

Exercise 7 (Individual, 12 Points Total)
DATE: Thursday, April 9, 5:30pm

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EE/Econ 458, Spring 2009

Exercise 7
Participation in Electric Energy Markets
(K/S Chapter 4)

Basic References for Ex 7: EE/Econ 458 Syllabus Section IV.A

- [1] ** L. Tesfatsion, *Lecture Notes on Kirschen/Strbac, Chapter 3*, ON-LINE
www.econ.iastate.edu/classes/econ458/tesfatsion/OrganizationOfMarkets.KSChapter3.pdf
[2] ** D. Kirschen and G. Strbac, *Power System Economics*, Required Text, Chapters 3&4

General Exercise Instructions:

- (a) This exercise consists of THREE QUESTIONS.
- (b) Be sure to show all your work so that partial credit can be given for answers even if some type of error occurs along the way.
- (c) Read each question carefully before you begin your answer.
- (d) Define terms and concepts clearly and carefully.
- (e) It is recommended that you make an extra copy of your answer for use in class discussion on the due date. Individuals will be called upon to report their findings.
- (f) **Recall that late assignments cannot be accepted – no exceptions! Make sure your exercise is turned in to the instructor or TA at the *beginning* of class on the due date before discussion of exercise answers commences. Do not send your exercise in via email or place it in a department mailbox as these sites might not be checked in time.**

QUESTION 1 (4 Points)

Carry out **Problem 4.2** on page 102 of Chapter 4 for the Kirschen/Strbac (K/S) textbook, as follows.

An **answer** for Problem 4.2 is provided in the K/S Appendix (p. 269). **Your** task is to carefully *derive* this answer to establish its correctness (or to carefully show why you believe a provided answer is not correct if that is what you conclude).

QUESTION 2 (4 Points)

Carry out **Problem 4.4** on page 103 of Chapter 4 for the Kirschen/Strbac (K/S) textbook, as follows.

An **answer** for Problem 4.4 is provided in the K/S Appendix (p. 270). **Your** task is to carefully *derive* this answer to establish its correctness (or to carefully show why you believe a provided answer is not correct if that is what you conclude).

QUESTION 3 (4 Points)

Carry out **Problem 4.5** on page 103 of Chapter 4 for the Kirschen/Strbac (K/S) textbook, as follows.

An **answer** for Problem 4.5 is provided in the K/S Appendix (p. 270). **Your** task is to carefully *derive* this answer to establish its correctness (or to carefully show why you believe a provided answer is not correct if that is what you conclude).