

**Contents**

- 1. Introduction ..... 1
- 2. The Model ..... 8
  - 2.1 Operational Constraints and demand shifting..... 11
- 3. Model Implementation ..... 17
- 4 Results ..... 26
  - 4.1 Optimal planning under multi-stage decisions without policy measures..... 26
  - 4.2 Optimal allocation under multi-stage decisions with a potential carbon tax ..... 33
  - 4.3 Optimal allocation under multi-stage decisions with a potential renewable policy target for the year 2035..... 39
- 5 Conclusion ..... 46
  
- References ..... 48
  
- Appendix A: Assumptions and simplifications ..... 52
- Appendix B. Solution Methodology..... 56
- Appendix C: Additional parameter values ..... 60