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SC14 EEHPC Workshop

Energy Efficiency Considerations for HPC Procurement Documents: 2014

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U.S. DEPARTMENT OF ENERGY NNSA

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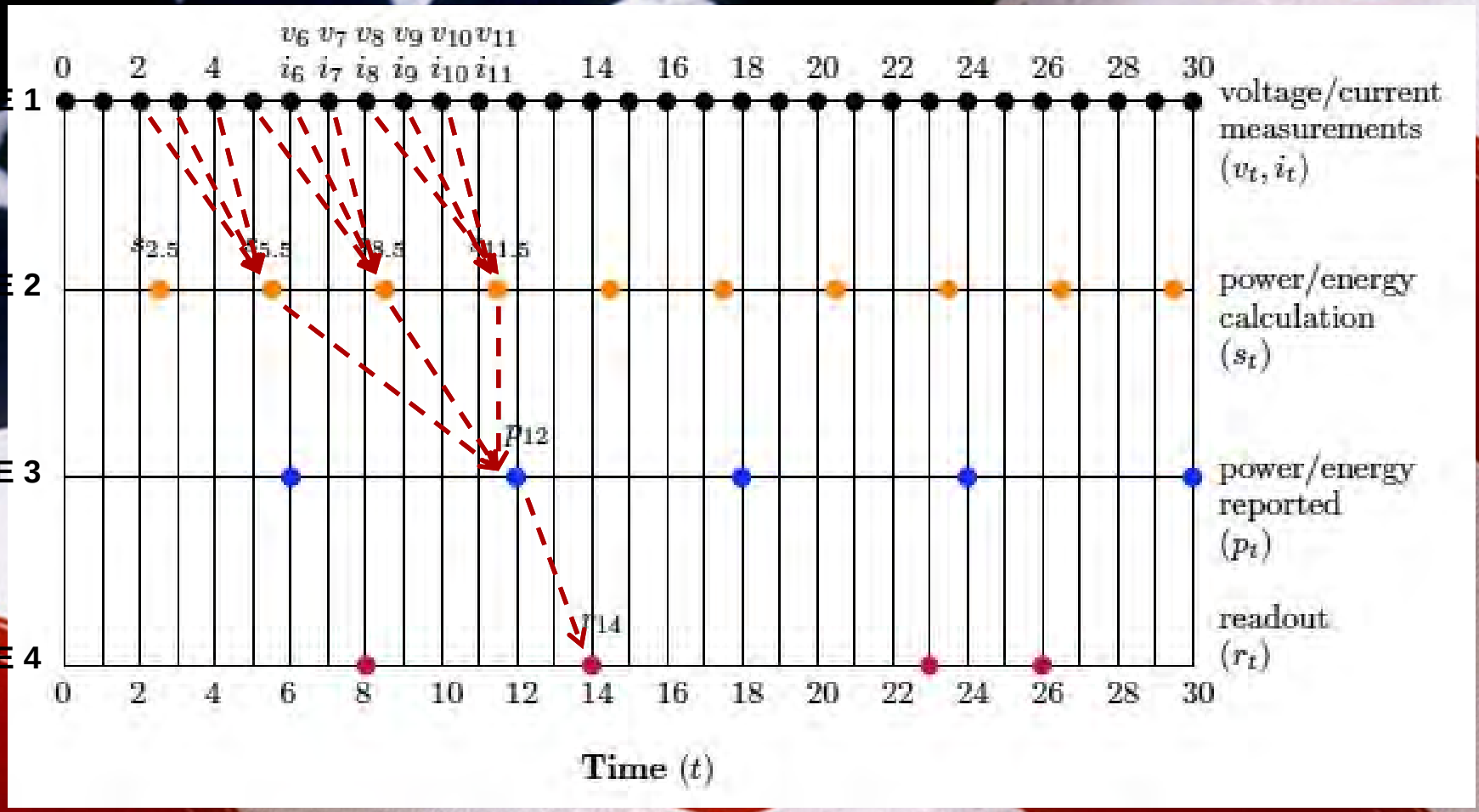
Purpose of Document

- Provide Guidance
  - Have you considered this?
  - Site can pick and choose [illegible] ortance
- Facilitate communica[illegible]
  - Throughout HPC com[illegible]
  - Between HPC com[illegible]nd HPC vendors
- Forecast com[illegible]eds
  - Vendors need [illegible]e
- This is intended [illegible]be a LIVING document

Reported Values vs. Internal Samples



System/Platform/Cabinet

	Internal Sampling Frequency
Mandatory	≥ 10 per second
Important	≥ 100 per second
Enhancing	≥ 1000 per second

		External Reported Value Frequency
Mandatory	Discrete Power (W)	≥ 1 per second
	Average Power (W)	≥ 1 per second
	Energy (J)	≥ 1 per second
Important	Discrete Power (W)	≥ 10 per second
	Average Power (W)	≥ 1 per second
	Energy (J)	≥ 1 per second
Enhancing	Discrete Power (W)	≥ 100 per second
	Average Power (W)	≥ 1 per second
	Energy (J)	≥ 10 per second

Node

	Internal Sampling Frequency
Mandatory	≥ 100 per second
Important	≥ 1000 per second
Enhancing	≥ 10000 per second

		External Reported Value Frequency
Mandatory	Discrete Power (W)	≥ 10 per second
	Average Power (W)	≥ 10 per second
	Energy (J)	≥ 1 per second
Important	Discrete Power (W)	≥ 100 per second
	Average Power (W)	≥ 100 per second
	Energy (J)	≥ 10 per second
Enhancing	Discrete Power (W)	≥ 1000 per second
	Average Power (W)	≥ 1000 per second
	Energy (J)	≥ 10 per second

Component

	Internal Sampling Frequency
Mandatory	≥ 1000 per second
Important	≥ 10000 per second
Enhancing	≥ 1000000 per second

		External Reported Value Frequency
Mandatory	Discrete Power (W)	≥ 100 per second
	Average Power (W)	≥ 10 per second
	Energy (J)	≥ 1 per second
Important	Discrete Power (W)	≥ 1000 per second
	Average Power (W)	≥ 100 per second
	Energy (J)	≥ 10 per second
Enhancing	Discrete Power (W)	≥ 10000 per second
	Average Power (W)	≥ 1000 per second
	Energy (J)	≥ 10 per second