The Survey of Commercial and Institutional Energy Use (SCIEU 2019)

October 2020
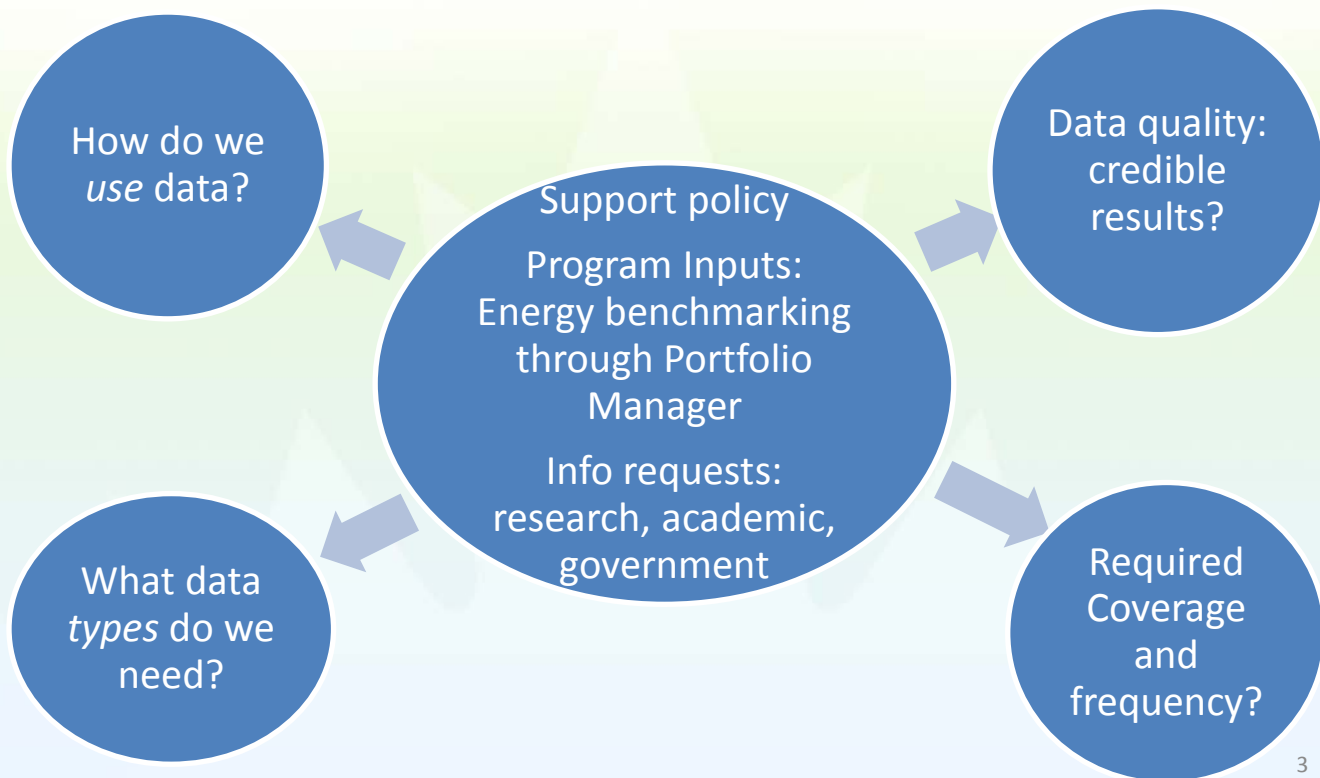
Outline

1. Why we collect energy data
2. Surveys: expanding our primary info source
3. Challenges: meeting data needs and COVID-19

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1. Data: a *Canadian* evidence base

How do we *use* data?

Data quality: credible results?

Support policy

Program Inputs: Energy benchmarking through Portfolio Manager

Info requests: research, academic, government

What data *types* do we need?

Required Coverage and frequency?

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2. Why we collect building energy data?

- Better understand the market
- Guide policy and program development
- Measuring progress, including on sub-sector programs
- Energy benchmarking through Portfolio Manager
- Support government priorities

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3. Recent Data Collection

- 2000 Commercial and Institutional Buildings Energy Use Survey (CIBEUS)
- 2003, 2004, 2005 Commercial & Institutional Consumption of Energy Survey (CICES)
- 2014 Survey of Energy Consumption of Arenas (SECA)
- 2009, 2014 Survey of Commercial and Institutional Energy Use - buildings and establishments (SCIEU)
- Establishments: supplies data to Canada's Energy Balances (RESD)
- 2018 Survey of Multi-Unit Residential Buildings (MURBs)

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4. Survey of Commercial and Institutional Energy Use (SCIEU)

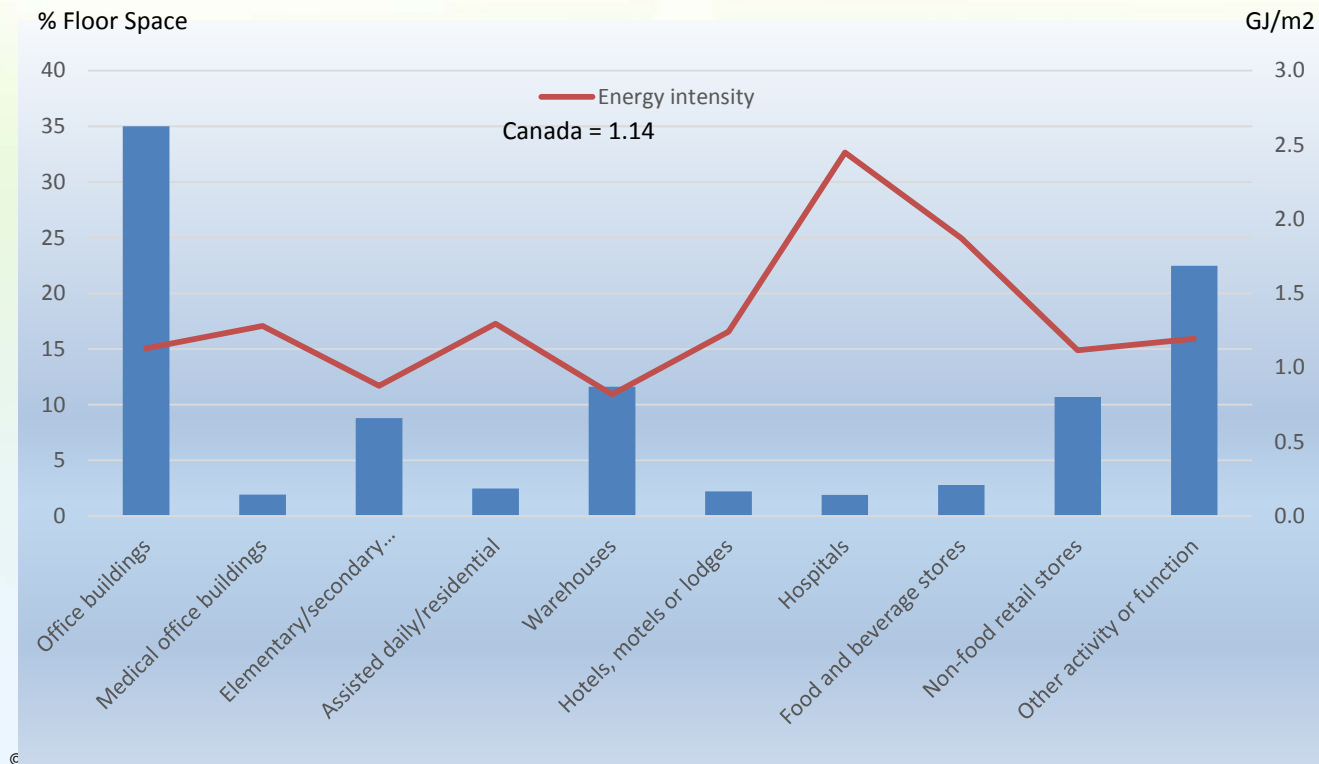© Her Majesty the Queen in Right of Canada, as represented by the Minister of Natural Resources, 2017

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5. Key data on *floor space* and *energy use intensity (SCIEU)*

% Floor Space / GJ/m2

Energy intensity

Canada = 1.14

Categories: Office buildings, Medical office buildings, Elementary/secondary..., Assisted daily/residential, Warehouses, Hotels, motels or lodges, Hospitals, Food and beverage stores, Non-food retail stores, Other activity or function

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6. Multi Unit Residential Buildings (MURBs)

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7. Expanding SCIEU for 2019

❑ 2009, 2014 and 2019 (collection December 2020)

❑ Current policy and budget initiatives

- Provinces/Territories: working toward full energy disclosure
- ENERGY STAR™ Portfolio Manager benchmarking tool: must expand from 10 to 26 building types to cover 80% of floor space
- Better sense of market penetration of key policies re: retrofits, recommissioning, retro-commissioning, fuel switching
- Maintain consistency with U.S. EPA

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8. Survey Operational Challenges

Data Quality/Use

- Need to find *all C&I buildings in Canada*

- At present, # buildings and energy consumption are statistically derived

- Quality of 'estimates' is uncertain

- Universities and Hospitals: important but problematic

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9. Establishment Challenge: e.g., Hospitals

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10: COVID-19 Challenges

Viability of a business survey:

- Are the units still in business?
- Availability of knowledgeable reps?
- Effects on StatsCan re: processing?
- Effects on the data?
  - What do results really represent?
  - Pre/post COVID?
  - Trends, relationship to other sources?
  - How long will this last?

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11. Solutions

- ***Buildings Registry***: up-to-date inventory of all buildings
  Statistically derived: Canada = 482,000
  Buildings Registry: Canada = 1,018,000 !!
- ***Much Larger Sample***: increase coverage/quality
- ***More Building Types***: 80% floor space
- ***Establishment Survey***: campus-level data
- ***COVID-19***: still an unknown

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12. Next steps

- Winter/Spring 2020/21: data collection

- Summer/Fall 2021: review data and their messages:

  – COVID-19 effect?

  – Do data make sense?

  – Are they useful?

  – Do they answer our mandate information needs i.e.,

    supporting our transition to a lower carbon economy

- Jan/Feb 2022: web-based publication of SCIEU 2019 data
- Prep for SCIEU 2024

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Thank You!

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