



GREEN STORAGE TWG

2025 Review and 2026 Plans

Presented by Don Goddard, Chair

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Green Storage TWG 2025 Accomplishments

- [Green Storage TWG Charter link](#)
- Recent completed work - summary:
 - Released Emerald Device Level Spec V1.0
 - Emerald System Level Spec V5.0 draft ready for public review
 - Supported 2024 EPA DCS Unit Shipment Report Submissions; 2025 in waiting for Energy Star request
 - Collaboration with TGG on EU Lot9 Regulatory updates
 - Ongoing Industry Support for V4.0 Emerald Measurement Specification test tools & kits
 - Engaged w/ the EPA regarding revised/future test methodologies
 - Planning to use SPEC file IO revised workloads and upgraded toolset for Emerald 5.0
 - Ongoing technical advisory for SNIA-J for next release of Japan TopRunner Program

Green Storage TWG ROADMAP- 2026

Approximate and subject to change

Update 12-17-2025

		CY2026												CY 2027				CY2028
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Q1	Q2	Q3	Q4	
#	Events																	
1	SNIA-GTWG F2F													▽				
	Invite EPA to concall																	
2	EPA-SNIA Industry Meetings		▽						...as needed...					▽				
	DCS Stakeholder Meeting																	
3	ENERGY STAR Data Analysis (on file submittals)		▽															
	V2.0/2.1 data analysis																	
4	Emerald System Spec v5.0		▽															
	CTS lite replacement for Vdbench																	
	Update to Spec Storage 2020																	
	Spec V5.0 Public review																	
	Submit for SNIA Approval																	
	Publication																	
5	ISO version of Emerald System Spec 5.0 (tentative)																	▽
6	Emerald Device Spec V1.0																	
	Test Community Readiness																	
	Future:																	
	EPEAT Technical committee to form in Q1FY26																	
	AI Workloads																	
8	Partner Collaboration/Tracking	----->																

ESTAR, ITI/ TGG (incl 80PLUS, Digital EU), EU Lot 9, ASHRAE, SPEC-Storage/Power, SNIA-Jpn TopRunner, ISO, ETSI, DMTF

Green Storage TWG Membership as of 9-Jan-2026

- ▣ Cerabyte, Inc.
- ▣ Dell Technologies
- ▣ Ellisys Group SA
- ▣ HPE
- ▣ Hitachi
- ▣ Huawei Technologies
- ▣ IBM
- ▣ JetIO Technology
- ▣ KIOXIA Corp.
- ▣ Micron Technology Inc.
- ▣ NetApp Inc.
- ▣ Pure Storage
- ▣ RedactIQ Inc.
- ▣ Sandisk Technologies, Inc.
- ▣ Seagate Technology
- ▣ Solidigm
- ▣ Toshiba America

Green Storage TWG Participation

- What is the expected industry impact of this work
 - One architecturally unbiased test methodology to serve regulatory bodies worldwide
 - Proactively provide a single test methodology worldwide
 - Industry knowledge of storage system power consumption and best practices/configurations to optimize power usage w/o compromising system functionality
- What is the industry segment relevance
 - Storage System Manufacturers; Storage Device Manufacturers; DCIM SW Vendors
- Why you should join and participate in Green Storage TWG
 - Participate in developing Standards used worldwide for datacenter data storage power efficiency
 - Influence regulations worldwide related to datacenter data storage power efficiency
 - Refresh and renew focus on best practices (whitepapers, planning tools)
 - Maintain / create competitive advantage in product sustainability
 - Avoid being surprised when a new regulation goes live and affects your product portfolio/revenues
- Who to contact for additional information
 - GTWG Co-chairs: Don Goddard, dggoddard@hotmail.com