Advancing the Great Lakes bioeconomy through strategic research and policy

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Why are research and policy considered together?

Support for research in the area of bioeconomy
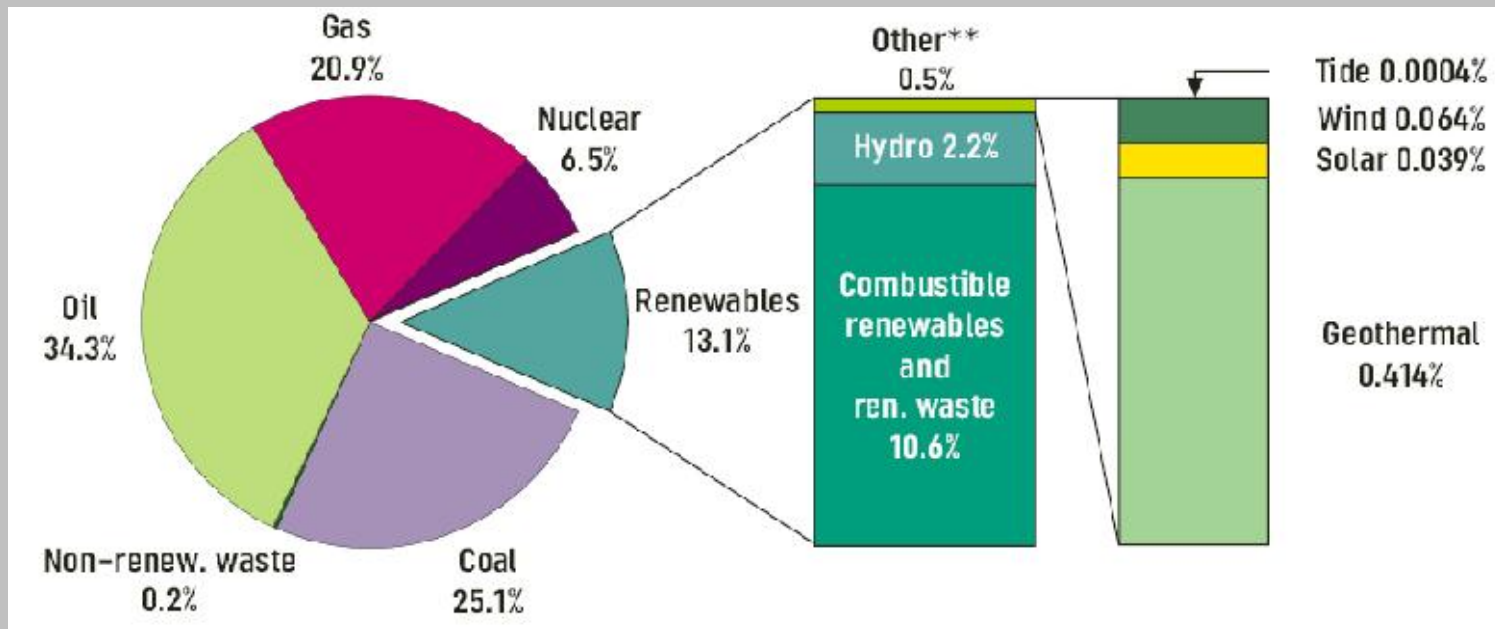without a specific focus on "bio"
new, targeted funding

Policy considerations
Great Lakes region in a global context
National, provincial, regional considerations

Addressing the pressing issues – where research and
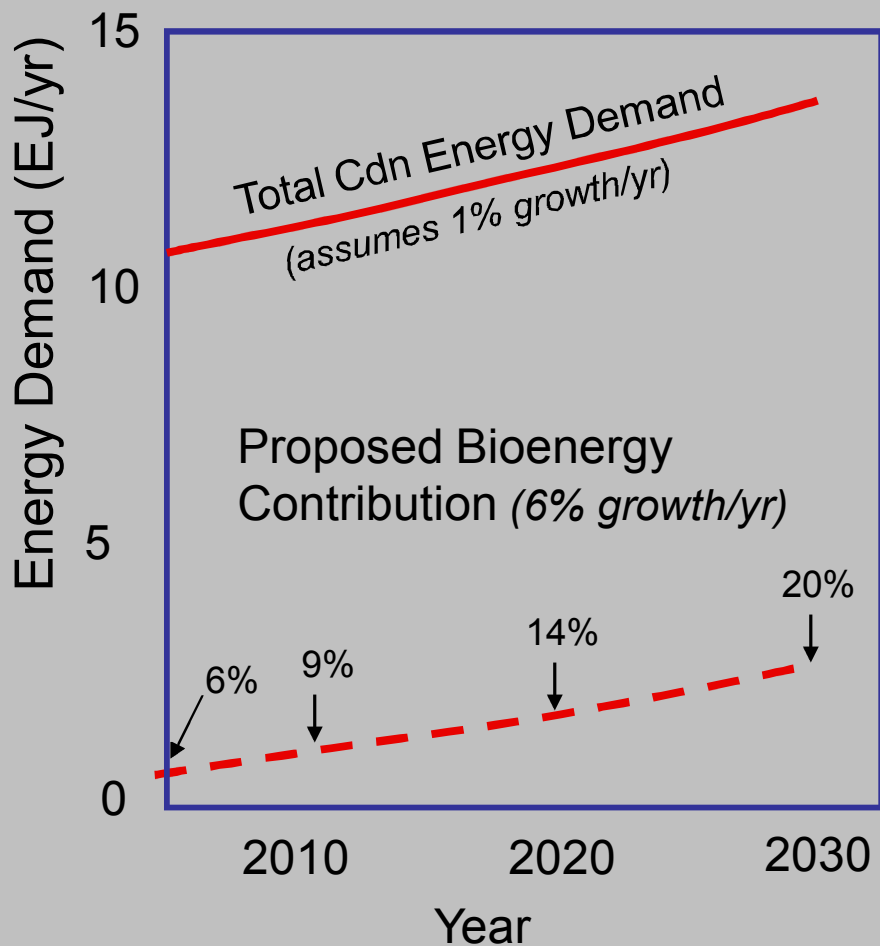policy intersect

Global energy production from biomass currently accounts for 13% of total

Source: Renewables in global energy supply: An IEA Fact Sheet, page 3.

Canadian energy production from renewables currently at 6%

Biological capacity to sustainably produce 20% by 2030

How can we comfortably set and achieve such a goal?

Source: BIOCAP Canada Foundation www.biocap.ca

Long-standing history of substantive investments in science and technology research in Canada by federal, provincial and industry

> Result = excellent foundations in agriculture, forestry, engineering

New investments at the federal level: Agricultural Bioproducts Innovation Program (ABIP), additional funding to Tri-council granting agencies for targeted research to support federal S & T strategy

> Result = rapid advances in targeted areas (biofuels)

New investments at the provincial level: QU Innovation Park $21M; UWO (Sarnia-Lambton) Research Park $10M; Atikokan Bio-energy Research Center $8.5M; Center for Research and Innovation in the Bio-economy (CRIBE) $25M and many others (MaRS, U of G Biocar Initiative)

Result = regional growth opportunities

US investments match or surpass Ontario initiatives – some clearly overlap

> Syracuse Center of Excellence
> University of Wisconsin-Madison: Great Lakes Bioenergy Research
> Michigan State in partnership with DOE

How can we optimize the research activity?
How can we move from research to implementation?

Policy considerations

At every level, challenges of public policy and business investment policy must be considered – these are different, but demand clear goal setting

Public policy: what is in the best interest of society?
what does society perceive that it wants?
who is in the driver's seat?
"society risk management"

Business investment policy:
what makes the business case locally?
what fits with corporate policy?
"monetization of risk"

Great Lakes region offers unique opportunities but also special challenges

Regional

Provincial/State

Global
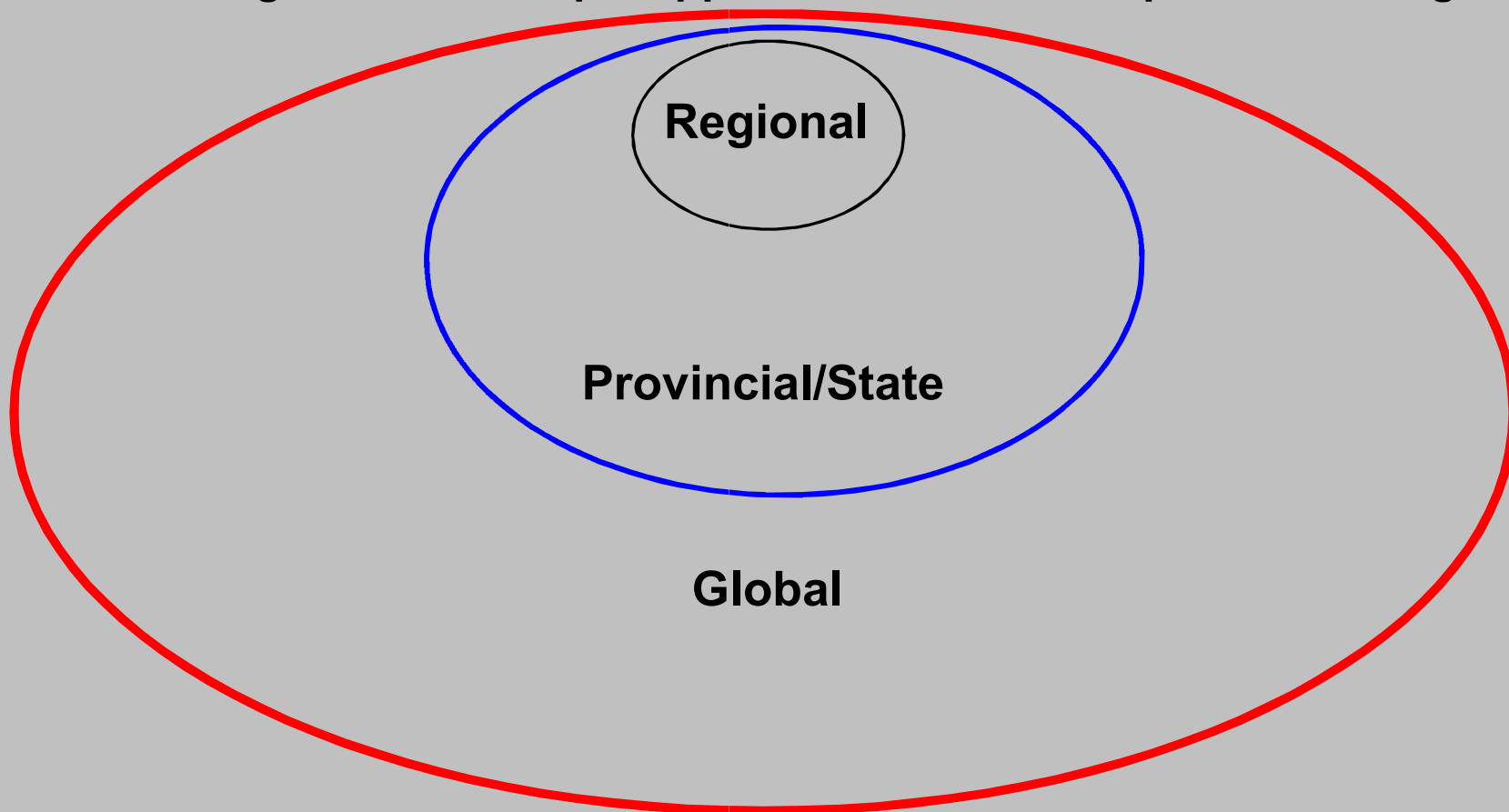
The pressing issues: where research and policy meet

1. Ongoing need for technological and scientific research
- Linked to implementation of (nearly) mature technologies

- Arising from new challenges that evolve during implementation

- Opportunity for knowledge mobilization

2. Urgent need to understand social impacts
- Food vs fuel debate needs analysis, discussion

- Role for First Nations

- Perception of place in the world, role of natural resources, acceptable management schemes

- Impacts of transformative change

The pressing issues: where research and policy meet

3. How do we value carbon?
- Opportunity to develop a revenue stream related to the sale of credits (and avoid penalty)

- Interaction with markets – currently unclear, poorly defined public policy

- Inconsistent business policy

4. How do we value land and environmental goods and services?

- What are the environmental consequences of using land and resources differently?

- How do we place a monetary value on the use of land?

5. How do we approach harmonization with others in the Great Lakes Region?

- Can we conserve political sovereignty and optimize economic integration?

- What structures for communication and education will serve wide stakeholder base?

6. What strategies can we use to integrate with existing energy and transportation infrastructures?

- How can the current fossil fuel industry partner so that they retain a successful business case?

- How can the life cycle for transportation be improved?

7. How can we use what we already know to support informed public policy and globally competitive business decisions?

For further discussion

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