

Transitions in Energy Systems

SYSE 555

Fall

Dr. Tom Bradley

STAT 301/303/315 or equivalent

Dr. Tim Coburn is a Professor in the Systems Engineering Department at CSU. He previously served as Director of the School of Energy Economics, Policy and Commerce at the University of Tulsa and as Professor of Energy and Operations Management.

Learn about the future of energy systems

This course will introduce students to foundational ideas from across the global energy complex, some of which are technical-, scientific-, business-, and policy-oriented through case studies, industry applications, and guest lectures.

Students completing this course will be able to:

- Identify what the energy system entails, its subsystems, components, stakeholders, constraints, & risks
- Summarize what is meant by “energy transition,” addressing the rationale and key drivers. Identify the business, scientific, social, environmental, & political implications.
- Compare competing energy sources
- Evaluate the relationships among energy policy and practice, governmental regulation, technological innovation, markets, & corporate & environmental sustainability

Topics covered in this course:

- Systems thinking in the energy context
- Transitioning to a new economy
- Aspects of energy justice and a “just” transition
- Subsystems: electric grid, buildings, transportation, manufacturing, new ventures (hydrogen, nuclear, etc.).
- Much more!

A systems approach to today's energy transition

Questions?

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We recommend registering for Fall classes by early August



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