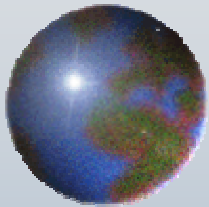




Complexity  
Creativity  
Change

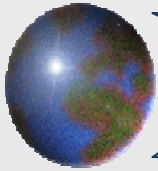
**Delphi**



# *Utility Regulatory Policy: What Can Be Done*

**CEC: Building the Renewable Energy Market in North America**

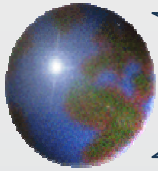
Ted Ferguson  
Vice President, Energy and Environment  
The Delphi Group



# *Electric Utility Options for Renewables*

## Overview

- ❖ Steps in Choosing Renewables for Electric Utilities  
Policy Options
- ❖ BC Hydro Example
- ❖ Ontario Example
- ❖ Other Canadian Jurisdictions and Policy Options



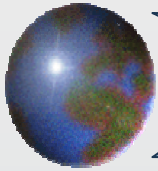
# *Electric Utility Options for Renewables*

## Drivers

- ❖ Renewable Portfolio Standards
- ❖ Preference for Renewables
- ❖ Desire to Diversify Energy Supply

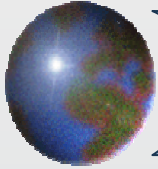
## Policy Options

- ❖ Renewable Energy Tariffs
- ❖ Emission Credits for Renewables (Set-Asides)
- ❖ Different Pricing for Different Resources
- ❖ Green Retail Marketing options



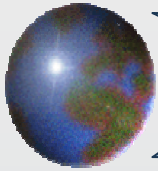
# *First Step*

- ❖ Utilities must decide that Renewables are a strategically important direction for their energy planning
  - ➔ Strategic in that they fulfill multiple goals
    - ✓ Environmental
    - ✓ Social (license to operate, low pollution)
    - ✓ Financial – can and must be done in an economic way
  
- ❖ Renewables as part of an integrated energy plan will require different policies and actions than if fossil generating stations were being tendered/built



## ***Next Step – Policy Choices***

- ❖ Must decide on the best way to bring renewables on-line
  - ➔ Depends on the natural resources available
- ❖ Hydro, wind, solar, biomass: all offer different price, supply and capacity realities
- ❖ Customers may prefer a certain type of renewable energy – wind is currently 'en vogue'
- ❖ Need to consider existing incentives (wind power tax incentives in the US and Canada, capital cost tax provision in Canada)



# *Next Step – Choice of Specific Mechanism to be Used*

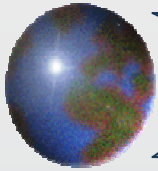
## How To Commission Renewables?

1. Utility develops it – flows costs through in the rates

or

2. Tender for Renewables

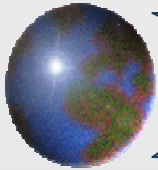
- ❖ Fixed price – with environmental pricing
- ❖ Open bid – lowest price picked first
  - ✓ Tender should include natural resource variability pricing – proximity to load, time of day, capacity factors etc.
  - ✓ Tariff approach – automatic feed in premium tariff awarded to various classes of renewables technology
  - ✓ Reduces costs for the generator



# ***BC Hydro's Approach***

## Two Green Power Tenders

- ❖ Tender – fixed price of \$55/MWh with up to \$8/MWh in green credits
  - ❖ \$5 for Ecologo
  - ❖ \$3 for GHG
  
- ❖ Natural resource variability pricing – up to \$5/MWh based on
  - ❖ Capacity
  - ❖ Time of day/year when generation mostly occurs
  - ❖ Proximity to load



# *Ontario's Renewables Tender*

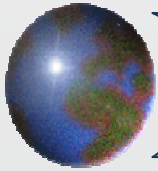
## ❖ Looking for 300MW of Renewable energy

- ❖ No price cap – open bid
- ❖ Renewables criteria must be met
- ❖ No green pricing, government owns all green value
- ❖ If green value is realized, 25% will be returned to the proponent

## ❖ Analysis

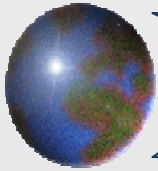
- ❖ Ontario needs price discovery – tender will help
- ❖ Renewables variability has not been used to the advantage of the system – peak time production, location pricing.





# *Other Regions*

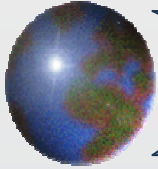
|                |   |
|----------------|---|
| Quebec         | Tender for specific renewable types (biomass, wind)                     |
| Saskpower      | Tender for low impact renewables  |
| Alberta        | Open market, wind being developed, Green power retail markets operating |
| Nova Scotia    | Tender for Wind   |
| Manitoba Hydro | Testing for wind, large hydro under development                         |



# *Additional Utility Policy Options*

- ❖ Intermittent resource close to load? Offer pricing which encourages its development eg. peak time solar
- ❖ Hydro system with wind options? Offer storage in the reservoir
- ❖ Long term energy planning? Incorporate emission costs into pricing
- ❖ If tendering to IPPs, consider barriers created by interconnection charges, and delivery costs
- ❖ Work with government on siting approvals
- ❖ Allow industrial customers to contract directly with renewable IPPs





# *The Delphi Group*

## Business Units

- ❖ Clean Energy and Environmental Technologies
- ❖ Climate Change
- ❖ Health and the Environment
- ❖ Corporate Sustainability

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