

CAUSE 2003: Energy and Society: Industrial Revolution to Industrial Ecology

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Texts:

1. Lewis Mumford, "Technics and Civilization," A Harvest Book, Harcourt Brace & Company, San Diego, New York, London, 1963. (TaC)
2. E. S. Cassedy and P. Z. Grossman, "Introduction to Energy," Cambridge University Press, 1998. (ItE)
3. David E. Nye, "Consuming Power," The MIT Press, 1999. (CP)
4. Charles Dickens, "Hard Times," The Modern Library, 2001. (HT)

Outline:

Students will consider the formative roles that science, technology, geology and landscape, economics, social-thought, religion and public policy, art and architecture, and literature have played in charting the progress from the 18th century rural economy to the post-industrial economy of the 21st century. Case studies/class presentations will focus on the significant role that energy resources have played in this transformation. Findings will be compiled in essays, papers, and in an illustrated travel journal to be used on-line by future Penn State students. The course will include a 14 day research expedition to Iceland and the UK. This expedition will be in the two-weeks following the finals, in May 2003.

Date	Theme	Presenter
January	16 Introduction: Themes, Teams, Practices, and Travel Information	
	23 Objectives and Cultural Preparation (Ch 1-TaC)	Team 1
	30 Agents of Mechanization (Ch 2-TaC)	Team 2
February	6 The Eotechnic Phase (Ch 3-TaC and Ch 1 &2-CP)	Team 3
	13 The Paleotechnic Phase (Ch 4 -TaC and Ch 3-CP)	Team 4
	20 The Neotechnic Phase (Ch 5-TaC and Ch 4&5 -CP)	Team 5
	27 Compensations and Reversions (Ch 6 -TaC and Ch 6-CP)	Team 7
March	6 Assimilation of the Machine and Orientation (Ch 7&8 -TaC and Ch 7-9-CP)	Team 6
	20 A Pennsylvania and U.S. Perspective on Coal	Team A
	27 A Pennsylvania and U.S. Perspective on Petroleum & Natural Gas	Team B
April	3 A Pennsylvania and U.S. Perspective on Nuclear Energy	Team C

	10	A Pennsylvania and U.S. Perspective on Non-Depletable Energy Resources	Team D
	17	A Debate on U.S. Energy Policy from Supply Side and Demand Side Perspectives	Whole Class
	22	Conversation with Jean Robert	Whole Class
May	1	Discussion of Research Project Proposals	Whole Class
	11-27	Travel to Iceland and the UK	
September	4	Review syllabi	All
	11	-	
	18	-	
	25	Review of What We Have Learned Energy Conversion Principles	All Matt
October	2	A Review of Industrial Ecology	Eric, LaurenK, Amish
	5	Dinner at Castello del Diablo	All
	9	Exergy	Matt and Brad
	16	Skeleton Outlines of Projects (to Angel)	All
	23	Energy and equity in the developing world	Duane, Rebecca, Morgan, Marielle, Kelsey
	30	Energy policy – Congressional enquiry	LaurenZ, Jennifer, Pete
November	6	Project presentations I	Viking, Daedelans
	13	Project presentations II	Diapositive, Canute, Icarus
	20	Reflective essays – discussion – celebration!	All