

ENGY 3310 Fundamentals of Nuclear Science and Engineering

Spring 2016

HW #2: Various Generation III or Generation IV Reactor Systems

Your job for this HW assignment is to do a little research on the subject of Generation III and Generation IV reactor concepts. You certainly will want to start with the discussion in Chapter 11 of your text by Shultis and Faw (and with the brief discussions from class), but you are also expected to dig a little deeper to get a good appreciation for the type of reactors that are currently being built and the ones being studied as possible Gen IV systems for application in the 2025 - 2040 time frame. After your initial review, pick one of the systems that catches your interest and do some further research on this particular type, focusing on its basic design, its safety features, and on its economic potential and ability to address fuel utilization and nuclear waste issues.

Once you have sufficient information, write a short summary paper (3-5 pages) that overviews the key attributes of the system you selected for your study. Try to be as specific as possible and include some discussion on how the use of your selected Gen III or Gen IV system compares with today's Gen II designs.

This should be a professional summary document -- and be sure to formally cite any reference sources used in your report. Note also that you should be prepared to briefly discuss some aspects of the system you selected during class discussions...

Good luck -- this assignment should be quite educational and give you a good overview of the various reactor concepts that are being considered for current and future nuclear power applications...