



Governance and the Electricity Sector

International Experience

Jeff D. Makholm, Ph.D

Toronto, Ontario

June 4, 2010

Outline of Comments



- Economic Governance
- Critical Natural of Governance for Renewable Energy
- Uniqueness of North American Regulatory Governance Institutions
- The Transmission Puzzle for Sustainable Development

- “The structure and functioning of the legal and social institutions that support economic activity.” (A. Dixit, outgoing President, American Economic Association, 2009)
- Good economic governance is needed to secure three things essential to market economies:
 - Security of property rights
 - Enforcement of contracts
 - Management of collective action on the part of interested pressure groups to form reasonable legislation and regulation

Governance for Renewable Energy

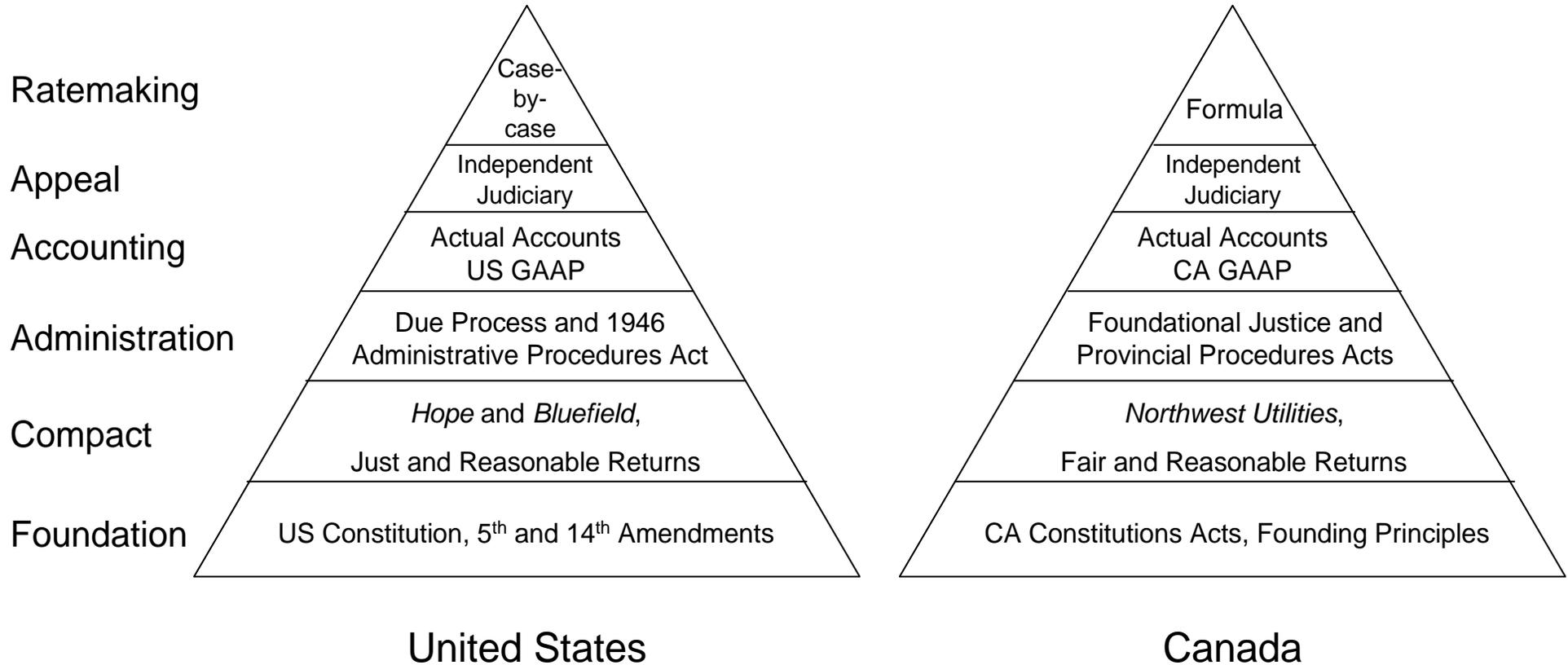


- Renewable technologies are capital intensive and appear in inconvenient locations
- The technologies are highly “relationship specific” and thus depend on a transmission sector that has to date received scant attention
- Such renewable generation assets need certainty—either through vertical integration (which is frowned upon now in North America) or through contracts (which transmission technology disrupts)
- If not through contractual relationships possible, how can investors in renewable technology reliably depend on a return?

Uniqueness of North American Regulatory Institutions



- Canada and the U.S. Seem to Share Basic Regulatory Institutions:



Uniqueness of North American Regulatory Institutions



- European Regulation Shares Little in Common with North America
 - Split jurisdiction—weak EU regulator
 - Lack of transparency—legislated accounting and operational information
 - No constitutional definition of regulated property (*Hope* decision)
 - Heavy and weakly-regulated vertical integration controlled by national regulators

Uniqueness of North American Regulatory Institutions



- European regulatory precedents are generally not helpful in North America from the perspective of governance
 - North American regulatory institutions (particularly related to transparency, accounting and property rights) took decades to develop.
 - European regulation is relatively new and hasn't grappled with the elements upon which North American regulation depends
 - Transparency, Property, Legal Foundation and Due Process
- Innovative, efficient pricing is another matter
 - Large-scale marginal cost pricing originated in France.
 - But this doesn't generally apply to the transmission constraints for the development of sustainable energy technologies

Uniqueness of North American Regulatory Institutions



- And yet, the conference White Paper shows trends in Canada that do not appear in the U.S.
 - Ministerial meddling
 - Direct (or visible) executive pressure on Commissions in the US is rare.
 - Such pressure in Canada appears to be common
 - Lack of genuine regulatory independence
 - Despite frequent criticisms, the checks and balances inherent in U.S. Commission regulation appear to work.
 - Parliamentary Provincial governance appears to contribute to weakened independence of regulatory institutions

The Electricity Transmission Puzzle



- The restructuring era of the 1990s and 2000s left transmission on the wayside
 - So much effort was put into getting generating incentives right that scant attention was paid to market failures in transmission.

- Transmission is now at center stage
 - Public pressure for more sustainable energy
 - Transmission bottlenecks impede efficient generation markets
 - Much of the transmission infrastructure is old

The Electricity Transmission Puzzle



- The FERC has tried to create order and predictability for transmission governance
 - Order 888, requiring OATT (Open Access Transmission Tariff)
 - Order 2003, “standardizing” generator interconnections
 - Order 890, requiring open, transparent planning

- But the FERC has shown a tendency to approve idiosyncratic local settlements
 - Reasonableness is tied to local geographic and industrial structures
 - There is no one particular set of rules that works for transmission

Transmission US vs. Canadian Experience



- US Transmission
 - Legislation intended to provide funds and improve transmission for renewables
 - **Energy Policy Act of 2005**
 - **American Recovery and Reinvestment Act of 2009**
 - Regulatory policies also designed to facilitate transmission expansion (incentive ROE, increased cost socialization in many RTOs)
 - Yet, dis-integrated structure of multiple transmission providers with competing interests operating in single RTO, together with a complex state-by-state approval process and tight capital markets makes implementation difficult

- Canadian Transmission
 - Legislation has been developed to facilitate expansion in some provinces (e.g., Electric Statutes Amendment Act, in Alberta)
 - Government funds have been committed to facilitate expansion (e.g., application of Green Energy Fund to Northwest Transmission Line in British Columbia)
 - Implementation is facilitated by ownership structure: single T-owner (often a crown corporation, integrated in G & D), resulting in less disputes and provincial financing



Governance and the Electricity Sector

International Experience

Jeff D. Makholm, Ph.D

Toronto, Ontario

June 4, 2010