



Program of Energy Research and Development (PERD)

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Marine Transportation and Safety



Natural Resources
Canada

Ressources naturelles
Canada

Canada 



Outline

- What is PERD?
- Participants
- Features and Structure of PERD
- Outline of the oil and gas component of PERD
- Timeline and next steps





What is PERD?

- A unique federal program concentrated entirely on non-nuclear energy research and development
- Coordinated by Natural Resources Canada but delivered interdepartmentally through twelve federal departments and agencies
- Funding provided to or through the participating federal departments and agencies
- 2005-06 R&D Budget: \$50M





Goal of PERD

PERD seeks to promote the development and use of Canada's energy resources in a clean and safe manner, and the development of energy efficient, renewable and alternative energy sources and technologies





Engaging PERD

PERD funds 12 federal departments and agencies, including:

- Agriculture and Agri-food Canada
- Canada Mortgage and Housing
- Environment Canada
- Fisheries and Oceans
- Health Canada
- Indian and Northern Affairs
- Industry Canada
- National Defense
- National Research Council
- Natural Resources Canada
- Public Works and Government Services Canada
- Transport Canada

Those in **red** font are actively involved in northern R&D





Features of PERD

- Strategic focus, responsive to current priorities
- Collaborative approach allows a coordinated effort, yielding more significant results
- Partnerships with recipients and industry increases the pool of expertise and funding, and ensures relevance to the needs of the end-users
- Systematic evaluation to periodically assess relevance
- Sound S&T expertise due to the work being led by experts in specific fields of research





S&T Strategic Intents (6)

- **Strategic Intent 1:** Fulfill federal government responsibilities while maximizing economic benefits and reducing environmental consequences from the expansion and diversification of Canada's oil and gas production
- **Strategic Intent 2:** Foster cleaner sustainable transportation fuels and systems in order to improve the environment, reduce emissions, including GHGs, and to increase economic activity through development of domestic and export markets
- **Strategic Intent 3:** Reduce the overall energy intensity of Canada's buildings and community systems and, consequently, their associated GHG emissions while, at the same time, providing Canadian companies with potential economic opportunities





S&T Strategic Intents (6) con't

- **Strategic Intent 4:** Reduce the overall energy intensity of Canada's resource sectors and, consequently, their associated GHG emissions while, at the same time, improving productivity and providing Canadian companies with potential economic opportunities
- **Strategic Intent 5:** Reduce the environmental impacts of Canada's electricity infrastructure, particularly greenhouse gases, through alternative electric power generation, increased efficiency of fossil-fuelled plants and strategies to capture and manage emissions
- **Strategic Intent 6:** Minimize the negative impacts of climate change on the Canadian energy sector (*Phasing out*)





PERD Oil and Gas Portfolio (Strategic Intent 1)

- 3 Strategic Directions:
 - 1.1 Oil Sands Production and Upgrading
 - **1.2 Offshore and northern**
 - 1.3 Cross-cutting environmental





Strategic Direction 1.2

Offshore and northern oil and gas

(\$6.3M)

- Program Objectives

1.2.1. Offshore environmental factors

1.2.2. Oil & gas in the north

1.2.3. Marine transportation and safety

1.2.4. Remediation of offshore drilling and production wastes, discharges & spills





Strategic Direction 1.3

Crosscutting Environmental Issues (\$2.8M)

- Program Objectives

1.3.1 Upstream Petroleum Air Issues (Flaring, venting, fugitive emissions)

1.3.2 Pipelines (primary focus on the North)

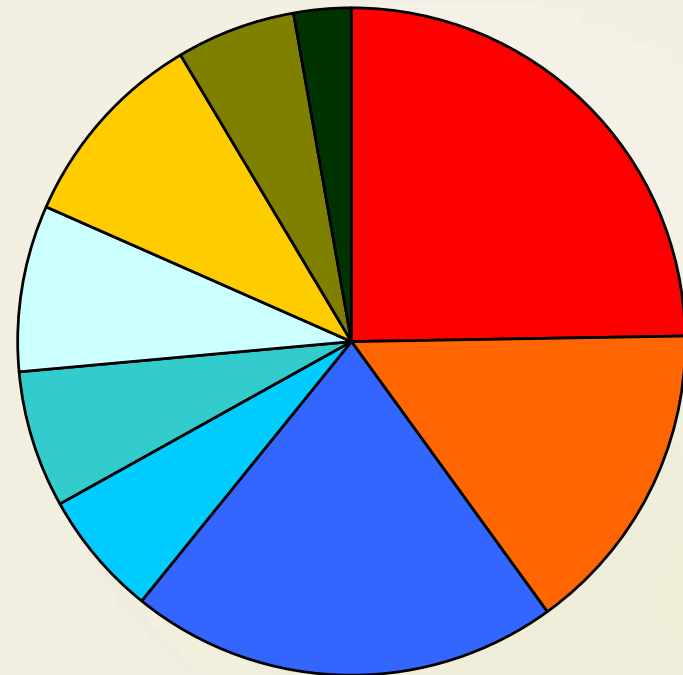
1.3.3 Remediation of groundwater and soil





Relative funding in Oil and Gas POLs

- Conversion
- Production
- Offshore Environmental Factors
- Offshore Impact Mitigation
- Marine Transportation and Safety
- North
- Pipelines
- Groundwater and Soil Remediation
- Upstream Air Issues





Timeline and Next Steps

- Offshore and northern PERD programs will continue into 2006-07 at similar funding levels
- Input from key stakeholders on future R&D needs is currently being received at various levels, in order to feed into a Sustainable Energy Science and Technology Strategy (led by NRCan)
 - The report from this workshop is one such mechanism to provide your input
- Implementation of the Sustainable Energy S&T Strategy will likely begin as of next year
 - Will involve some realignment of programs to respond to emerging priorities





Strategic Planning Initiatives Underway

- Energy Strategy
 - Currently under development at NRCan; estimated completion early 2006
 - Requested by the Prime Minister in order for Canada to have a clear vision of what we need to do in order to sustain our energy needs for years to come





Strategic Planning Initiatives (con't)

Sustainable Energy Science and Technology Strategy

- One component of the broader Energy Strategy
- Will identify the key priorities that need to be addressed in order to help Canada transition to a new energy economy (long term)
 - The new energy economy will include cleaner fuels and new technologies to allow the production of energy with less green house gases and less contaminants. There will also be more emphasis on energy conservation. Respect for the environment when producing new resources will continue to be a priority as well.





Summary

- PERD contributes to the achievement of federal responsibilities and priorities
- PERD has broad coverage in energy S&T
- PERD achieves many outputs with limited resources, thanks to partnerships

Looking ahead...

- Planning exercise underway to align the program with present and emerging needs
- Implementation of the Energy S&T Strategy likely to begin late 2006





For more information

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