



Feed-in Tariff Policy Design

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EUCI Toronto Conference: Feed-in Tariffs

Topic: The Key to a Green Economy?

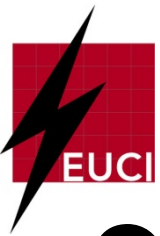
September 21, 2009



FIT: Unsustainable

Alternative perspectives on “success”

- FIT contract recipients and associates
- Non-FIT generators
- Aspiring but unsuccessful FIT applicants
- FIT advocates
- Consumers (overall cost including grid)



Consumer Perspective on FIT

- Darlington B cost outlook creates future room for renewables
- Bruce A refurb. contract (with over-runs) much cheaper than FIT wind but close to competitive wind
- Current surplus, NG prices, and proposed grid expansion challenge FIT credibility



Fitting in FIT

- Non-dispatchable generation niche massively over-supplied in Ontario (i.e. nuclear, wind, run-of-river hydro, cogen, solar)
- Wind vs. load often out of phase (e.g. summer, mornings, winter warm days, weekend/holidays)
- Wind to be first contingency for operating reserve soon (where is IESO assessment?)



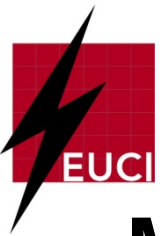
Accommodating FIT Generators

- Dispatchable generation need: fast ramp, low min. load, frequent thermal cycling
 - Coal emits lower GHGs for supporting wind during windy periods than CCGT
- Major import/export partners facing similar renewables integration issues (U.S. interties offer no silver bullet)



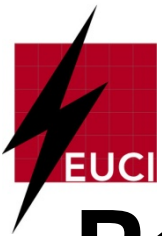
Falling Demand

- YTD (Jan-July) weather corrected energy: 7% below lowest point since 2002, 10% below peak (2005)
- YTD (Jan-Aug): 309 hrs HOEP \leq Zero (very large surplus relative to experience and previous forecasts)
- declining load/Tconstraints in Northwest makes FIT particularly inefficient west of Wawa



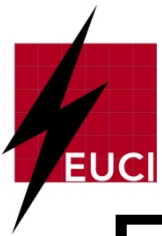
Market Surveillance Panel (July '09)

- Surplus Baseload Generation (SBG) “a significant reliability issue”
- Wind contributes to SBG
- Wind more productive during SBG events than otherwise



Potential Future Policy Drivers

- Declining demand/surplus generation
- Political vulnerabilities
 - Trillium Foundation funding wind developers!
 - Renewable Energy Facilitation Office accountability?
- Recreational area industrialization acceptance
- FIT subscription rate indicates overpayment
- Any carbon constraints relaxation puts cheap, abundant, reliable, smog-free coal into the mix



FIT Program Life Expectancy

- Where is OPA's IPSP update?
- Competitive renewables procurement more sustainable than FIT
- Next policy wave: Load building and flexibility programs



Questions?

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