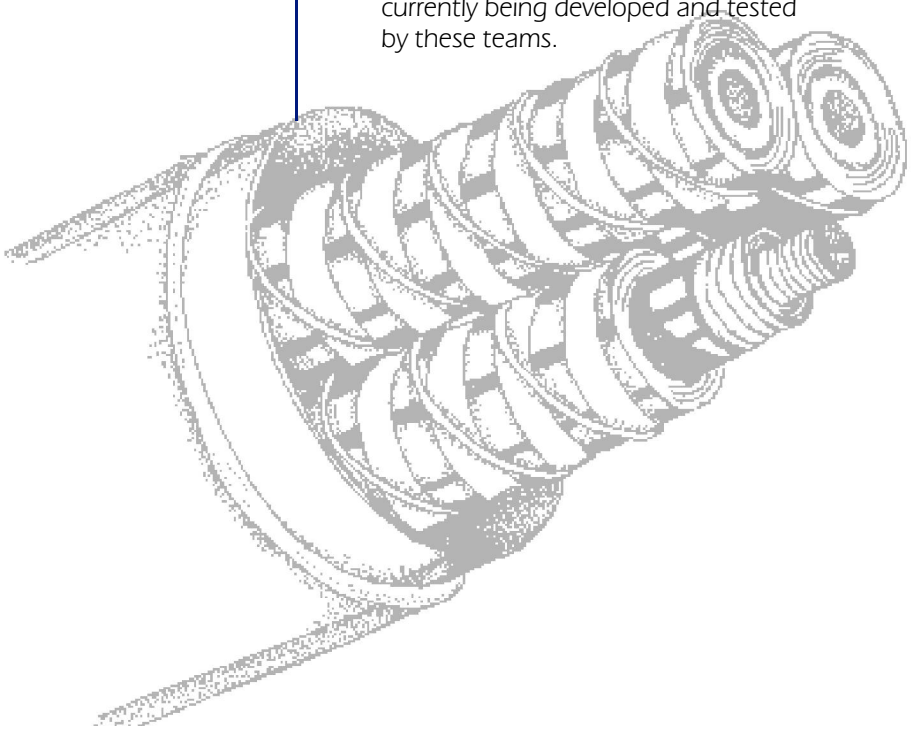
Superconductivity Partnership Initiative

Accelerating Technology

The Superconductivity Partnership Initiative (SPI) is an integral part of the Department of Energy's Superconductivity Program for Electric Systems and is designed to meet the challenges of global competitiveness in a brand new technology. DOE has created this innovative partnership structure to accelerate the typical technology development cycle.

The SPI is Unique Because:

- Vertically integrated teams form alliances along the market channel and join forces in an impressive Department of Energy cooperative effort between government and industry.
- SPI teams develop utility technologies, using the most advanced ideas from the national laboratories, components from wire manufacturers, and incorporating the requirements of end-users.
- A new generation of power equipment will be introduced into the marketplace in 5-10 years based upon prototypes currently being developed and tested by these teams.



Superconductivity Partnership Initiative Teams

Lockheed Martin Corporation
American Superconductor Corporation
Southern California Edison Company
Los Alamos National Laboratory

1995: Test 2.4 kV HTS current limiter at Southern California Edison substation

General Electric Company
Intermagnetics General Corporation
Niagara Mohawk Power Corporation
New York State Institute on Superconductivity
New York State Energy and Development Authority
Argonne, Oak Ridge, and Los Alamos National Laboratories

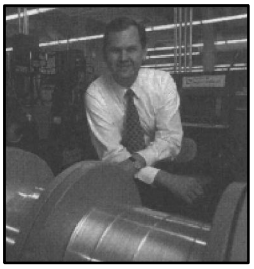
1995: Test world's first HTS coil for 100 MVA generator

Reliance Electric Company
American Superconductor Corporation
Centerior Energy
Electric Power Research Institute
Sandia National Laboratories

1996: Test world's first 125 hp HTS motor

Electric Power Research Institute
Pirelli Cable Corporation
American Superconductor Corporation
Los Alamos and Oak Ridge National Laboratory

1998: Test 30 meter, 115kV HTS cable

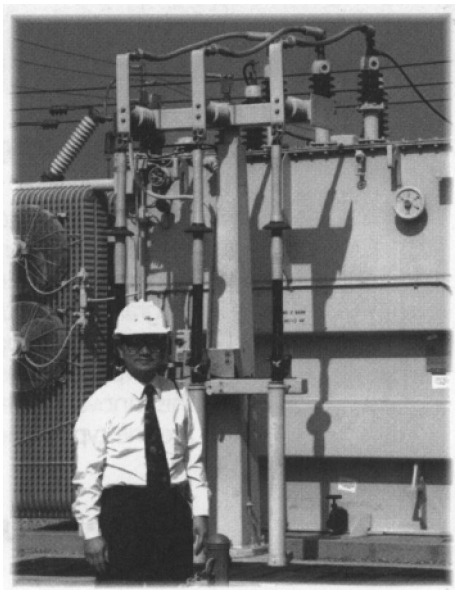


Dr. Greg Yurek, CEO
American Superconductor Corporation

The SPI: Helping Industry Exceed Expectations in HTS

Lockheed Martin

The Lockheed Martin (LM) 2.4 kV fault current limiter is proceeding ahead of schedule and exceeds original specifications. Using a design from Los Alamos National Laboratory, LM worked closely with the Superconductivity Coordinating Committee for Electric Power, utility representatives, American Superconductor Corporation, and Southern California Edison (SCE) field engineers. The result: this proof-of-concept model already meets stringent field safety and ruggedness requirements, and SCE will test the prototype in an actual installation.



J.R. Gaines, Jr.
Vice President and General Manager
Superconductive Components, Incorporated

American Superconductor

American Superconductor Corporation (ASC), a major U.S. HTS wire manufacturer, is an integral part of the SPI program. While at Massachusetts Institute of Technology, Professor Greg Yurek formed this small company in part due to successful early work funded by DOE. Now CEO, Yurek has 120 high-wage employees. ASC works closely with the national laboratories in the Superconductivity Program for Electric Systems to develop energy applications of HTS, is on 3 Superconductivity Partnership Initiative teams, and participates in the Department of Energy Small Business Innovation Research (SBIR) program.

The Next Step

DOE's investment is contributing to a strong, emerging U.S. HTS industry, which, is already making wire in lengths and capacities useful for many applications. Promising applications for the electric power industry have been identified and proof-of-concept testing is under way.

DOE expects to fund additional SPI projects to maintain a strong portfolio of projects that will capitalize on continuing improvements in HTS wire, component, and systems properties.