The Future of Science

The health and vitality of U.S. science and technology depends on the availability of the most advanced research facilities. The U.S. Department of Energy's Office of Science leads the world in the conception, design, construction, and operation of these large-scale devices. *Facilities for the Future of Science: A Twenty-Year Outlook* lists 28 new large scientific facilities and upgrades of current facilities that will define scientific opportunities across all fields of science supported by DOE over the next 20 years.

	Priority	Program	Facility
Near-Term	1	FES	ITER
	2	ASCR	UltraScale Scientific Computing Capability
	Tie for 3	HEP	Joint Dark Energy Mission
		BES	Linac Coherent Light Source
		BER	Protein Production and Tags
		NP	Rare Isotope Accelerator
	Tie for 7	BER	Characterization and Imaging
		NP	CEBAF Upgrade
		ASCR	ESnet Upgrade
		ASCR	NERSC Upgrade
		BES	Transmission Electron Achromatic Microscope
Mid-Term	12	HEP	BTeV
	13	HEP	Linear Collider
	Tie for 14	BER	Analysis and Modeling of Cellular Systems
		BES	SNS 2-4 MW Upgrade
		BES	SNS Second Target Station
		BER	Whole Proteome Analysis
	Tie for 18	NP/HEP	Double Beta Decay Underground Detector
		FES	Next-Step Spherical Torus
		NP	RHIC II
Far-Term	Tie for 21	BES	National Synchrotron Light Source Upgrade
		HEP	Super Neutrino Beam
	Tie for 23	BES	Advanced Light Source Upgrade
		BES	Advanced Photon Source Upgrade
		NP	eRHIC
		FES	Fusion Energy Contingency
		BES	HFIR Second Cold Source and Guide Hall
		FES	Integrated Beam Experiment

Near-term
Mid-term
Far-term

Programs:
ASCR = Advanced Scientific Computing Research
BES = Basic Energy Sciences
BER = Biological and Environmental Research
FES = Fusion Energy Sciences
HEP = High Energy Physics
NP = Nuclear Physics

"These facilities and upgrades will revolutionize science—and society. They are needed to extend the frontiers of science, to pursue opportunities of enormous importance, and to maintain U.S. science primacy in the world. Investment in these facilities will yield extraordinary scientific breakthroughs—and vital societal and economic benefits."

Secretary of Energy Spencer Abraham

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