

**RSM2122: Clean Energy
Winter 2020
Prof Kenneth S Cortis
Daily Schedule**

JANUARY 21

Energy System, Climate Change, Energy Policy

Readings (there is a lot here; prioritize the readings marked with * and come back to this list later as time allows):

- Sections I and II of my [Course Outline Notes*](#)
- My [Short Note on Environmental Policy Interventions](#)
- Visit carbonzero.ca and compute your personal carbon footprint*
 - ideally have your gas and power bills in hand
- [Environment Canada GHG Statistics*](#)
 - be sure to explore both the “national” and “sectors” tabs
- [COP24 \(NYT\)*](#)
- [COP25 \(NYT\)*](#)
- [Paris vs 2 degrees \(NYT\)*](#)
- [Climate Action Tracker](#)
 - this is the source for the cool figures in the second NYT article above
 - warning: this is so interesting and so detailed you may lose vast quantities of time browsing this site and its country-by-country assessments of emissions “gaps”
- Canada’s Climate Plan
 - [one-page highlights](#)
 - [full 3MB PDF](#)
- Ontario’s Climate Plan
 - [Preserving and Protecting our Environment for Future Generations](#)
 - pages 16-38 are the chapter on Climate Change
- Keohane and Olmstead text
 - chapter 3 pp 35-44 only

JANUARY 28

Economics of Energy Policy Interventions

Readings:

- Section III of my [Course Outline Notes](#)
- My [Long Note on Environmental Policy Interventions](#) up to but **not** including “Network Externalities”
- Keohane and Olmstead text
 - chapter 4 pp 69-79 only
 - chapter 5 pp 80-85 only
 - chapter 8 pp 139-158 and 162-167 only
 - chapter 10 inset box pp 208-210 only

FEBRUARY 4

Upstream Technology Development and Entrepreneurship

Guests: Alexandra Tavasoli, [Solistra](#)
François Cartier, [Ubiquity Solar](#)

Readings:

- Explore the website of our guest speaker's firms (link above)
- Keohane and Olmstead text
 - chapter 9, *except pp 184-189*
 - chapter 10 pp 200-207 and 217-220 only

**FEBRUARY 11
QUIZ #1**

Buildings: On-Site Generation, District Energy, and Demand Reduction

Guest: Paul Leitch, [U of T Sustainability Office](#)

Readings:

- My [Conceptual Framework for Evaluating Energy Businesses](#)
- Read U of T's [Low Carbon Action Plan](#)
- Watch the short video at [International District Energy Association](#)

FEBRUARY 18

Electricity: Institutional Landscape

Guest: Mike Jessop, OPG

Readings:

- Section IV and V of my [Course Outline Notes](#)
- Learn about the IESO by doing one of the following:
 - visit the Ontario [IESO's website](#) and explore under the "Learn" tab
 - read the ["Overview of IESO-Administered Markets"](#) (22 page PDF)

**FEBRUARY 25
HOMEWORK #1 DUE**

Electricity: Wind

Guest: Mike Griffin, [Algonquin Power](#)

Readings:

- Fox Islands Wind Project (A), HBS Case 9-810-129 (purchase [here](#))
- Study questions:
 - What are the key steps/factors in determining whether the project is viable?
 - What types of roadblocks did Baker encounter and how did he address them?
 - What are the key determinants of whether the economics of the project make sense?
 - What were the key elements of US and Massachusetts energy policy that ultimately enabled this project to succeed?

MARCH 3

Electricity: Solar + Alternative Business Models

Guest: Richard Lu, [Abundant Solar](#)

Readings:

- My [Alternative Models for Clean Energy Investments](#)
- Explore alternative solar rooftop financial models
 - [from U of T](#)
 - [from Abundant](#)

**MARCH 10
QUIZ #2**

Electricity: Storage

Guest: Geoff Osborne, [NRSTOR](#)

Readings:

- Explore the website of our guest speaker's firm (link above)

MARCH 17

Transportation and Storage: Hydrogen

Guest: Anna Murray, [Hydrogenics](#)

Readings:

- Explore the website of our guest speaker's firm (link above)
- This [Metrolinx summary](#) of its hydrogen feasibility study
- This [brief overview](#) of hydrogen as energy storage

**MARCH 24
PAPER #1 DUE**

Transportation: Electric Vehicles

Guest: Cara Clairman, [Plug-n-Drive](#)

Readings:

- Explore the website of our guest speaker's organization (link above)
- The "Network Externalities" section of my [Long Note on Environmental Policy Interventions](#)
- This [research summary](#) on the chicken-and-egg problem in alternative fuels

MARCH 31

Waste and Agriculture: Biogas

Guest: Kevin Matthews, [CCI BioEnergy](#)

Readings:

- Explore the website of our guest speaker's firm (link above)
- [Biogas Overview](#) from Biofuels Academy

**APRIL 7
TEAM PROJECT DUE**

In-Class Presentations