

FY12 Research & Development

Committee Recommendations – September 2011

No.	Organization	Project	Requested	Committee Recommendation
2323	SW Virginia Higher Ed Center	Cavitated Fuel Oil and Water Emulsion for Energy Efficiency	2,163,000	2,163,000
2428	Center for Advanced Engineering/IMT	CAER-B&W mPower Integrated System Test Loop Phase III	2,916,222	2,916,222
			Total Available	50,925,990
			Total Recommended	5,079,222

#2323 Southwest Virginia Higher Education Center Foundation (SVHECF)

Cavitated Fuel Oil and Water Emulsion for Energy Efficiency and Emissions Reduction

The SVHECF is requesting \$2,163,000 on behalf of CavitroniX to undertake five interrelated applied research and product development activities that would demonstrate energy efficiency attributes and environmental efficacy of the E2C emulsion system in oil-fired furnaces and boilers. CavitroniX would establish headquarters operations, R&D and manufacturing operations in southwestern Virginia. Approximately 48 new jobs are anticipated by 2015 (i.e. 29 by 2013). CavitroniX further projects 8% market penetration within five years which would mean revenue approaching \$100M in year five. Non-Commission funds are available and committed, and assuming that any equipment, property and related improvements acquired using Commission funds accrue directly to the SWHECF there do not appear to be any problematic budget issues. **Committee recommends award of \$2,163,000.**

#2428 – Center for Advanced Engineering/IMT

CAER-B&W mPower Integrated System Test Loop Phase III (Babcock & Wilcox mPower Phase III)

The CAER is requesting \$2,916,222 to complete the construction phase of the Babcock and Wilcox Nuclear Energy, Inc. Integrated System Test (IST) facility for the mPower reactor. \$7,437,461 of TCR funds have previously been awarded for Phase I and Phase II. Phase III completes procurement and installation of process equipment. The CAER owns all assets purchased, installed and constructed. Staff wishes to note that the beneficiary has already exceeded its commitment for hiring at both the CAER and the City of Lynchburg operational headquarters, and there is active discussion of additional engineering opportunities that will directly enhance the nuclear industry economic cluster that will be pivotal to the economic expansion in Central Virginia. Moreover, there is a letter of intent between B&W and the Tennessee Valley Authority (TVA) to jointly pursue development of a construction permit and operating license for up to six mPower plants. Further, visitation to the Bedford County CAER facility by potential domestic and international clients is already underway as discussed in the initial application, and there is

every reason to believe that the economic impact projections provided by Mangum Economic Consulting, LLC will at least be fully realized. All required matching monies are committed and available. Both Phase I and Phase II awards were made without referral to the VEDP for vetting based upon the fact that only construction was involved rather than there being a specific research program that was to be funded. Accordingly, **Committee recommends an award of \$2,916,222.**