The Potential role of the National Renewable Energy Laboratory (NREL) flagship tools in decision making under deep uncertainty[1]
LUCY CORTHELL[2], Juniata College
— The National Renewable Energy Laboratory (NREL) flagship tools currently model some amount of shallow uncertainty and may want to consider accounting for deep uncertainty as well. To determine if and how Decision Making under Deep Uncertainty (DMDU) methods could be incorporated into NREL flagship tools, I reviewed literature reports, interviewed tool developers, and looked at how these methods could be incorporated using case-study data from PRAS to see what is currently being done in terms of accounting for deep uncertainty and if there is a need to account for more deep uncertainty. I collected information from 9 different tools: PRAS, REopt, ReEDS, URBANopt, SAM, SLiDE, BSM, Tempo, and CELAVI and talked to 11 different tool experts to learn about (1) their tool(s), (2) if and how they currently incorporate uncertainty into their tool, and (3) if there is the need to incorporate DMDU methods into their tool. Out of 9 tools, I found that 7 tools account for shallow uncertainty while BSM and Tempo account for deep uncertainty. The trend was that tool developers thought trainings could be made available to NREL employees to allow for broader access to DMDU methods into all NREL flagship tools which could benefit NREL in becoming an expert among national labs in DMDU methods and analysis. Replace this text with your abstract body.

[1]The National Renewable Energy Laboratory
[2]Lucy Corthell is a student at Juniata College pursuing the 3-2 engineering program.

Lucy Corthell
Juniata College