

A Source of Strength for Québec

TASK FORCE
**The Rural Areas as Energy
Producers**
October 13, 2009



2007-2014

Politique nationale de la ruralité



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du territoire*

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The Initial Mandate: Background

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The mandate of the task force is to explore new and alternative energy sources.

The goal is to encourage local development and socio-economic diversification of rural areas by providing rural communities with practical knowledge in order to develop their potential by:

- › *identifying the sectors and technologies best adapted to small communities;*
- › *finding short routes between the location of a raw material supply and that of its processing for energy production and utilization.*



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The Initial Mandate: Objectives

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- Acknowledge and develop the advantages and potential of rural areas in the production of alternate sources of energy.
- Specify the best niches and development models to be exploited.
- Ensure economic spin-offs and job creation and the establishment of new enterprises and technologies near the supplies of raw materials.
- Propose practical means to ensure that stakeholders in rural areas are the main beneficiaries of the development of this new economic sector.
- Assess the environmental impact of the technologies studied.



2008-2010 Work Plan: six Targets

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- **Explore the complete range of technologies and energy sectors** compatible with the development of small communities.
- **Identify the models, approaches and strategies best adapted** to Québec rural communities taking into account the principles of sustainable development and the fact that some are complementary and can be deployed in parallel.
- **Identify everything that supports or limits the development** of energy approaches in rural areas, in particular: laws, regulations, taxation, policies and programs, institutional practices, etc.
- **Develop tools enabling communities to manage their own initiatives** and benefit from a maximum of spin-offs: survey of needs and available resources, identification of possibilities and potentials promising the best results, tools for decision making and implementation of chosen solutions.
- **Recommend technical and professional support approaches** adapted to characteristics of small communities.
- **Suggest measures of financial support** adapted to rural initiatives.



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Tasks Completed or In Process

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- Survey of energy sectors for rural areas: data on 22 sectors, and recommendations concerning those promising the best results: the data will be distributed and the recommendations are under study.

General Sectors

- Forest biomass
- Energy crops
- Heat network



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Tasks Completed or In Process

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Promising Short-Term Sectors

- Densified biomass
- Residential combustion
- Large-scale combustion
- Biogas
- Solar heating of air/water
- Geothermal power
- Energy efficiency

Potential Sectors: 1 to 5 Years

- Cogeneration
- Biodiesel
- Mini hydroelectric station



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Sectors in Development: + 5 Years

- Pyrolytic bio-oil
- Ethanol from starch or sugar
- Ethanol from cellulose
- Synthetic gas
- Diesel and BTL ethanol
- Micro-hydro
- Photovoltaic solar
- Small-scale wind power
- Large-scale wind power



Tasks Completed or In Process (*Biopterre*)

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Decision support tool for the production of bioenergy derived from biomass in rural areas

- In the form of an evaluation guide for the creation of bioenergy projects.
- Used to identify the needs, potential and production activities meeting energy needs of communities and generating socio-economic spin-offs.
- Targets the best development solutions.



Perspectives for 2009-2010

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- Produce further documentation as needed on the most promising technologies, models or sectors as indicated in the survey step and subsequent work.
- Consider a possible integration or complementarity between the most attractive sectors or technologies.
- Explore support approaches for communities that often do not have the professional resources to aid them in their projects. (For example : in Alberta, prefeasibility studies are undertaken by the state.)
- Review the conditions of financial support likely to meet the special needs of rural communities.



5 Research-Action Projects: Autumn 2009

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- Establish a realistic portrait of constraints, obstacles and levers related to the implementation of small energy projects.
- Test the decision making tool in three rural communities.
- Study the potential of reviving sawmills by producing energy through the exploitation of existing equipment (shredder, boiler, dryer, etc.) and raw materials.
- Explore the socio-economic cost-effectiveness of small energy projects in rural areas using a combination of sectors and approaches integrated from inputs (harvesting or production of biomass) to outputs (heat, power, steam and related activities: greenhouses, drying, fish farming, industrial or residential heating, etc.).
- Examine the benefits of promoting energy crops.



Exploration of New Solutions

- Identify models in which rural communities assume management of energy development.
- If needed, conduct testbeds for rural communities and their municipal associations in order to verify the feasibility and relevancy of proposals put forward (for example, for the decision support tool).



THANK YOU FOR YOUR ATTENTION

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