

The Use of Regulation in Promoting the Development of Renewable Energy Technologies in the Caribbean



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Introduction

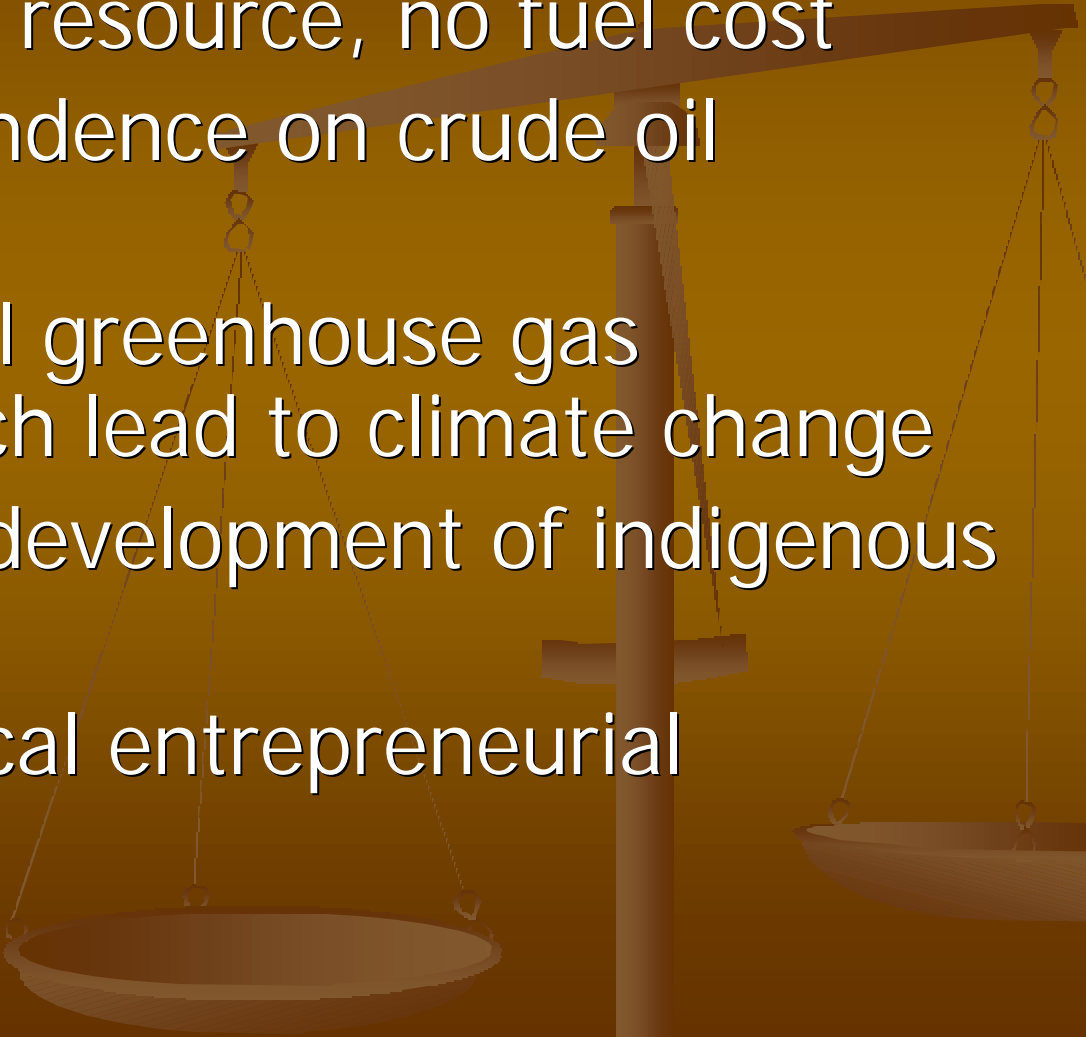
- In this study the role of regulation was assessed as it relates to the development of renewable energy technologies in Barbados.
- The strategies used were compared to those implemented internationally
- Based on findings recommendations were made for development of a regulatory framework suitable for the Caribbean

What is Renewable Energy?

A renewable energy source is a source of energy which is infinite or regenerative; these fuels are not depleted with use. Renewable energy sources include solar, wind, biomass, hydropower and geothermal.

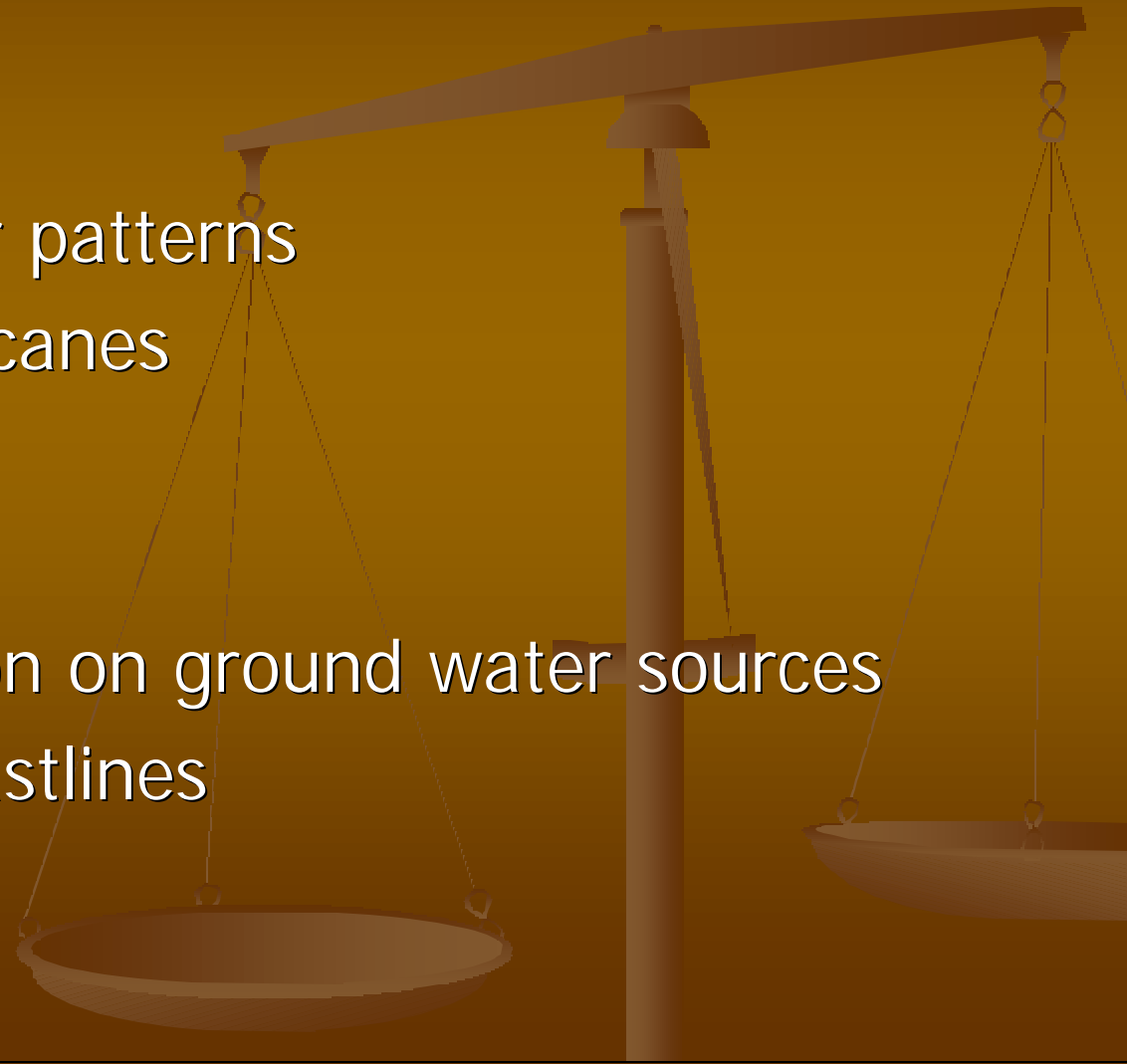


Why Use Renewable Energy ?

- It is an infinite resource, no fuel cost
 - Reduces dependence on crude oil derivatives.
 - Reduces global greenhouse gas emissions which lead to climate change
 - Promotes the development of indigenous technologies.
 - Encourages local entrepreneurial opportunities.
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Climate Change effects

- Rising sea levels
- Changing weather patterns
- More severe hurricanes
- Flooding
- Drought
- Salt water intrusion on ground water sources
- Destruction of coastlines



Renewable Energy Barriers

- High Capital Cost
- Lack of knowledge /expertise within utilities
- Lack of incentive through regulations and policies
- Financial risk is perceived as high



Regulatory Strategies

- Command & Control
(equitable, high regulatory cost)
- Economic Incentive
(efficient, flexible)
- Persuasion
(non coercive, unenforceable)



Barbados Solar Water Heating Industry

- 35,000 water heaters
- One third of population
- 3 companies
- Tax incentives for entrepreneurs
- Income tax deductible



Barbados Wind Energy

- Technical studies completed
- Favourable conditions exist
- No agreement between utility and wind developer
- No Independent Power Producer Legislation
- No economic incentive for the utility to introduce new technology
- No present projects

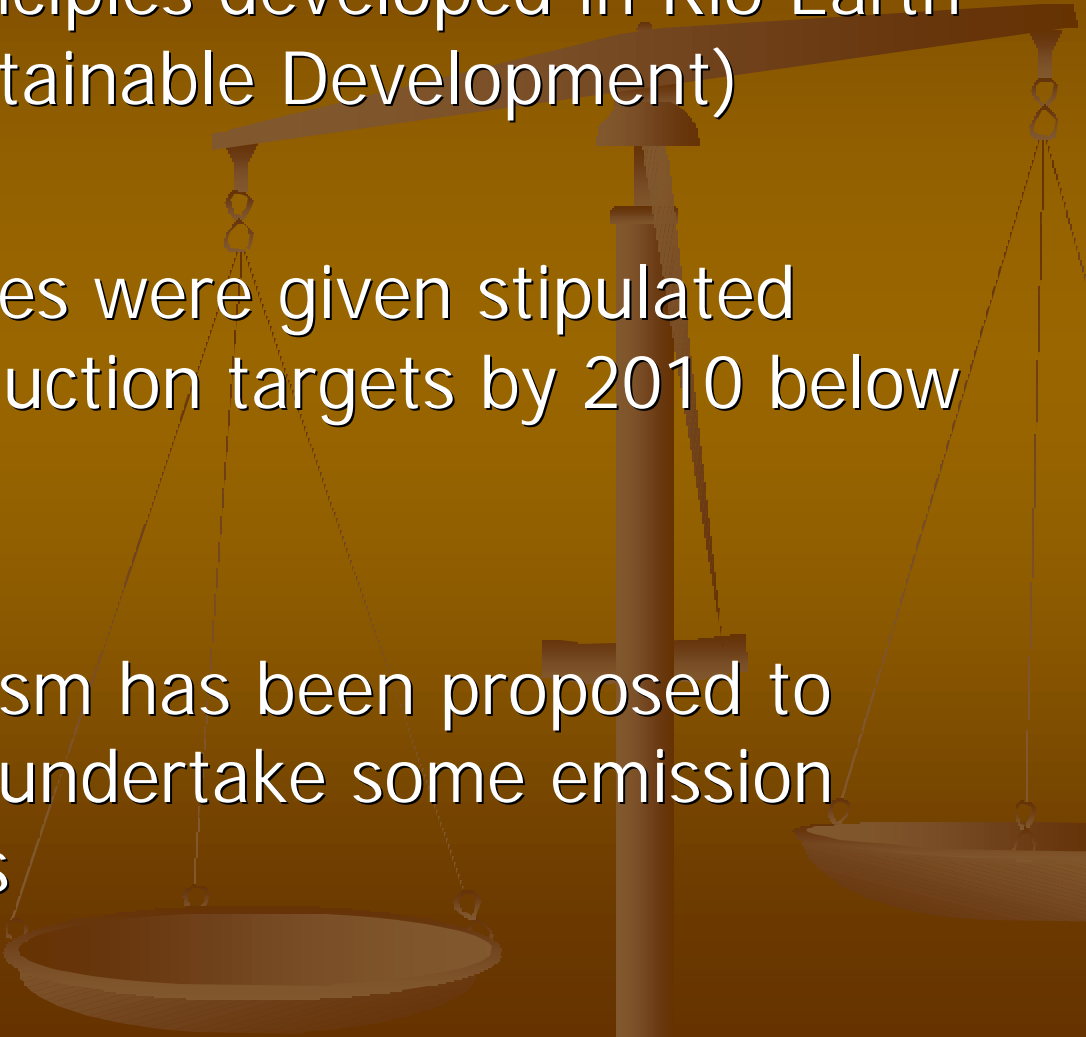


German Experience

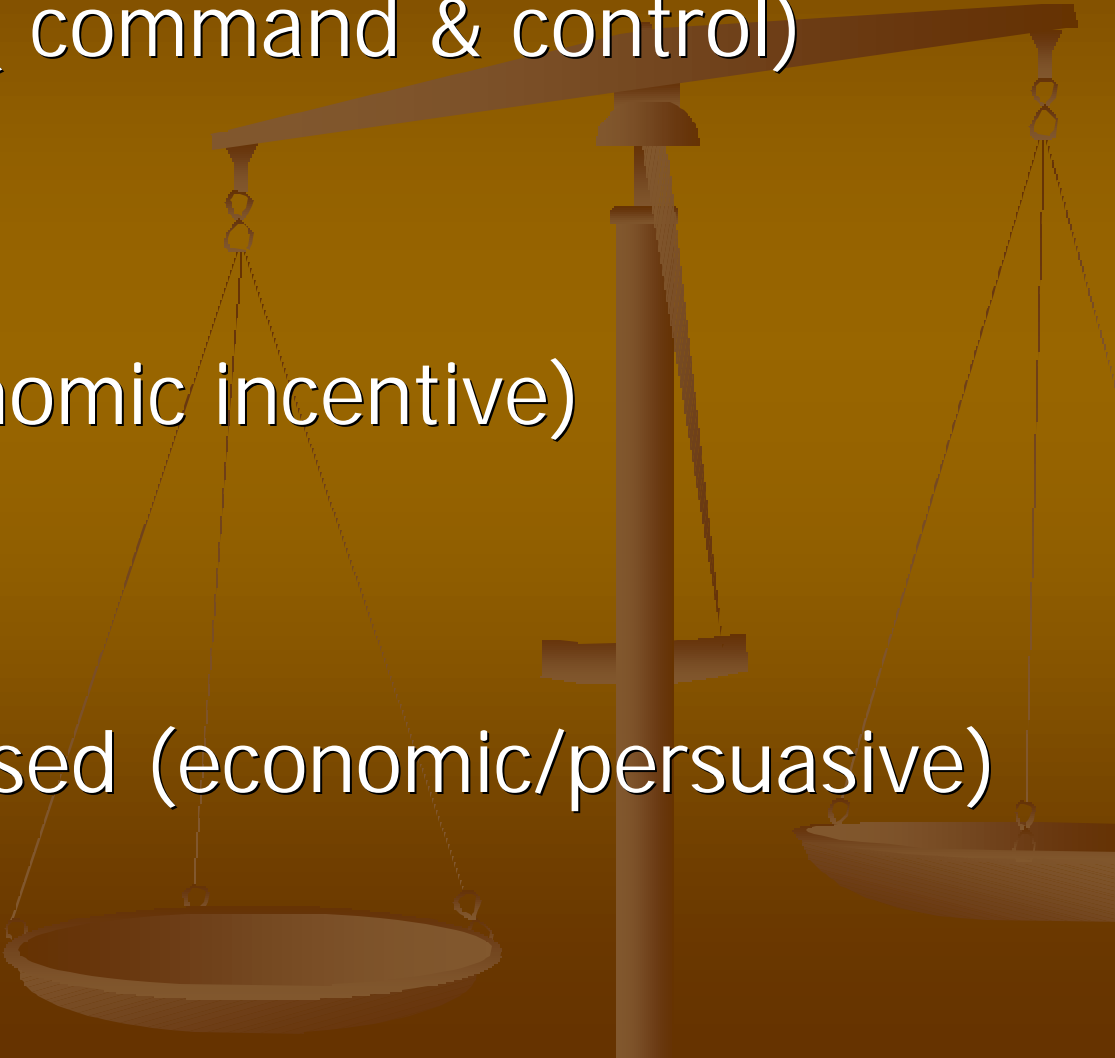
- Policy directives from government
- Entrepreneurial opportunities for citizens to sell wind power to utilities.
- Interest free loans provided for erection of photovoltaic systems
- Policies supported by a regional mechanism



Kyoto Protocol 1997

- Emerged from principles developed in Rio Earth Summit 1992 (Sustainable Development)
 - Developed Countries were given stipulated carbon dioxide reduction targets by 2010 below 1990 levels.
 - Economic Mechanism has been proposed to allow countries to undertake some emission reduction overseas
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Regulation Systems

- Rate of Return (command & control)
 - Price Cap (economic incentive)
 - Performance based (economic/persuasive)
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- A faint, stylized image of a balance scale is visible in the background. The scale is tilted, with the right pan being lower than the left pan. The image is rendered in a dark, muted brown color, matching the overall theme of the slide.

Recommendations



- Development of appropriate targets to facilitate Performance based regulation in the long run.
- Establishment of regional emission reduction target
- Establishment of single buyer utility structure for utilities in the Caribbean
- Establishment of Carbon trading scheme for the Caribbean
- Environmental cost should be factored into current regulatory systems



Thanks

