

**RSM2122: Clean Energy
Professor Kenneth Cortis
Winter Intensive 2022
Detailed Daily Schedule**

JANUARY 4

Climate Change; Energy System; Energy Policy

Readings:

- Sections I, II, and III of my [Course Outline Notes](#)
- My [Short Note on Environmental Policy Interventions](#)
- Climate Action Tracker
 - this is super-interesting but can be hard to figure out because they keep making their figures more complex; don't lose time here if it seems confusing
 - the gist, which is probably already clear to you, is that to stay anywhere near the Paris Agreement temperature goals, emissions need to come down a lot, soon, and faster than what countries have pledged to do
 - [summary global graph](#)
 - [Canada country summary](#)
- [Environment Canada GHG Statistics](#)
 - see what you patterns you can discern from the graphs under the first four tabs: "national", "regional", "intensity", and "economic sectors"
- [Canada's NDC update submission prior to COP26](#)
 - this is long; the first 6 pages contain the key content
- [Carbon pricing systems around the world \(World Bank\)](#)
 - check out the tabs immediately to the right of "Carbon Pricing Dashboard" for a variety of interesting maps and figures
- [Carbon pricing systems in Canada](#)
 - review the map briefly
- Visit [carbonzero.ca](#) and compute your personal carbon footprint
 - ideally have your gas and power bills in hand
 - enter the travel data as if it were a pre-covid year

JANUARY 5

Economics of Energy Policy Interventions; Electricity: Wind

Guest: Ariel Bautista, [Algonquin Power](#)

Readings:

- My [Long Note on Environmental Policy Interventions](#), through "Traditional Externalities" only
- Fox Islands Wind Project (A), HBS Case 9-810-129 (purchase link in syllabus)
- Study questions for the case:
 - 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?

JANUARY 6

Modern Electricity Markets; Electricity: Solar

Guest: Richard Liu, [Abundant Solar Energy](#)

Readings:

- Sections IV and V of my [Course Outline Notes](#)
- IESO website
 - [Overview of Sector Roles](#)
 - [A Smarter Grid](#)
 - [Electricity Market Today](#)
 - [Electricity Market of Tomorrow](#)
- US DOE website
 - [Community Solar Basics](#)

**JANUARY 7
QUIZ #1**

Energy Storage

Guest: Geoff Osborne, [NRSTOR](#)

Readings:

- My [Alternative Models for Clean Energy Investments](#)
- Explore the website of our guest speaker's firm (link above)

JANUARY 10

Energy Storage and Transportation: Hydrogen

Guest: Rob Harvey, [Cummins New Power](#)

Readings:

- My [Long Note on Environmental Policy Interventions](#), Dynamic and Network Externalities sections
- This [Metrolinx summary](#) of its hydrogen feasibility study
- This [brief overview](#) of hydrogen as energy storage

JANUARY 11

Buildings

Guest: Ron Saporta, University of Toronto

Readings:

- My [Conceptual Framework for Evaluating Energy Businesses](#)
- U of T's [Plans](#)
 - Both *A Climate Positive Campus* and its predecessor *Low-Carbon*

Action Plan are interesting and are available at that page

- Watch the short video at [International District Energy Association](#)

**JANUARY 12
QUIZ #2**

Waste; Industrial Processes

Guests: Kevin Matthews, [CCI Bioenergy](#)

Alex Tavasoli, MIT postdoc

Readings:

- Explore the website of our first guest speaker's firm (link above)
- [Biogas Overview](#) from Biofuels Academy
- Watch [the video](#) of our other guest speaker describing how her former company Solistra can reduce emissions in industrial processes

JANUARY 13

Transportation: Electric Vehicles

Guests: Zak Lefevre, [ChargeLab](#)

Cara Clairman, [Plug n Drive](#)

Readings:

- Explore the websites of our guest speakers (links above)
- This [research summary](#) on the chicken-and-egg problem in alternative fuels
- This [overview](#) of barriers to EV adoption

**JANUARY 14
PROJECT DUE**

Group Presentations