November 24, 2021 MEIA presesntation

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1. Climate change (global warming) – the earth’s energy imbalance (UNFCCC Rio 1992 and [Kyoto Protocol](https://unfccc.int/kyoto_protocol) [James Hansen’s website](http://www.columbia.edu/~jeh1/) [Trends of measured climate forcing agents (2001)](https://pubs.giss.nasa.gov/docs/2001/2001_Hansen_ha03300x.pdf)
2. Climate change mitigation versus adaptation.
3. Carbon budget (how much more CO2 equivalent can be released into the atmosphere with an X% change of keeping global warming within X% increase over time?)
4. Cumulative emissions. (Historical emissions matter given the length of time they reside in the atmosphere – how should the budget be allocated?)
5. Net zero emissions targets and market based solutions – what mechanisms are available to allow some emissions to continue because they are offset/covered by removals (national inventories versus corporate action) [Canadian Net-Zero Emissions Accountability Act](https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050/canadian-net-zero-emissions-accountability-act.html) and international commitments
6. Carbon trading (it is easier for some to reduce their emissions or generate removals of GHGs than others). It is more efficient for some regulated emitters to help others reduce their emissions first. Trading allowances in cap and trade.
7. Carbon credits or offsets (enabling carbon finance) Kyoto Protocol - CDM, EUETS, various national and sub-national markets; voluntary markets
8. [COP 26](https://unfccc.int/conference/glasgow-climate-change-conference-october-november-2021) and [Article 6 of the Paris Accord](https://www.wri.org/insights/what-you-need-know-about-article-6-paris-agreement) is still controversial
9. What can we do? The key objectives for Manitobans are the same as most others – reduce the use of fossil fuels and deal with the key “other” sources – forestry, agriculture and livestock- and find a way to enhance our carbon sinks.
10. Business opportunities abound and you will likely need to look outside Manitoba – for lenders, [investors](https://climateengagement.ca/about/), inventors/distributors/installers of technology and know-how, consultants of all kinds (yes, including lawyers)
11. Homework
12. What can you do right now? Listen to David.

Homework!

Books to read soon – Our Ecological Footprint (William Rees); Overshoot (William Catton); and Immoderate Greatness: Why civilisations fail (William Ophuls)

[State of the Voluntary Carbon Markets 2021](https://www.forest-trends.org/publications/state-of-the-voluntary-carbon-markets-2021/)

[Clean Development Mechanism: A review of the first international Offset Mechanism](https://www.c2es.org/document/the-clean-development-mechanism-a-review-of-the-first-international-offset-program/)

[CDM/JI Pipeline](https://www.cdmpipeline.org/cdm-projects-region.htm) [IGES CDM database](https://www.iges.or.jp/en/pub/iges-cdm-project-database/en?_ga=2.230919580.2047019665.1637596790-981716366.1637596790) \*\*\*and related publications\*\*\*

[Canadian Federal GHG offset System](https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/output-based-pricing-system/federal-greenhouse-gas-offset-system.html)

[List of recognized Offset Programs and Protocols for the Federal OBPS](https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/output-based-pricing-system/list-recognized-offset-programs-protocols.html) (Alberta and BC)

[Ontario offset program](https://www.ontario.ca/page/ontarios-carbon-offsets-programs) (now dead and trading prohibited)

[Quebec offset credits](https://www.environnement.gouv.qc.ca/changements/carbone/credits-compensatoires/index-en.htm) (linked with California)