

Social Change and the Development of Innovative Renewable Energy Projects in Rural Ireland

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IEA Bioenergy
Workshop,
University of
British Columbia,
27-30 August 2006





Tipperary Institute



- Established by the Irish Government
- Opened in September 1999

- Integrated education and development institute
- Two campuses – Thurles and Clonmel

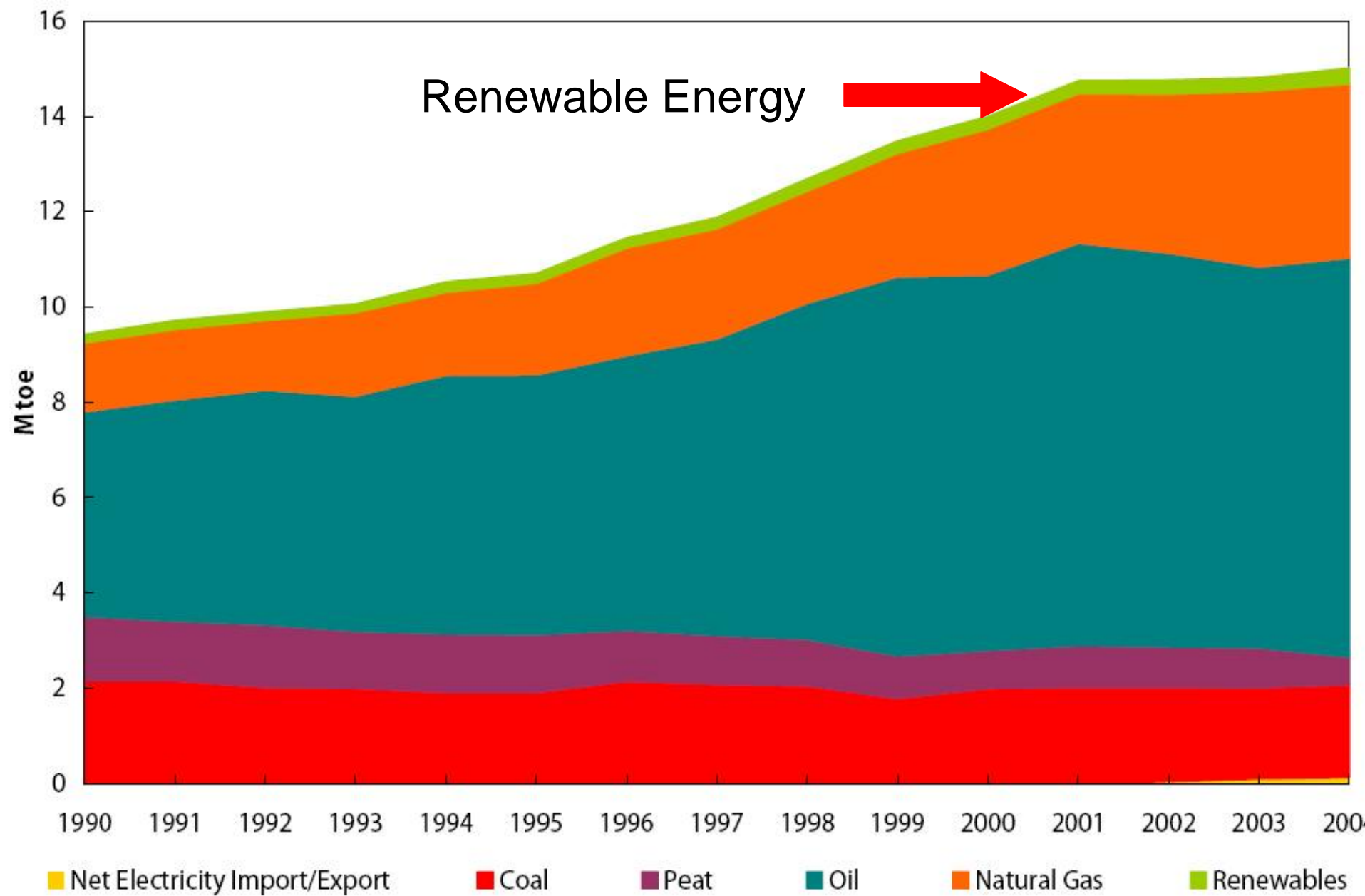


Content

- Context for Renewable Energy in Ireland
- Case Studies
 - Liquid Biofuels
 - Biogas
 - Wind
- A Suggested Framework to Investigate Social Change in the Context of the Case Studies
- Results from Research
- Analysis and Observations
- Conclusion

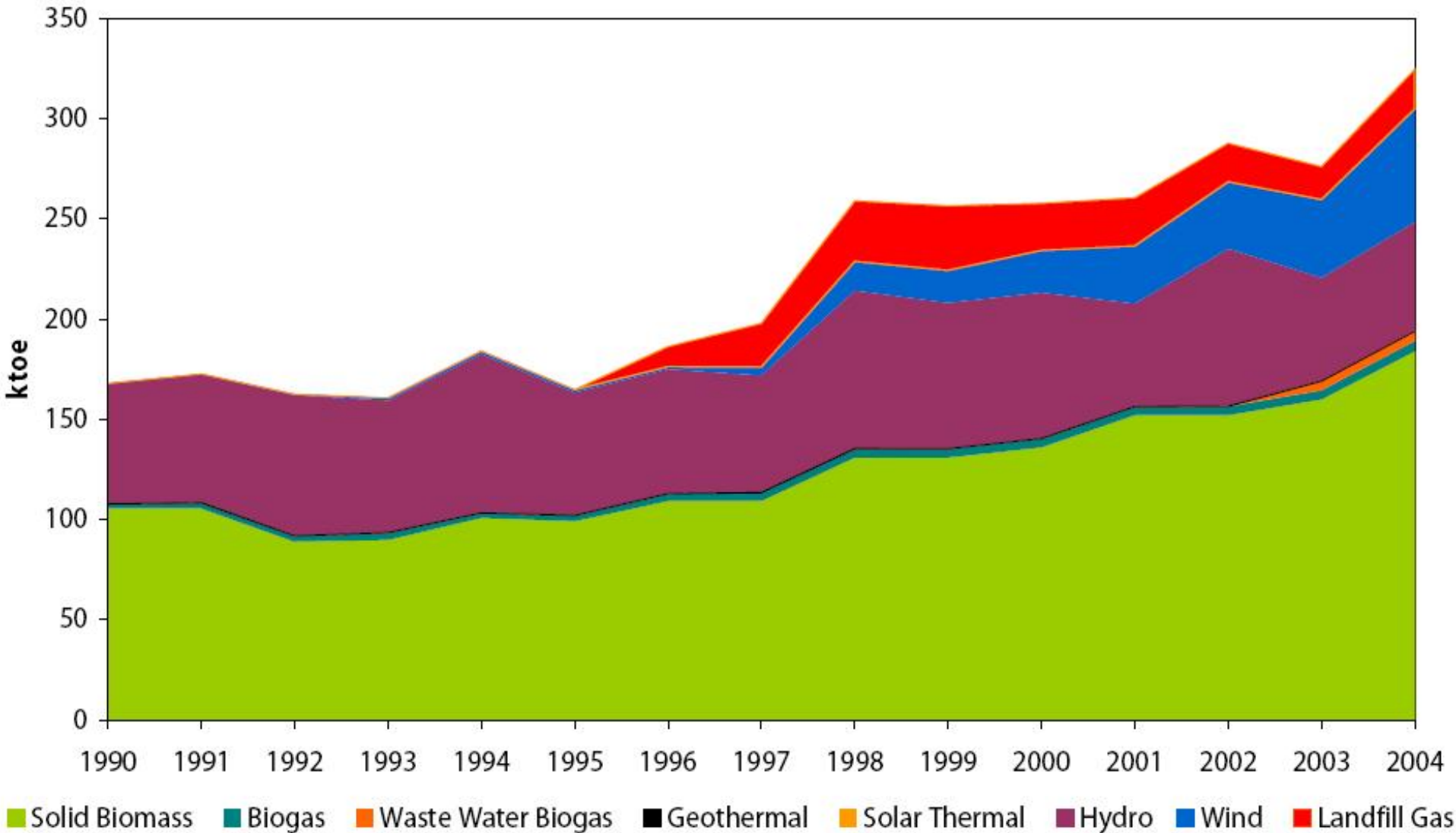
Total Primary Energy Requirement 1990-2004 (Mtoe)

(Source: SEI Energy Policy Statistical Unit)

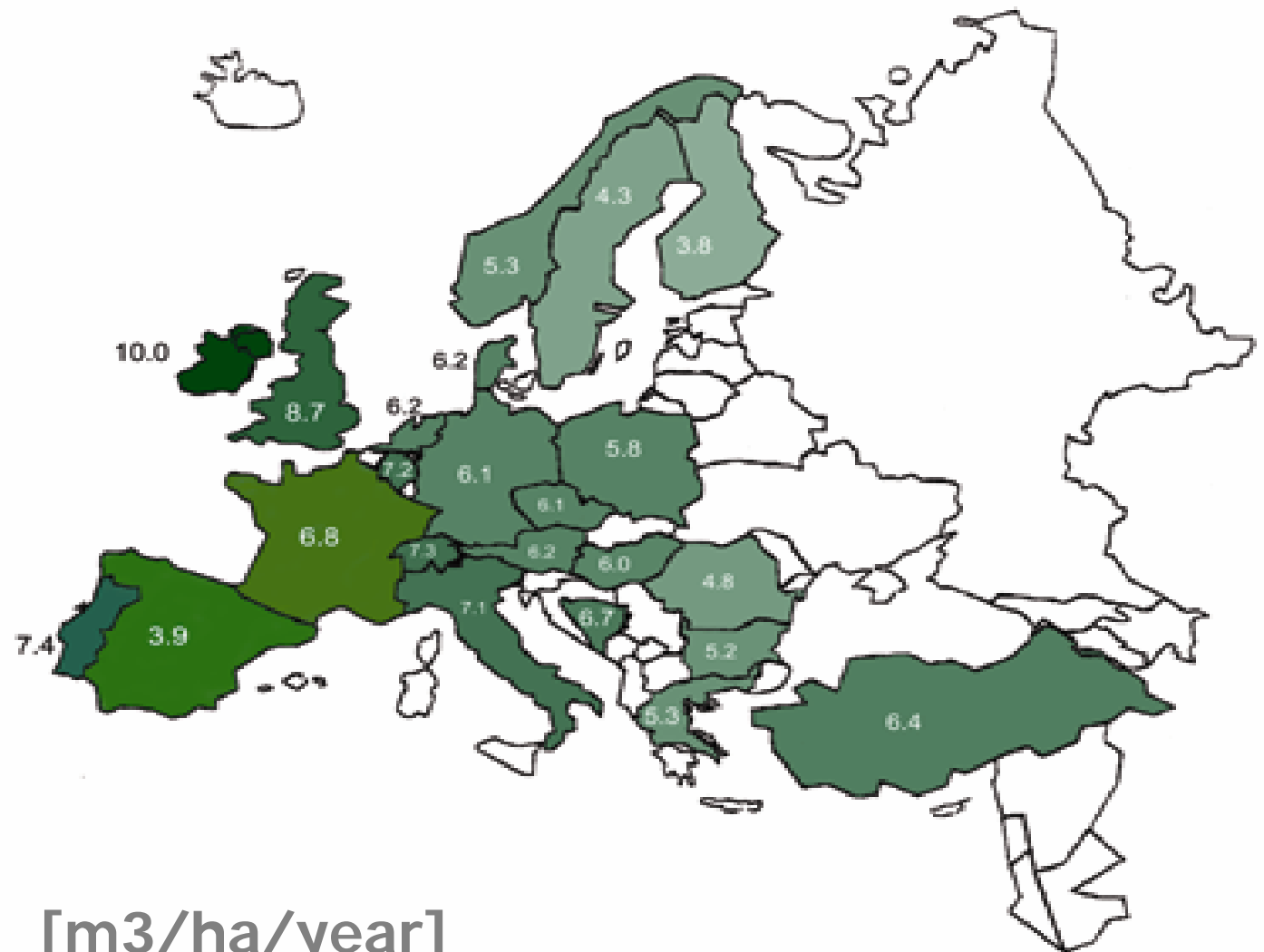


Renewable Primary Energy 1990 to 2004

(Source: SEI Energy Policy Statistical Unit)

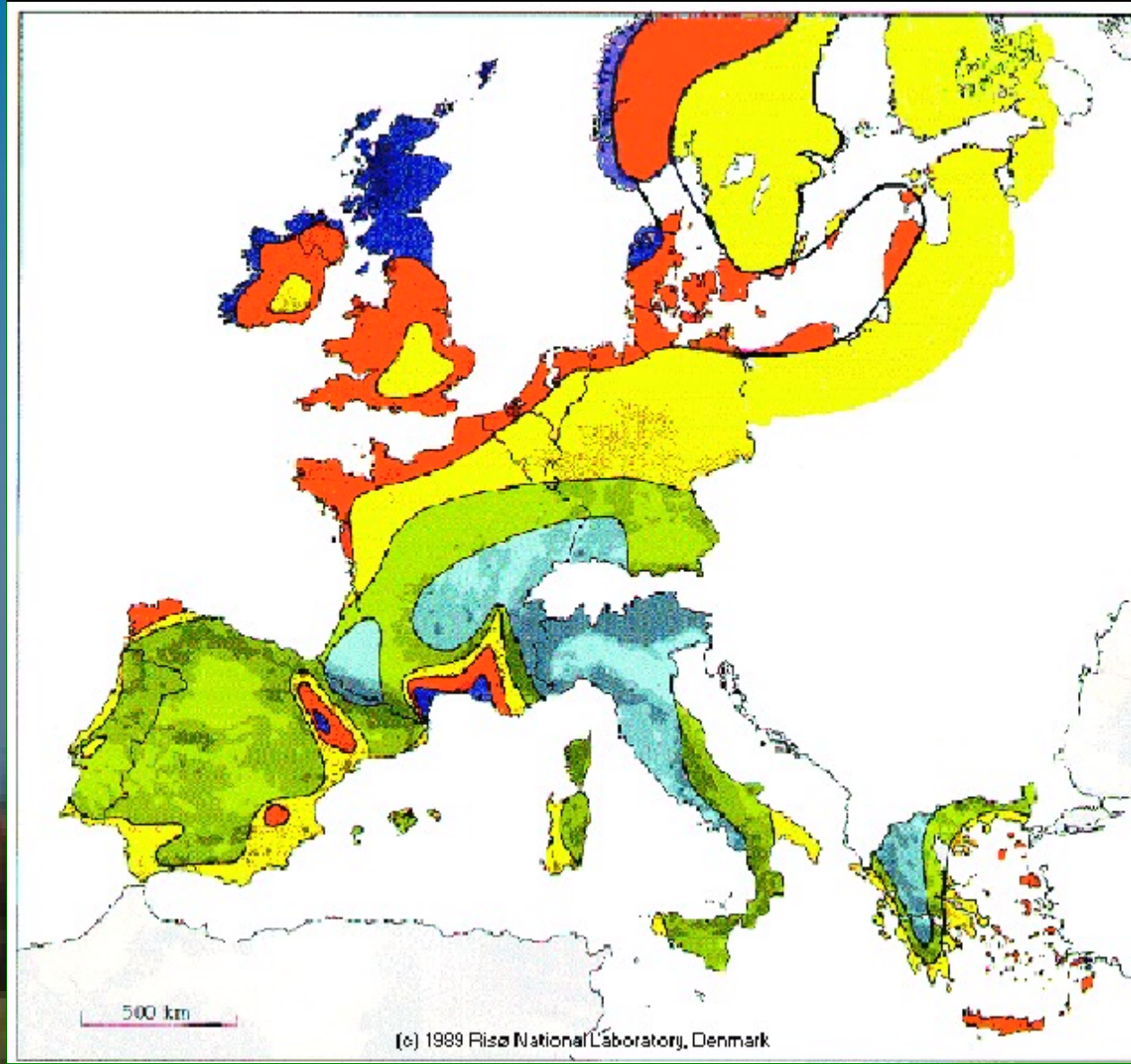


Ireland - The Best Growing Climate in Europe



[m3/ha/year]

Ireland – One of the Windiest Places in Europe

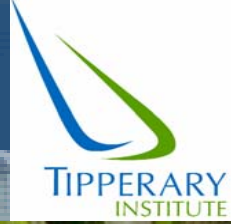


Case Studies

- Liquid Biofuels Project
 - Biogreen Energy Products
- Biogas Project
 - Camphill Community
- Wind Project
 - Templederry



Biogreen Energy Products Ltd.



- Pure Plant Oil from oilseed rape
- Used in modified diesel engines
- 4 farmers & 1 engineer
- Local farmers contracted to grow 800ha of oilseed rape for 2005



Biogreen Energy Products Ltd.



- Seeking alternative income generation
- Assisted by a number of agencies
- Lobbied to have excise duty removed on liquid biofuels
- Cost to date - €240,000
- At least 3,000 hectares of arable land needed when fully operational

Camphill Community

- Community of 85 people
- Methane gas from farm slurries and waste food
- Gas burnt to heat community buildings
- Multiple agencies involved
- Significant influence from Germany



Templederry Energy Resources Ltd.

- Community development plan Identified wind as a priority for development
- Planned to develop
 - 4MW wind farm owned fully by community
 - 40MW wind farm owned by local farmers
- Community has
 - Selected sites
 - Measured wind speed
 - Obtained planning permission



Templederry Energy Resources Ltd.



- Local agencies involved
- Share issue:
 - €1,000 per share to support development
 - €30,000 euro raised in first issue
 - Issue limited to community members - over subscribed
- Dividends in project to be reinvested in the community
- Five community members completed the TI 130 hour Certificate in Renewable Energy
- Considerable dialogue with community
- Awaiting grid connection

Suggested Framework to Look at the Influence of Social Change

Type of Driver	General Drivers of Social Change	Specific Drivers of Social Change Relevant to Renewable Energy Projects in Rural Ireland
<u>Remote Drivers</u> (International and National Context)	Social/Cultural	Attitude to Land Use
		Changing Demographics
	Economic	Globalisation of Economy
		EU Common Agricultural Policy
		Technological Innovations
		Effective Intermediary Bodies
	Environmental	International Environmental Policy
		EU Environmental/Energy Policy
		National Environmental/Energy Policy
	Knowledge and Information	Diffusion
<u>Proximate Drivers</u> (Local and Community Context)	Capital	Financial Capital
		Knowledge Capital
		Physical Capital/Land Availability
		Social Capital
	Leadership	Labour/Human Resources
		Personal Leadership
		Organisational Leadership
	Training/Culture	Availability of Relevant Training
		Culture of Co-operation

Biogreen Energy Products Ltd.

	Biogreen Energy Products Limited	Not Relevant	Somewhat Relevant	Relevant	Very Relevant
		Oil	Oil	Oil	Oil
Remote Drivers of Social Change	Attitude to land				
	Changing Demographics				
	Globalisation of the Economy				
	EU Common Agriculture Policy				
	Technological Innovations				
	Effective Intermediary Bodies				
	International Environmental Policy				
	EU Env&EnergyPolicy				
	National Environmental Policy				
	Diffusion				
Proximate Drivers of Social Change	Financial Capital				
	Knowledge Capital				
	Physical Capital/Land Availability				
	Social Capital				
	Labour/Human Resources				
	Personal Leadership				
	Organisational Leadership				
	Availability of Relevant Training				
	Culture of Co-operation				

Camphill Community

	Camphill Community Ballytobin	Not Relevant	Somewhat Relevant	Relevant	Very Relevant
		Gas	Gas	Gas	Gas
Remote Drivers of Social Change	Attitude to land				
	Changing Demographics				
	Globalisation of the Economy				
	EU Common Agriculture Policy				
	Technological Innovations				
	Effective Intermediary Bodies				
	International Environmental Policy				
	EU Env&EnergyPolicy				
	National Environmental Policy				
	Diffusion				
Proximate Drivers of Social Change	Financial Capital				
	Knowledge Capital				
	Physical Capital/Land Availability				
	Social Capital				
	Labour/Human Resources				
	Personal Leadership				
	Organisational Leadership				
	Availability of Relevant Training				
	Culture of Co-operation				

Templderry Energy Resources Ltd.

	Templderry Energy Resources Limited	Not Relevant	Somewhat Relevant	Relevant	Very Relevant
		Wind	Wind	Wind	Wind
Remote Drivers of Social Change	Attitude to land				
	Changing Demographics				
	Globalisation of the Economy				
	EU Common Agriculture Policy				
	Technological Innovations				
	Effective Intermediary Bodies				
	International Environmental Policy				
	EU Env&EnergyPolicy				
	National Environmental Policy				
	Diffusion				
Proximate Drivers of Social Change	Financial Capital				
	Knowledge Capital				
	Physical Capital/Land Availability				
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[illegible]

[illegible]

[illegible]

Conclusion

- Multiple responses to social change evident in the projects studied
- All projects reported a significant change in the attitude to the role of land
- Diffusion was a clear driver for at least two of the projects
- Access to physical and financial capital vital
- The role of social capital perhaps even more important

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