

TOWARDS A HOLISTIC INTEGRATION OF ENERGY JUSTICE AND ENERGY SYSTEM ENGINEERING

BY

SAMUEL G. DOTSON

DISSERTATION

Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Nuclear, Plasma, and Radiological Engineering in the Grainger College of Engineering of the University of Illinois Urbana-Champaign, 2024

Urbana, Illinois

Doctoral Committee:

Research Scientist Madicken Munk, Chair

Professor Kathryn D. Huff

Professor James F. Stubbins

Professor Clifford Singer

Assistant Professor McKenzie F. Johnson

Research Scientist, Denia Djokić

 $[F] or \ the \ kids \ like \ me \ who \ got \ ADHD \\ -- \ Joyner \ Lucas, \ "Isis"$

Table of contents

List of Abb	reviations	iv
Chapter 1	Introduction	1
Chapter 2	Literature Review	2
Chapter 3	Osier	3
Chapter 4	Examples with Osier	4
Chapter 5	Using modeling to enhance just outcomes	5
Chapter 6	Conclusions	6

List of Abbreviations

Osier Open source multi-objective energy system framework

Introduction

Literature Review

Osier

Examples with Osier

Using modeling to enhance just outcomes

Conclusions