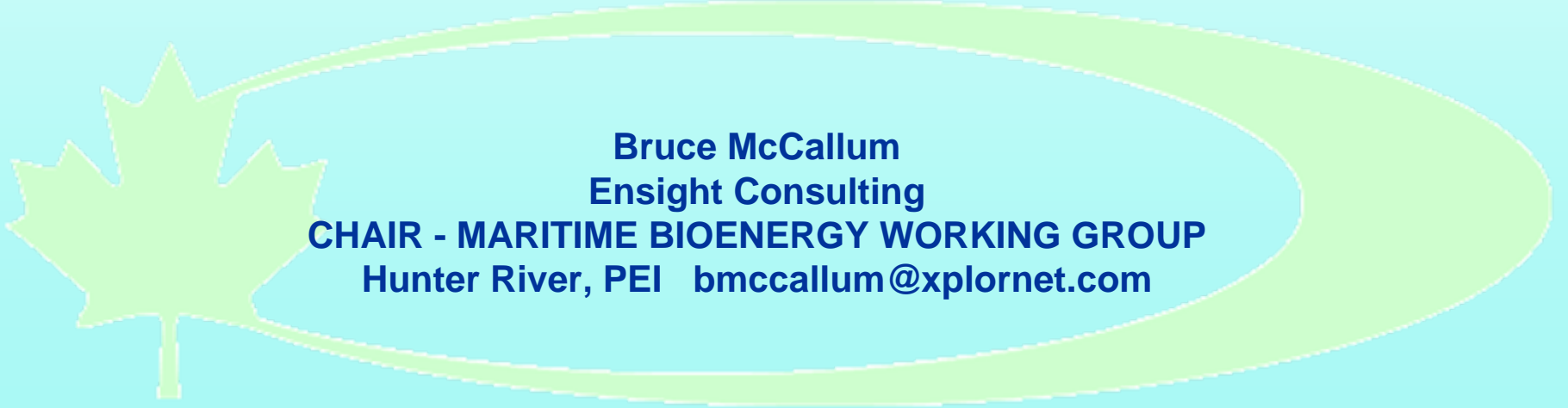




BIOMASS UNDER PRESSURE

AN ELEPHANT IN THE BED



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COUNTRIES LEADING THE WORLD HAVE BIOENERGY POLICY FRAMEWORKS

- Sweden
- Finland
- Denmark
- Austria





CANADA'S CURRENT BIOENERGY POLICY FRAMEWORK





**A POSITIVE BIOENERGY
POLICY FRAMEWORK
for
CANADA**





A Positive Bioenergy Policy Framework

- Supportive Overarching Federal Policy
- Provincial Agreement and Support (All Provs.)
- National Targets for Bioenergy with Set Timelines
- Harmonized Federal & Provincial Strategies
- Complimentary Government Programs - To Stimulate R&D & Commercialization
- Commitments to Address All Barriers – Prov. & Fed.



JOB # 1

Address Key Barriers





PROVINCIAL JURISDICTIONS ARE KEY

Provinces are Responsible for:

- Forest Resources – Ownership & Allocation (Harvest Guidelines, Stds.)
- Power Generation (Crown Corps.) & or Regulation of Utilities
- Own Many Public Buildings - Potential Conversion Sites
- Boiler Codes & Operating Regulations



Prov. Barriers to Bioenergy Development

- **Restrictive Provincial Legislation**
 - ◆ **Restrictive Emissions Standards – e.g., Ontario**
 - ◆ **Access to the Grid - Generally controlled by Prov. leg. (PUCs)
- Utilities fight access (e.g., PEI examples)**
 - ◆ ***Municipal* – GVRD regulations block biomass systems for greenhouses and other businesses (BC deferred to GVRD)**
 - ◆ **Antiquated Labour/Pressure Vessel Regulations – Each Prov. different (Adds huge labour costs to small biomass systems)**



Boiler Codes

- Canada has no Boiler Code – We Rec. ASME
- No Border between Canada & the USA
- Provincial Jurisdiction – Every Prov. has a Pressure Vessel & Power Engineers Acts & Regs.
- PEI Boiler & Pressure Vessel Act & Regs.
- PEI Regs. list ASME as one of the codes it follows
- Power Engineers Act Regulates Plant Operation



THREE KEY PROBLEMS

I - PEI Boiler Engineers Act – Operating Regime

Plants above 50 Therm Hours (150 HP, 1.5 MW)

Must provide Continuous Staffing - 24/7

Act requires all system boilers to be added up

Big Problem for District Heating Systems

Big Expense - \$250-300,000/a added to Operating Costs



II - PEI Boiler & Pressure Vessel Act

- All Commercial Boilers must meet ASME (CRN)
- Very Difficult for European Manu. to meet ASME
- Must Certify - Company, Welders, Boiler Designs
- Ongoing Inspections
- Very Costly - Only Big Manu. Can Afford ASME
- Current Regime – Entrenched, Rigid, Hostile
- Many see ASME as a Non-Tariff Trade Barrier



III – Residential Boiler Certification - CSA

- Expensive (\$20-30,000)
- Lengthy – 1 year or more
- Redundant for European Appliances
- Restricting - No Changes Allowed
- More Serious – CSA & ASME overlap
- CSA approved boilers not approved for Commercial Applications as Press. Vessels
- Schools, Businesses, Apartments (5+)
- PEI Boiler Engineers Act applies–CRN/ASME

EXAMPLE



Two Tarm 4.0 40 kW Boilers

Are Changes Important ?????

- Depends Which Side of Fence You Are On
- I Say Yes Because:
 1. Europe has many manu.-best biomass technologies
 2. We cannot afford to use poor systems - done that
 3. Some fields e.g., straw systems - only in Europe
 4. Restricting imported technologies will only slow our development





BARRIERS STUDY – KEY RECOMMENDATIONS

Resolve Continuous Staffing Dilemma

Swedish Approach (AFS2002-1) Preferred Option

Adopt the EU Boiler Standards (via O.I.C.)

EN 303-4 (Res & Comm. Boilers up to 300 kW)

PED Directive 97/23/EC (All larger Boilers)

Work with Atlantic Provs. to Harmonize PV Stds.

**Work with Maritime Atlantic Provs. to establish a
Regional Bioenergy Development Group**



An Overarching Canadian Bioenergy Policy

The federal and provincial governments recognize that Canada has extensive untapped biomass resources that are very important to rural economies in every province and territory.

Governments will take steps to facilitate the rapid development of these resources for the benefit of all Canadians.



National Canadian Bioenergy Targets.

E.g., Total Primary Energy

- **12% in 2012** (An increase from 6% to 12%)
- **16% in 2015**
- **25% in 2020**
- **35% in 2025** (Sweden & Finland are at 27% now)



How Do We Get There? - Build Biomass Plants

- 12 Large Cogen Plants (Williams Lake, 67 MWe)
- 100 Cogen plants in 10-30 MWe Size Range
- 9-10,000 Biomass heating Plants (.5-5 MW Thermal)
- 200,000 Res./A, 25,000 Comm. Pellet Systems/A



Thank-you

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A PEI STRATEGY 2008

- A Work in Progress
- Intention to Convert many Public Buildings
- Two Pilot Projects – Evangeline School, Kinkora School - Pellets
- Kensington Schools – Straw District heating - maybe
- Interest in PEI Pellet Production
- Debate – Large or Small Scale