

Executive Summary:

A Junior Faculty Development Program in Nuclear Energy Systems at The University of Texas at Austin

The **objective** of the program is to catalyze the junior faculty member's development of a sustainable research and teaching program in these fields. A sustainable program is one that attracts ongoing, stable research funding from a broad range of sources, maintains an outstanding academic reputation, and consistently places students in prominent positions in industry, the laboratories and academia. A rigorous metric is proposed to quantify progress toward these goals. Early-career funding enables the faculty member and his/her supported students to accumulate a track record of success; in essence it is leveraged many times over. The central **benefit** of the program is thus to establish, via the faculty member's graduates, a pipeline serving the needs of the nuclear industry in Texas and nationwide. Texas will remain a key state for the industry: four or more new reactors are poised to be added to its existing fleet of four power reactors. These reactors, as well as the NRC Region IV Headquarters in Dallas, have employed multiple UT-Austin graduates in the past five years alone. A successful program will serve the demands of these industries for decades to come.

The **commitment** of UT-Austin to the success of this effort is reflected by the multiple sources of matching funding: funding commitments come from the Cockrell School of Engineering and the Mechanical Engineering Department. These are augmented by an in-kind contribution from the University whereby one-half of the facilities and administrative have been waived. Together these demonstrate a strong commitment to the success of the junior faculty member at the Departmental, College and University level.

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