

Prospect of Community Based Renewable Energy on Rural Resiliency: A Secondary Study on Different Renewable Energy Projects

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Acknowledgment

RPLC- Governance Team



Key Concept

Community Renewable Energy (CRE):

Community Renewable Energy refers to **participation of a community** (directly/indirectly) in an **renewable energy-related** initiative that results in of some sort of **local and collective benefit** (Walker, 2008).

Research objective(s) and Methods

Research Objectives

- i) To understand **current scenario** of energy consumption.
- ii) To find out **major limitations** of conventional renewable energy; and
- iii) To explore **scope and barrier** of community based renewable energy projects.

Research Method

STEEP (Social, Technical, Economic, Environmental, Political)
Framework

Existing Energy Scenario

1. Energy Scarcity

- 1.1 billion people** live **without access to energy**
- 2.9 billion people** rely on wood or other biomass
- 4.3 million deaths** each year (World Bank, 2015)

2. Fossil Fuels and Climate Change

- 82%** world energy depend on fossil fuels (IEA,2015B).
- 37% of total CO₂** emission comes from electricity production
- **250,000 deaths** per year

3. Renewable Energy

- 3.5 million jobs** in 2010 (UNEP, 2011)
- wind energy can satisfy **20% of Canada's electricity** demand by 2025
- CO₂ emissions reduce **277 million metric tons annually** by 2025

Major Limitations of Conventional Renewable Energy Project

- More Centralized**
- Top to Bottom Structure**
- Large Amount of Investment**
- Monopoly by few organizations**
- Urban Dependent and lack of individuality**
- Lack of Sustainable Regional Development**

Community Renewable Energy

Community Renewable Energy Model

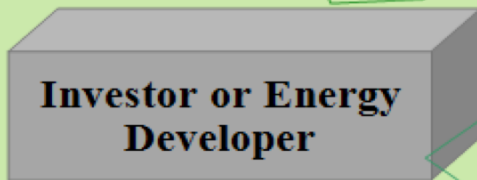
- User
- Operator
- Worker during Eradication Activity



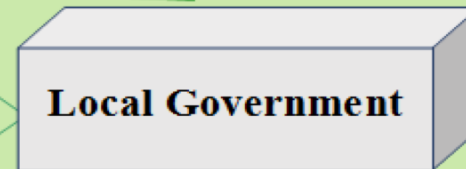
- Promoting Utilization of Renewable Energy



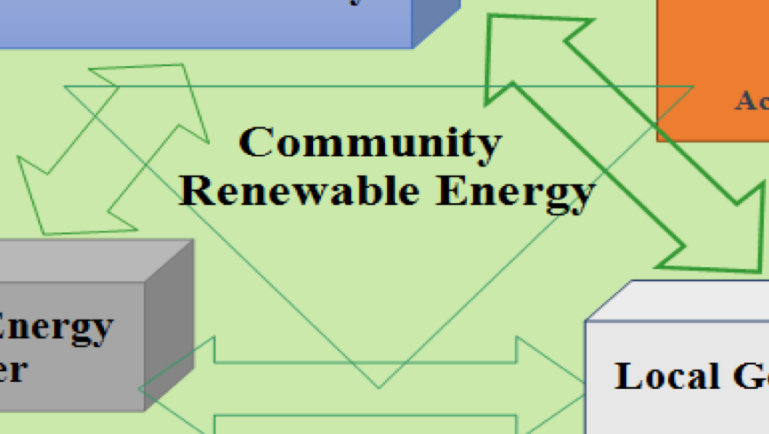
Community Renewable Energy



- Project Sponsor
- Financing
- Built Power Plant



- Facilitator
- Land
- Permits or Licence
- Connecting local community



Positive Outcomes of CRE

Social

- i) Increasing Social Capital
- ii) Promoting Social Equality
- iii) Reducing Out Migration

Economical

- i) Increasing revenue income,
- ii) Reducing energy poverty,
- iii) Local employment

Technical

- i) Reduce Load Management
- ii) Increasing Storage Capacity
- iii) Potential to match on Community's Energy Supply and Demand

Positive Outcomes of CRE

Political

- i) Increasing revenue income,
- ii) Reducing energy poverty,
- iii) Local employment

Environmental

- i) Decentralization process
- ii) Environmental leadership
- iii) Community Empowerment

Why CRE is more Successful Compare to the traditional RE projects????

ABCD (Assets Based Community Development) Approach

- Process Dimension (who is developed and run the project)
- Out comes Dimension (Who benefited from the project)

Limitations of CRE

Common Barrier			
General	Public	Private	Community
CRE as a new concept for society	Competitive and complex funding streams	Lack of local authority	Holiday homes
Lack coordination and communications gap	Designation and Planning restrictions	Lack of developer partnerships	Local value action gap
Few partnerships.	Lack of standard toolkits	Barriers to market and network entry	Lack of volunteers
High investment risk	Bureaucracy complexity	Lack of service opportunities	Lack of knowledge and understandings
Lack of data on energy capacity	Lake of exemplar CRE schemes		
Lack of Technological and human capital			

Thank you

<https://www.youtube.com/watch?v=XL462ypuKGA>

https://www.youtube.com/watch?v=o_u12-HQra4