

# Future of Energy

Municipalities as leaders

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# Outline

- What does the future look like – climate policy vs energy transitions
- Impacts of policy and technology – myths vs realities
- The role of municipalities as leaders

# Climate policy vs energy transition

## Climate

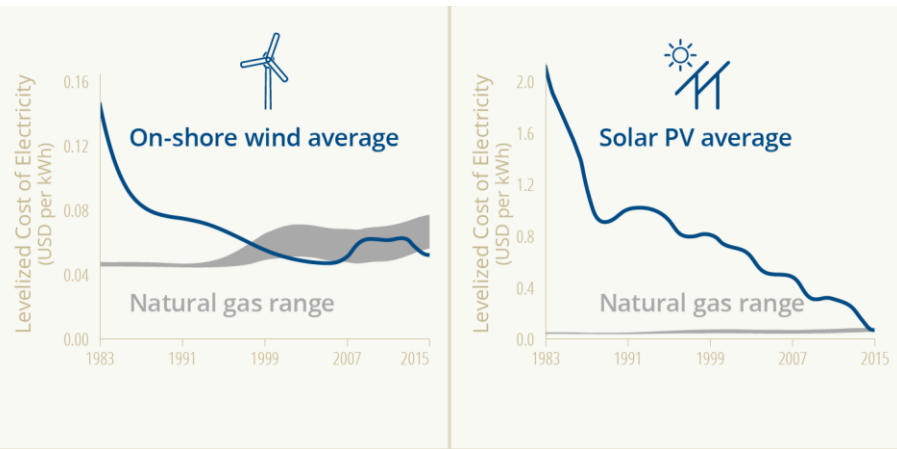
- Change in type and amount of energy
- Focused on cost to reduce emissions
- Policy driven
- Result: Reduction of greenhouse gas emissions

## Energy transition

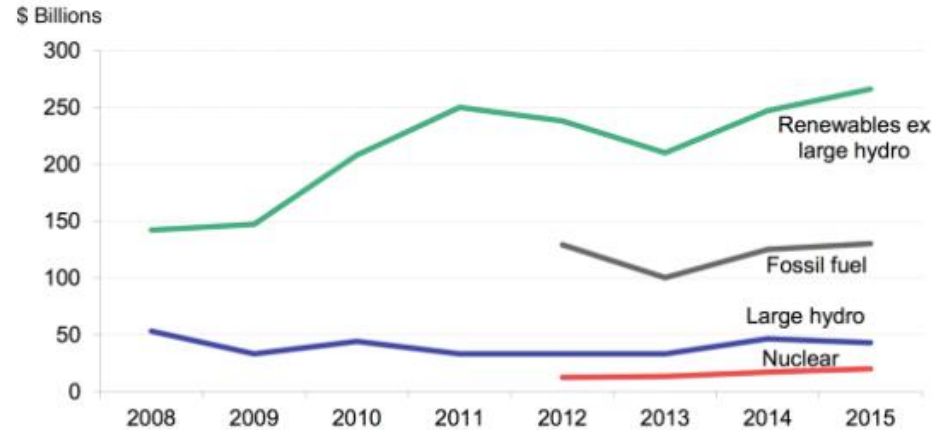
- Resiliency in the face of volatile prices
- Business opportunities
- Full cost accounting plus markets
- Result: Increase in resource productivity

# This is not small or local

## Costs are falling dramatically

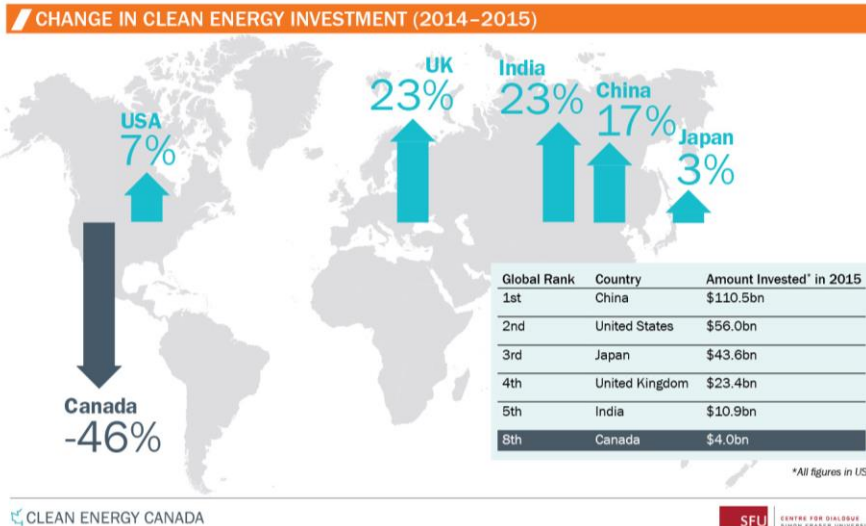


## Investments in renewables 2x fossil fuels

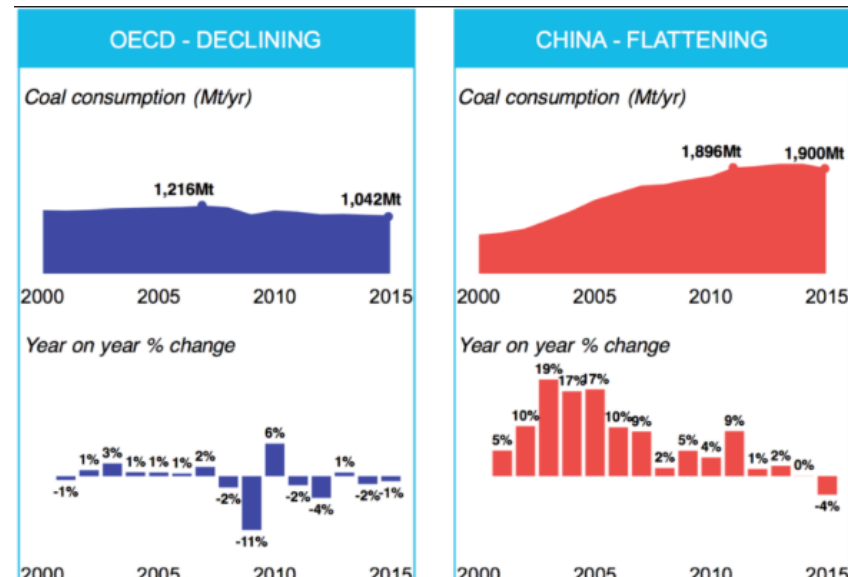


■ Investment in Power Capacity, 2008-2015 Source: BNEF, UNEP

## Investment is global



## Coal consumption is responding



# Examining the myths - renewables

- Myth: Renewables are too expensive and raise prices for consumers
- Reality: Costs for renewables have fallen dramatically and market based solutions result in lower prices
- Myth: Renewables aren't useful because they are variable
- Reality: Grid operators have shown 30% renewables can be done today. And they act as a hedge against fossil prices.

# Examining the myths – carbon levy

- **Myth: There are better alternatives.**
- **Reality: A clear consensus that a market based approach is better than prescriptive and more costly direct regulation.**
- **Myth: Albertans won't be able to afford the cost.**
- **Reality: The majority of the population will get a fixed rebate – giving them an incentive to reduce while protecting those who can't afford it.**
- **Myth: The levy will increase electricity prices.**
- **Reality: Prices are set by the most expensive generator in an hour – the impact will be minimal and could result in lower prices.**
- **Myth: The levy should exempt sectors.**
- **Reality: A price on carbon works best when it is applied across the whole economy. Support for sectors can be best provided in the form of assistance to reduce energy use – ensuring they are resilient against future energy price increases.**

# Municipalities as leaders

- Municipalities are on the front line (e.g., flood response)
- Increased role for municipalities as solutions are increasingly local
  - Distributed grid
  - Energy efficient buildings
  - Waste gas capture from upstream oil&gas
- Municipalities realize co-benefits
  - Job creation
  - Health benefits
  - Reduced congestion

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