



Memorandum

To: ISO Board of Governors

From: Khaled Abdul-Rahman, Ph.D., VP and Chief Information & Technology Officer

Date: May 14, 2025

Re: Decision on energy management system upgrade project

This memorandum requires ISO Board of Governors action.

EXECUTIVE SUMMARY

Management requests the ISO Board of Governors approve an upgrade to the existing energy management system (EMS), which was originally implemented in 2019. ISO staff have assessed the business and technical requirements to ensure the proposed upgrade fulfills user needs for functionality, performance, usability, accessibility and security. Management recommends the following motion:

Moved, that the ISO Board of Governors approves the capital project budget of \$19.5 million for the energy management system upgrade project, as described in the memorandum dated May 14, 2025.

DISCUSSION

The ISO's energy management system (EMS) is a mission-critical tool for grid operations, serving as a monitoring, decision support, and control system. It offers real-time situational awareness to ISO system operators by gathering data, executing supervisory control actions to maintain system balance, and providing system operators with essential guidance in identifying and addressing fault conditions.

The EMS system must be upgraded due to the following reasons:

- The production hardware, including consoles, was procured in 2018 and 2019 and is due for a refresh. As a best practice, the ISO recommends updating the hardware every five to seven years to avoid end-of-life issues and ensure continued supportability.
- Third-party software components are approaching their end-of-support agreement, which expires in June 2028.

Like any technology system, the EMS software components require these upgrades to proactively ensure future security and compliance status.

The EMS upgrade offers several other significant advantages, including:

- Enhanced performance, robustness, and security achieved through more advanced hardware.
- Accelerated adoption of future vendor application updates enabled by utilizing the most current EMS software release.
- Improved integration with other systems, from the same vendor, thanks to alignment with the latest base system.

The vendor has proposed a two-year timeline for updating EMS to its latest release, aligning with the June 2028 deadline. The ISO plans to initiate the project in June 2025, with the goal of completing it by end of 2027, allowing adequate time for user acceptance testing and parallel operations.

BUDGET & SOURCE OF FUNDING

Based on the ISO business needs to update the EMS along with the hardware and third-party software, Management recommends the Board authorize a budget of \$19,500,000. The large size of this project warrants carving it out separately from the overall 2025 project budget, which is set at \$25 million. The cost of the project will be funded entirely from capital reserves on hand. Capital reserves come from cash-funded capital collected as part of the annual revenue requirement. An approval of this request will have no impact on the revenue requirement or grid management charge rates.

CONCLUSION

Based on the need as described above, Management recommends the Board authorize Management to approve the budget amount of \$19,500,000 for the EMS upgrade project.