Results

- Include thermal storage
- More examples that can be loaded
- Better documentation on power flows and constraints
- Probabilistic resilience
- Explicit DC coupling
- Dark mode
- More flexible results (break down into months, days, etc. instead of just years)
- Warning in GUI and CLI when perfect foresight is used

2023 Polling

- What else?

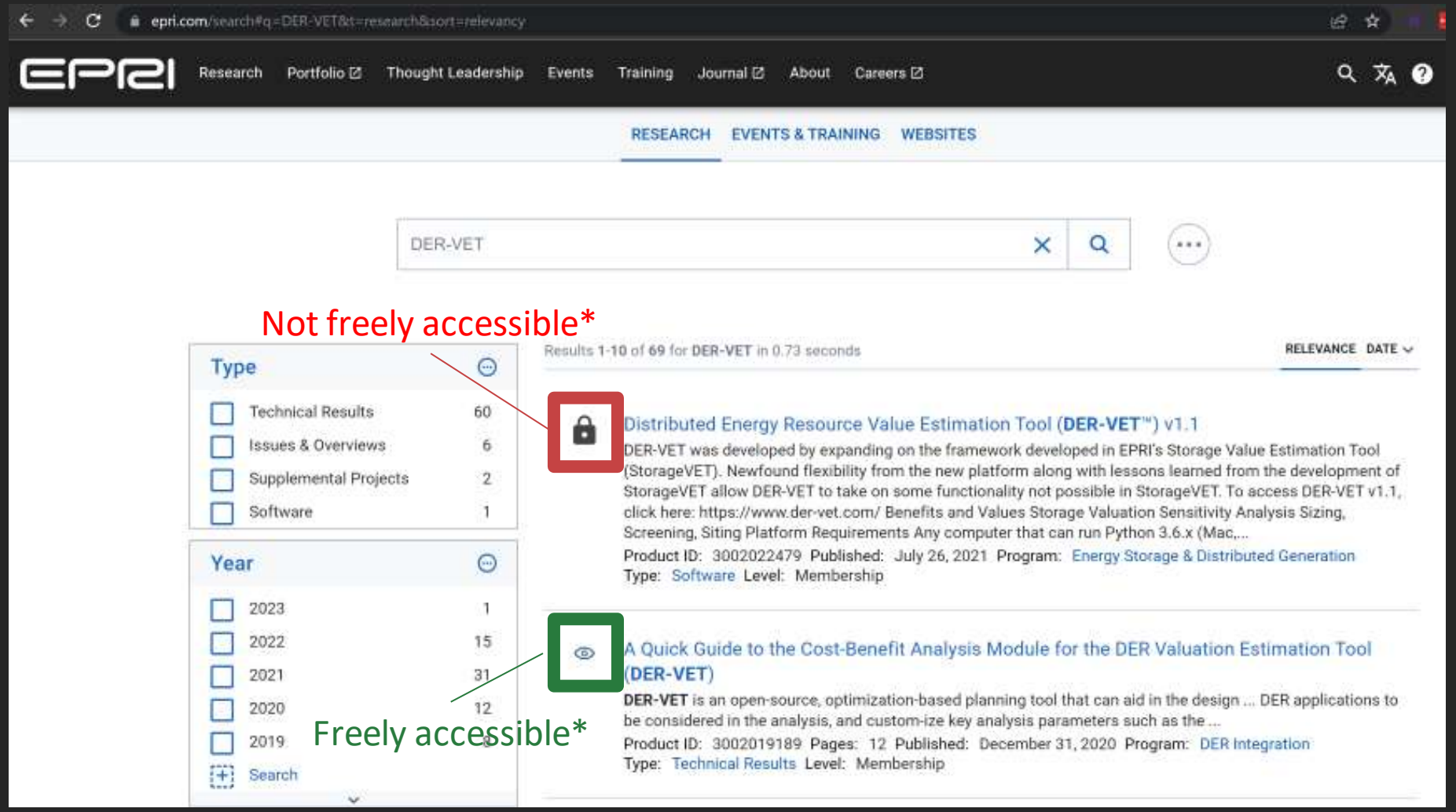
Public Case Studies

- https://storagewiki.epri.com/index.php/Public_Case_Studies

Name	Description
Value Streams in ConEd Territory	This report explores the value of energy storage based on different ownership models, locations, interconnection methods, and value stream combinations in Consolidated Edison service territory.
Valuation of Hydrogen Technology on the Electric Grid Using Production Cost Modeling	This work develops and applies a systems modeling approach, pairing capacity expansion results with production cost modeling simulation, to assess the system-level economic impacts of hydrogen-grid integration for future high-renewables scenarios in the U.S. Western Interconnect.
Combined Heat and Power	This report describes use cases for analyzing CHP at sites with known electric and thermal loads.
Military Installation Microgrids	The project investigated the viability of long-duration energy storage enabled microgrid in improving energy security, reliability, and providing continuity of service for critical loads during grid outages at military installations.
Decarbonizing Resilience	This paper presents six recent microgrid case studies that improve community resilience and feeder reliability.

Also, www.epri.com has a lot of free research results

- Look for the eye symbol next to search results for free, public content



* Assuming you are not logged in or don't have a membership to EPRI

Details of DER-VET Release v1.2.3 February 6, 2023 (I)

- **Feature**: EPRI code signing certificate added to Windows GUI Installer
  - The digital certificate ensures that the software can be safely downloaded
- **Bug**: Controllable Load Technology not working
  - DER-VET GUI can now save this technology to a project
  - DER-VET CLI will allow this technology to be active
- **Bug**: System Requirement Constraints not working correctly
  - POI constraints set with max_export and max_import corrected to include generation from all technologies.
  - User service minimum constraints can ignore values by setting them to 0
  - Have DR and RA minimum DER dispatch power constraints exclude Load and Intermittent Power
- **Bug:** Backup Energy Service not working
  - Allow the creation of a minimum energy constraint

Details of DER-VET Release v1.2.3 February 6, 2023 (II)

- **Feature**: Improvements to Reliability Sizing module
  - Uses a 72-hour continuous period centered on critical load peak for checking infeasibilities
  - Fixes the size of non-ESS DERs first and then iterates on ESS sizing
- **Bug**: GUI does not allow some sub-hourly time step frequencies
  - Simplify and fix how the backend handles input time frequencies
- **Bug:** Results files show data as a fractions of 1 with a percent label
  - Report all relevant data in percent (0-100) and with a percent label (%)
- **Bug:** Battery Auxiliary Load input not recognized
  - Adds to Total Load, and to aggregate power variables for POI constraints

- *Please view the CHANGELOG files for more details.*