CHARGES TO THE OFFICE OF SCIENCE ADVISORY COMMITTEE

EXECUTIVE SUMMARY: FOUR ADVISORY CHARGES

Establishing four dedicated SCAC subcommittees to guide Office of Science strategic direction

- Charge 1 (Microelectronics): Evaluate R&D landscape and prioritize near- and mid-term investments (July 2027)
- Charge 2 (Open SI Models): Formulate strategic recommendations for developing open foundation models for science and engineering (March 2027)
- Charge 3 (User Facilities): Assess facility policies, data rights, and access for new scientific paradigms (Sept 2027)
- Charge 4 (Biological Sciences): Formulate decadal vision for biological sciences in the era of SI (July 2027)

CHARGE 1: MICROELECTRONICS R&D PRIORITIZATION

- Core Charge: Form a subcommittee to recommend how best to prioritize SC resources and accelerate scientific discovery
- Landscape Assessment: Conduct a rigorous evaluation identifying critical scientific targets, technical opportunities, and gaps
- Investment Priorities: Propose near- and mid-term investments for maximum impact on long-term microelectronics science
- Scientific Scope: Address materials, chemistry, synthesis, processing, devices, circuits, and computing architectures
- Key Coordination: Harmonize findings with DOC CHIPS for America, DoW Microelectronics Commons, and Genesis Mission

CHARGE 2: OPEN SI MODELS FOR SCIENCE

- Core Charge: Form a subcommittee to formulate strategic recommendations for SC to lead in open models for science
- Private-Sector Leverage: Determine how SC can build upon U.S. commercial open models while addressing scientific needs
- Security & Openness: Balance open scientific exchange with protecting economic and national security
- Data Governance: Formulate strategies to safely inform open models using DOE open and protected data resources
- Key Coordination: Synchronize recommendations with SCAC Genesis Mission activities and national laboratory experts

CHARGE 3: MODERNIZING USER FACILITY POLICIES

- Core Charge: Form a subcommittee to evaluate SC user facility operational practices and policies for new research paradigms
- Data Rights & Policies: Evaluate progress on revising data policies and clarify guidance on data rights in user agreements
- Access & Allocation: Recommend evolutions in peer review, operational hours, accelerated pathways, and targeted campaigns
- Partnering Modalities: Assess best practices internationally and expand multi-facility and private-sector access
- International Partnerships: Identify best practices and innovative frameworks that balance international collaboration with required access protocols and restrictions

CHARGE 4: DECADAL VISION FOR BIOLOGICAL SCIENCES

- Core Charge: Form a subcommittee to re-envision the long-term mission, strategic posture, and operational impact of biological sciences within BER
- Decadal Vision: Define grand biological challenges BER should prioritize to advance U.S. biotechnology innovation
- Autonomous Infrastructure: Advise on expanding SI-enabled autonomous laboratories, automated platforms, and user facilities
- Predictive Bio-Models: Define BER role in developing and stewarding predictive biological models and in gathering, curating, and stewarding datasets for these models
- Key Coordination: Leverage BER environmental science, other SC programs, DOE applied energy offices, and federal agencies

THANK YOU