

Nova Scotia Department of Energy
Annual Accountability Report For The Fiscal Year 2006-2007

November 2007

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1.0 Accountability Statement

The accountability report of the Department of Energy for the year ended March 31, 2007, is prepared pursuant to the Provincial Finance Act and government policies and guidelines. These authorities require the reporting of outcomes against the department business plan information for the fiscal year 2006-2007. The reporting of department outcomes necessarily includes estimates, judgements and opinions by department management.

We acknowledge that this accountability report is the responsibility of department management. The report is, to the extent possible, a complete and accurate representation of outcomes relative to the goals and priorities set out in Energy's business plan for the year.

Minister, Honourable Richard Hurlburt

Deputy Minister, Alison Scott

2.0 Message From the Minister

I am pleased to submit the accountability report on behalf of the Nova Scotia Department of Energy for the 2006-2007 fiscal year. This report highlights the contributions of the Department of Energy toward the development of a world-class energy sector in Nova Scotia.

Each year, the Nova Scotia Department of Energy makes great strides on many fronts, and this year is no different. We are continuing to grow, expand and promote the province's promising onshore and offshore - part of our long-term commitment to Nova Scotians.

We are also working to build a sustainable environment. As a result of work by my Department, by 2013 nearly 20 per cent of Nova Scotia's electricity supply will be generated by renewable sources. This means up to 100,000 more homes will be powered by green energy, up to 750,000 tonnes of greenhouse gas will be displaced from our air and about \$1 billion in new investment will be generated in Nova Scotia.

We are also providing Nova Scotians with information and opportunities needed to make informed energy choices through the creation of Conserve Nova Scotia, the provincial agency responsible for energy efficiency and conservation. This agency is dedicated to helping Nova Scotians learn how to use energy more efficiently and allows all of us to do our part in making Nova Scotia a cleaner, greener province for our generation and for generations to come.

With these thoughts, I look forward to the continued expansion of our province's energy industry and to the growth of our economy.

Hon. Richard Hurlburt,
Minister of Energy
Minister responsible for Conserve Nova Scotia

3.0 Message From the Deputy Minister

When the Nova Scotia Department of Energy was established in 2002, the Nova Scotia Energy Strategy served as the foundation upon which the Department's mission and mandate were built.

To this day, the Energy Strategy still guides the Department of Energy in its planning and decision-making. It also provides the Department with a means to monitor its success, based on the objectives outlined in the strategy.

In the 2006-2007 fiscal year, the Nova Scotia Department of Energy made considerable progress toward the long-term goals set out by the government in the Energy Strategy. The enclosed accountability report provides an overview of these achievements—achievements which translate into economic, environmental and social benefits for Nova Scotians.

By working closely with key stakeholders and by embracing challenges that may arise with a positive, can-do attitude, together, we will continue to seize every opportunity to develop our province's resources and strengthen our position in the global energy market.

It is with great pleasure that I offer the following accountability report on behalf of the team of energy experts who are helping bringing our province's vision to fruition.

Alison Scott
Deputy Minister of Energy

4.0 Introduction

In 2006-2007 the Department of Energy was guided by two documents – the department’s 2006-2007 Business Plan and the Nova Scotia Energy Strategy. When the Energy Strategy was released in December 2001, it provided a solid foundation on which to build a stronger, more vibrant energy industry. The strategy is a dynamic document – one that was designed to be strategic, yet flexible as the department meets the challenges and opportunities within the energy industry as it changes and grows. In the coming years, continued success will depend on the department’s ability to respond to changing global and regional circumstances while making the most of new opportunities. Each year, the business plan outlines how priorities link to the themes in the Energy Strategy. Thus, this accountability report reflects not only progress made on our business plan, but on the Energy Strategy as well, thereby integrating strategy and action.

5.0 Department Progress and Accomplishments

Strategic Initiatives:

In our 2006-2007 Business Plan, the Department of Energy established three strategic directions to focus on to deliver our mandate:

- *Mitigate Climate Change Through Energy Efficiency and Renewable Energy*
- *Increase investment in offshore and onshore exploration and development*
- *Effective and efficient departmental regulation and operations*

The business plan defined each of the Department's strategic initiatives against the three main priorities of Building Knowledge, Marketing Nova Scotia, and Creating a Positive Investment Climate. The following sections will identify each of the actions set out in the 2006-07 business plan to achieve these priorities and report on the Department’s progress.

5.1 Mitigate Climate Change Through Energy Efficiency and Renewable Energy

Government must work closely with the private sector and non-governmental organizations (NGOs) to achieve diverse, competitively priced and sustainable energy supplies in Nova Scotia. The Department works with these groups through various program and policy initiatives. Success in this area will help to address climate change and energy efficiency challenges.

5.1.1 Priority: Build Knowledge

By promoting and facilitating targeted research and development and technological innovation, the Department supported the development and demonstration of alternative and efficient energy technologies. The Department conducted policy research and development to better understand issues that affect Nova Scotia's energy supplies such as our renewable resources and the implications of federal and provincial regulation of GHG emissions. The Department's public education initiatives enhance understanding of opportunities for energy efficiency and conservation as well as careers in alternative forms of energy.

A major step in building knowledge and awareness of energy conservation and efficiency was the launch of *Conserve Nova Scotia* in January 2007. This agency, serving under the Minister of Energy, is charged with developing and managing programs and building awareness of energy conservation and efficiency by all residents of Nova Scotia.

- 2006-07 Business Plan Action:

In 2005 the provincial government initiated the \$10 million Smart Energy Choices for Nova Scotians program aimed at building public awareness and knowledge as related to making energy conscious decisions. Energy efficiency leads to reduced impacts on our climate and health that result from particulates and greenhouse gasses produced by burning fossil fuels. In 2006-07 the Department was allocated \$10 million to continue this program. The program and funding was subsequently transferred to Conserve Nova Scotia when that office was created in January 2007.

Smart Energy Choices programs that contributed to improving residential energy efficiency in 2006-2007 include the Provincial *EnerGuide* rebate, the incentive for *EnerGuide* audits, the top-up for both the audits and *EnerGuide* upgrades for modest income homeowners, the incentive for new wood pellet and EPA wood stoves, and the incentives for energy efficient oil furnaces and hot water boilers.

In 2006/07 the following results were logged for energy efficiency utilizing *Smart Energy Choices* Program:

- ◆ 1100 homeowners received a provincial *EnerGuide* rebate;
- ◆ 100 modest income homeowners received the \$400 *EnerGuide* top-up rebate;
- ◆ 2100 homes received their first *EnerGuide* audit;
- ◆ 2500 homeowners registered for their rebate for an energy efficient oil furnace or hot water boiler;
- ◆ Provincial incentives supported the installation of 3500 new wood pellet or EPA rated wood stoves;
- ◆ 320 new home plans were analyzed for energy efficiency, and 30 homeowners had completed construction with upgrades and received the provincial government rebate.

Since inception in September 2005 to March 31, 2007 the *Smart Energy Choices* program incentives have supported:

- ◆ Installation of 3500 new wood pellet or EPA rated wood stoves;
- ◆ 2500 new high efficiency oil fired boilers or furnaces;
- ◆ 1450 provincial EnerGuide rebates;
- ◆ Direct provincial EnerGuide payments to homeowners of over \$1.8 million for energy efficiency upgrades;
- ◆ 1600 first EnerGuide audits; (Plus Federal support for 2100 EnerGuide audits)
- ◆ Delivery of approximately 65,000 energy savings kits to Nova Scotia households;
- ◆ Distribution of more than 200,000 compact fluorescent lights to Nova Scotians.

From its inception in 1997 to end of March, 2007 the EnerGuide program has involved over 10,600 Nova Scotia homeowners.

To build knowledge about renewable energy, in 2006-2007 the Department took major steps toward helping Nova Scotia realize more wind power, biofuels development, and the first in-stream tidal energy demonstration project in the Bay of Fundy.

Regarding Fundy tidal power, the first step was arriving at a conclusion on the jurisdictional issues related to the waters and seabed floor of the Bay of Fundy. A legal opinion was developed and has not been contested by the Federal government. To build detailed knowledge and local involvement, the Department assembled a Federal- Provincial Tidal Energy Working Group. It began identifying issues needing assessment. Several workshops and public forums were held in the Fundy region during winter 2006-2007, attracting substantial local participation. More items regarding the Fundy Tidal Project are listed in other sections below.

Along with these major initiatives, the following are special projects undertaken by the Department in 2006-2007 to build knowledge about climate change, energy efficiency and conservation:

- ◆ Funded and guided a wind integration study;
- ◆ Funded the Nova Scotia Climate Change Centre after federal funding was cancelled;
- ◆ Supported the creation of community energy plans for Halifax Regional Municipality and the Strait-Highlands region;
- ◆ Worked with the Union of Nova Scotia Municipalities (UNSM) on a best practices guide for small and medium-sized municipalities;
- ◆ Began developing issue papers on the risks of climate change on Nova Scotia;
- ◆ The department provided funding for a high-tech mapping project of Halifax harbour that will assist in climate change adaptation work.

5.1.2 Priority: Marketing Nova Scotia

In 2006-2007 the Department worked to identify niche markets to support Nova Scotia business development related to energy sectors. Along with offshore related opportunities, international opportunities are emerging for Nova Scotia-developed alternative and renewable energy technologies. The Department collaborated with the Department of Environment and Labour to identify additional opportunities.

In March, the maritime provinces were requested to present on the opportunities available to tidal power technology developers in the Bay of Fundy at the British Wind Energy Association's Annual Marine Renewable Energy Conference. The conference was followed up by a meeting at the Canadian High Commission between Canadian and UK decision makers on potential future collaboration.

5.1.3 Priority: Creating a Positive Investment Climate

- 2006-07 Business Plan Action:

90 per cent of Nova Scotia's electricity is generated by burning fossil fuels. The by-products of burning fossil fuels affect both climate change and health. To encourage increased investment in alternative sources of energy, the Department of Energy will be working with industry stakeholders to assess tax issues, distribution issues and jurisdictional issues (ocean based renewables) that impact on business case decisions. Emerging changes in electricity policy will include developing market rules for transmission system users, and setting timeframes and thresholds for renewables requirements.

In 2006-2007 to support investment in renewable energy and efficiency the Department worked to build an efficient regulatory system, negotiate federal funding and partnerships for conservation and renewable development, and support the use of and access to a diverse mix of energy sources. These activities help promote the economic opportunities arising from climate change mitigation and adaptation, energy efficiency and conservation, and helped continue opening of our electricity market.

Specific accomplishments related to electricity markets and wind power for 2006/06:

1. Electricity Act: The *Electricity Act* was proclaimed law on Feb 1st, 2007 along with 2 sets of companion regulations: 1) the *Wholesale Market Rules Regulations*, and 2) the *Renewable Energy Standards Regulations*.
2. Commitment to Work with Wind Developers: Held stakeholder forum on Dec 15, 2006 to review the proposed market rules and regulations for wind and other renewable energy development in Nova Scotia.
3. Commitment to Lead a Nova Scotia Wind Integration Study:
4. Wholesale Market Rules, Regulations, and market opening: Worked with stakeholders to develop wholesale market rules and regulations to support the

Wholesale Market opening. After wholesale market rules and regulations established, Wholesale Market Opening took place on Feb 1st, 2007.

5. Commitment to Establish Top-up and Spill and Backup rates for Wholesale Market: Continuing to work with NSPI and other stakeholders to establish rates.
6. Renewable Energy Standards (RES): Worked with stakeholders to establish rules and regulations for renewable energy and RES targets for 2010 and 2013.

In 2006-2007 the Department gave additional focus to potential development and opportunities from Fundy tidal power, a large source of renewable energy. Actions included establishment of a Federal- Provincial Tidal Energy Working Group which developed a regulatory framework to assist developers in navigating the complex process. In November, a delegation of Federal/Provincial regulators and Fundy stakeholders met in the UK with regulators of the first in-stream tidal energy demonstration facility in the world. The delegation visited the facility and learned from the experiences of the UK government on the development of in-stream tidal energy technology.

In March, cabinet approved two Departmental recommendations crucial to investment and development of Fundy tidal power:

1. Launch of a Strategic Environmental Assessment (SEA) to be led by the Offshore Energy and Environmental Research Association (OEER) which was created by the Department in 2005.
2. Development of an in-stream tidal energy demonstration facility.

For development of solar power, the Department in 2006-07 partnered with the Ecology Action Center (EAC) to help the Commercial, Industrial and Institutional sector evaluate the potential benefits of solar thermal energy systems. The project which is being lead by the EAC is entitled SolarGain. The Department of Energy provided assistance to the EAC in preparing a general presentation on solar thermal energy and in identifying priority areas for action.

The Department also processed applications for the 10% solar thermal rebate program and fielded questions from individuals seeking information on how to set up net metered photovoltaic systems. (Note solar rebate is payed for through Conserve NS)

5.2 Increase Investment in Onshore and Offshore Exploration and Development

Increased offshore energy exploration and production will help sustain the important royalty and tax revenue received by the Province from our offshore production, and also provide new business and employment opportunities for Nova Scotians. The royalties from Sable Offshore Energy Project are expected to reach an estimated peak of \$410 in the current fiscal year (2007-2008), then decline. Therefore the effort and activity in the following initiatives is essential to renewed exploration and development of our offshore energy potential.

5.2.1 Priority: Building Knowledge

In 2006/07, the Department worked to build an increased understanding of our onshore and offshore petroleum geology in the public, private and academic sectors by promoting and facilitating research and development and technological innovation as well as performing geoscience research within the Department. The Department likewise supported research initiatives to understand the relation of gas and oil activity to our marine environment. Working with our post-secondary institutions, we also helped to provide the skilled workforce required to support the expansion of our energy sector opportunities. The Department provided assistance with purchasing equipment and building infrastructure to support these opportunities. The Department also conducted research to better understand Nova Scotia's competitive position globally for international oil and gas investment capital.

- 2006-07 Business Plan Action:

A significant barrier to rejuvenating interest in Nova Scotia's offshore is the lack of reliable geoscience information and theory. In fiscal year 2005-06 the Department spearheaded the establishment of an independent association Offshore Energy Technical Research (OETR) aimed at removing this barrier. The initiative, known as "Sustaining Prosperity from Nova Scotia's Offshore", seeded this R & D entity with \$2.6 million. In 2006-07, the Department will review the work of the Association and its business plan to make more progress in this area.

In 2006/07 the OETR received additional funding of \$250,000. During the year OETR funded 3 research studies in amount of \$300,000 each to advance geoscience knowledge by archiving and reformatting seismic reflection data, and making the data available online through the CNSOPB .

- 2006-07 Business Plan Action:

Another entity, Offshore Energy and Environment Research, was also established in 2005-06 with seed funding of \$2.6 million from the Sustaining Prosperity program. This research entity will initially focus on the inter-relation of seismic testing and tidal electrical generating systems with the marine environment. In 2006-07, the Department will review the work of the Association and it's business plan to make more progress in this area.

In 2006-2007 the OEER received an additional \$250,000 to help support work on assessing the impact of tidal power development. In addition to its work on the inter-relation of seismic testing and the marine environment in that year, the OEER funded and began oversight of a Strategic Environmental Assessment (SEA) process for development of tidal power in the Bay of Fundy. This funding supported management of the SEA process and research on the socio-economic impact of potential tidal projects in Fundy.

- 2006-07 Business Plan Action:

Direct economic spinoffs, such as job creation, business growth and an increased tax base, can accrue to Nova Scotia from energy sector projects. However, these projects tend to be cyclical in nature. To ensure that our capabilities, capacities and workforce are maintained in Nova Scotia during periods of minimal activity, the Department of Energy will work with industry stakeholders to research alternative foreign markets for our goods and services.

Showcasing Nova Scotia goods and services in foreign markets provides an opportunity for companies to expand their markets. Opportunities for joint venture arrangements and technology transfers also arise. Trade shows and missions provide an opportunity for the Department to link our companies to the global exploration and development community.

In 2006/07 the Department participated and led delegations of Nova Scotia companies at six major international trade shows or missions (see listing in 5.2.2 below). Partners with the Department for the events listed above include OTANS, NSBI and the agencies from the other Atlantic Provinces under the IBDA Agreement. In the follow-up survey administered to participants after OTC in May 2006, 29% of our companies indicated that they won business or expect to win business in the future directly through participation in OTC 2006.

- 2006-07 Business Plan Action:

The Province of Nova Scotia is losing its emerging and established workforce to other areas such as Ontario and Alberta. To offset this, the Department will assist with developing energy sector workforce knowledge. The Department will continue to provide student pay subsidies, collaborate with learning institutions and other levels of government to provide specialized training equipment and infrastructure and partner with private sector companies such as Pengrowth to provide scholarship assistance for students. The department will assist our learning institutions extend their energy-related training capacities beyond the borders of Nova Scotia.

The Department's public education initiatives in 2006-2007 also enhanced knowledge of opportunities for careers in alternative forms of energy as well as conventional energy: In 2006-07, fifteen students took advantage of the Pengrowth Scholarship program. The total for the first two years is now 31 students.

The number of students getting energy industry experience via the Energy Training Program in 2006-07 was 28. The wage subsidy component was increased from \$5.00 to \$7.50 in 2006-07. The program was originally geared for the petroleum sector, but by expanding it more companies in the renewable and alternative energy sector have submitted applications to the program. Nearly all of these applications have been approved.

5.2.2 Priority: Marketing Nova Scotia

In 2006/07 the Department increased its efforts to identify potential investors and market Nova Scotia's petroleum resource potential as well as our business and workforce capacities. Based upon the results of our investment in research, the Department strategically marketed Nova Scotia to potential investors. Working closely with industry associations, especially the Offshore/ Onshore Technologies Association of Nova Scotia (OTANS), the Department commissioned an expert study and began the process of renewing our international marketing program.

In January 2007 the department initiated a multi-year oil and gas investment attraction initiative. This initiative will result in an enhanced marketing effort over the coming years that will showcase the province's infrastructure, energy and human resource opportunities to targeted companies. An additional \$600,000 has been allocated to implement this initiative.

Marketing of Nova Scotia's potential will occur through a number of avenues including hosting of international conferences and workshops, one-on-one meetings with exploration companies, and active participation at international trade shows and conferences. The Department also monitored economic activity resulting from local energy projects in order to identify, develop and implement strategies that will increase Nova Scotia's market share.

- 2006-07 Business Plan Action:

***Prospect Exchanges:** There are a number of key global opportunities to showcase the potential of Nova Scotia's offshore. These events are known as prospect exchanges at which petroleum explorers gather to showcase their opportunities. As individual companies prefer to spread their risk profile, these exchanges are extremely well attended venues where geoscientists meet to 'shop' the latest opportunities. For example, North American Prospectors Exchange will typically have over 1000 booths and will attract 12000 delegates, all interested in the latest global opportunities.*

The Department actively promoted Nova Scotia offshore and onshore opportunities at PETEX (London, UK) in November, 2006 and at NAPE (Houston) in Feb. 2007. The Department made presentations about Nova Scotia opportunities during international forums at these events.

- 2006-07 Business Plan Action:

***Investors Meetings:** One-on-one meetings are highly effective in promoting the offshore and developing policy. The Department staff and senior officials (including Minister and from time to time the Premier) are well positioned to open doors and results of the work proposed under this plan.*

In 2006/07 the Department organized meetings in Halifax, Houston, and London UK with investors interested in licence activities as well as the development of existing discoveries.

- 2006-07 Business Plan Action:

Conferences and Presentations: *There are many local, national and international conference opportunities where the Department staff learn the latest ideas pertaining to exploration and development, meet or renew geoscience ideas relevant to offshore Nova Scotia and discuss new policy initiatives designed to reinvigorate offshore Nova Scotia exploration and development.*

The department participated in major offshore energy conferences OTC 06, PETEX 06, CORE Conference 06, NAPE 07, and APEX 07.

- 2006-07 Business Plan Action:

Trade Shows/Trade Missions: *Showcasing Nova Scotia goods and services in foreign markets provides an opportunity for companies to expand their markets. Opportunities for joint venture arrangements and technology transfers also arise. Prospector exchanges and related trade shows provide an opportunity for the department to showcase our gas and oil resource potential to global exploration community.*

In 2006/07 the Department participated and led delegations of Nova Scotia companies at the following shows or trade missions:

May 1-4, 2006: Offshore Technology Conference, Houston, Texas
 June 13-15, 2006: Global Petroleum Show, Calgary, Alberta
 October 3-6, 2006: CORE Conference, Halifax, Nova Scotia
 December 4-8, 2006: Alberta Mission, Calgary and Edmonton, Alberta
 February 4-10, 2007: Trinidad Mission, Port of Spain, Trinidad and Tobago
 March 13-15, 2007: Buyers and Sellers Forum, Edmonton, Alberta

Partners with the Department for the events listed above include OTANS, NSBI and the agencies from the other Atlantic Provinces under the IBDA Agreement. In the follow-up survey administered to participants after OTC in May 2006, 29% of our companies indicated that they won business or expect to win business in the future directly through participation in OTC 2006. Several organizations who participated in the Trinidad Mission returned to that market to pursue business leads made at the event.

- 2006-07 Business Plan Action:

Marketing Materials: *Delivering key investment information to industry is of paramount importance in attracting investment. The mode in which the information is conveyed should suit the opportunity. In this regard, information should be delivered via technical papers, in technical journals and magazines, brochure handouts, internet access, interactive CDs and glossy reports. This will involve*

using the services of internal communication experts as well as contracted experts. These materials will be used for the one-on-ones, prospect exchanges and other major industry forums.

To deliver investment information to industry the department prepared and distributed an appropriate array of marketing materials in 2006-2007. It included CDs, maps, wall panels, and associated printed materials distributed as part of Departmental strategy at NAPE 06 and PETEX 06 international conferences.

5.3 Effective and Efficient Departmental Regulation and Operations

5.3.1 Priority: Creating a Positive Investment Climate

- 2006-07 Business Plan Action:

The oil and gas business gravitates to those jurisdictions with a combination of attractive fiscal and land tenure regimes, ready access to markets, efficient regulatory systems, high resource potential, stable governments, access to infrastructure and a ready and reliable service and supply sector. Of these, governments are in direct control of the fiscal and land tenure systems as well as the regulatory system. Governments with established offshore petroleum industries have found over the years that in order to maintain the attractiveness of their offshore areas, they need to regularly review these issues. Our land tenure and rights issuance process was established several decades ago. Its effectiveness and efficiency needs to be evaluated with our partners.

In 2006-07 the Department of Energy working with its partners in Newfoundland and Labrador and the Government of Canada developed a model for goal-oriented regulation (a blend of prescriptive and goal-based regulation) for offshore drilling, production and conservation. This modern approach is more responsive to technological change and allows for a more effective focus on desired outcomes.

The following suite of activities were undertaken or continued by the Department in 2006-2007 to provide effective support for investment decisions by potential investors in our offshore and onshore energy resources:

- ◆ began work on an economic model (EXCEL based) to help offshore investors evaluate the opportunity in Nova Scotia
- ◆ continued work with CNSOPB and NRCAN on revamping our offshore rights issuance policies
- ◆ completed a review of the need for policy regarding 3rd party access to existing pipeline infrastructure
- ◆ to mitigate risk by investors who are examining our geology the Department commissioned additional geoscience studies and began the steps to put government-owned seismic data into the public domain.

- 2006-07 Business Plan Action:

As gas distribution further develops in Nova Scotia the Department of Energy will review its regulatory framework to make sure that regulatory oversight is both efficient and cost-effective while fully protecting the public interest.

Use of our own natural gas provides increased energy security, and although natural gas is fossil fuel, it is the cleanest of these sources. In 2006/07 the department proceeded with several initiatives to expand use of our natural gas resource. These actions included a review of the *Nova Scotia Pipeline Act* and Regulations. Actions were taken to support the conversion of the Nova Scotia Hospital in Dartmouth and a commitment to convert the Victoria General Hospital through the Gas Market Development Fund. The Department supported the assessment of the economics of district heating and co-generation options to service Dalhousie, Saint Mary's, Victoria General Hospital, and QE II Hospital. The Department also renewed an agreement with Heritage Gas to support the conversion to Energy Star rated natural gas consuming appliances.

5.4. Human Resource Strategy

5.4.1 Employee Survey

- 2006-07 Business Plan Action:

In 2006-07 the Department will continue to analyze this survey and develop strategies that will address areas of concern.

In 2006-07 the Employee Survey Committee met with Public Service Commission officials to determine a process by which the departmental survey results could be analyzed. It was decided that a series of department specific questions be developed that could be added to the corporate employee survey planned for February 2007. Ten questions were developed with staff input and three of these were incorporated into the corporate strategy.

Also, all managers with reports had initiated a 360 degree analysis exercise by March 31, 2007. This was in response to employee survey questions / responses related to perceived management capacity.

5.4.2 Departmental Human Resource Strategy

- 2006-07 Business Plan Action:

The Department of Energy submitted an application to the Public Service Commission, under the Executive Leadership Continuity Program (LCP), to appoint an individual whose main focus will be to develop a departmental HR strategy

consistent with the Human Resource Plan. Pending approval, it is anticipated that the LCP placement will be available in July 2006.

Although the department received approval through the LCP process to hire an HR professional for this task, a suitable candidate could not be found for this placement. With PSC and HR CSU support, an HR Consultant from the DNR CSU was seconded in February 2007 and started the strategy development process. The final approved strategy will not be completed and made available until fiscal year 2007 - 2008.

5.4.3 Diversity in Hiring

- 2006-07 Business Plan Action:

The Department of Energy is committed to diversity in its recruitment of employees. It will review its hiring practices with emphases on improving the representation of designated groups such as African Canadians, Aboriginals and women in non traditional roles within its ranks. To this end, the department will actively work with the Human Resources Client Services Unit to ensure that individuals on their list of qualified diversity candidates have been given first opportunity for casual placements.

The Department had 11 casual placements in 2006 -2007. All were vetted through the diversity candidates list for qualification compatibility resulting in one diversity placement.

5.4.4 Occupational Health and Safety

- 2006-07 Business Plan Action:

The Department of Energy values the health and safety of its employees and is committed to providing a safe and supportive working environment. The departmental Joint Occupational Health and Safety (JOHS) committee ensures that these goals are met. This committee's priority is to work in partnership with employees to minimize the risk of occupational injury and illness in the workplace. The committee will continue to work with all employees to identify, report and resolve workplace hazards; ensure employee access to training and take necessary measures to promote health and safety.

The JOHS committee at Department of Energy continued its ongoing active role in 2006 - 2007.

6.0 BUDGET CONTEXT

000's of Dollars			
	Estimate 2006 -2007	Actual 2006-2007	Variance
Revenues	280180	276111	4069
Expenses			
Salaries	3290	3290	0
Operations	14907	11032	3875
CNOSP (net)	1515	1444	71
Total Expenses	19712	15766	3946
FTEs	51	49	2

* In accordance with the public accounts, all estimates/actuals have been rounded to the nearest thousand

Explanation of variances:

Revenue: Royalty revenue was less than estimated due to the fluctuation in natural gas prices.

Expenses - Operations: The Smart Energy Choices Program did not reach the forecast expenditures.

CNSOPB: Cost recoveries from offshore project owner companies contributions were greater than forecast.

FTE: The hiring of FTEs was not completed at the end of fiscal 2006-2007.

TCA: A departmental vehicle was purchased.

7.0 Measuring Our Performance

7.1 Outcome: *Greater awareness of energy issues, programs, services and operation.*

Measure: *Energy Awareness Index as defined in 2003-2004 public survey. (Thinkwell Research).*

WHERE ARE WE NOW?

Improving public awareness of energy issues, programs, services and operations is an important but long term process. The department's strategy is to measure it through the use of an energy awareness survey and index. This tool was developed to gauge Nova Scotians' awareness and understanding of a variety of energy topics.

In 2003-04, the department conducted a survey to determine baseline awareness index for topics including renewable energy, climate change, offshore activity, electricity, natural gas, and energy training opportunities. An overall energy baseline awareness index of 50 (out of a total score of 100 points) was established. Change in the energy awareness index is not expected within one year, nor is it feasible to repeat the survey annually. Therefore, the survey was not conducted in 2006-2007.

WHERE DO WE WANT TO GO/BE IN THE FUTURE?

The goal of public education is to increase the overall energy awareness index by 15 points, to 65. In fiscal 2007-2008, the survey will be repeated to determine if there has been an increase in awareness of energy issues, programs, services and opportunities.

7.2 Outcome: *Increased understanding of geological systems in Nova Scotia.*

Measure: *Number of research studies initiated and completed.*

WHERE ARE WE NOW?

Research to better understand our geology and marine systems will continue to be conducted through our two independent research associations - Offshore Energy Technical Research Association (OETR), and Offshore Energy Environmental Research Association (OEER). These associations were established in March 2006 through a \$2.6 million provincial grant for each.

Also in 2006-07 Petroleum Research Atlantic Canada (PRAC) received \$100,000 from the Department of Energy to perform a study to investigate the use of electromagnetic imaging (EM) technology as a viable geophysical tool to better understand our offshore geology.

OETR

In 2006-2007 the OETR funded 3 research studies in amount of \$300,000 each to advance geoscience knowledge of Nova Scotia's offshore. In addition, the OETR funded a fourth project, in the amount of \$256,000, which will archive and reformat seismic reflection data, and make the data available online through the CNSOPB.

In fiscal 2006-2007 the OETR also began organizing and planning the Nova Scotia Offshore Basin Forum which was held in Halifax in October 2007 to bring the geoscience community and industry together to discuss research initiatives and develop a go-forward strategy to entice industry back to the province. The OETR funded this forum in the amount of \$39,000.

WHERE DO WE WANT TO GO/BE IN THE FUTURE?

In 2007-2008, Department will be building an increased understanding of our onshore and offshore petroleum geology in the public, private and academic sectors by promoting and facilitating research and development and technological innovation as well as performing geoscience research within the Department. The Department will also continue to support research initiatives to understand the relation of gas and oil activity to our marine environment. In fiscal 2007-2008 the Department will complete those research projects begun in 2006-2007 and scheduled for completion in 2007-2008.

7.3 Outcome: *Increase regulatory certainty through better scientific understanding of the interaction of renewable and non-renewable energy activities with the marine environment.*

Measure: *Number of research projects initiated.*

WHERE ARE WE NOW?

In 2006-2007 the Offshore Energy Environmental Research Association (OEER) provided funding in the amount of \$656,000 to carry out 7 research projects to understand the impact of tidal power development and seismic research to help increase regulatory certainty. These projects include:

OEER contracted the services of a Program Manager to develop the resources to initiate and coordinate a 3 year research effort in Atlantic Canada to determine what adverse impact there may be from seismic on invertebrates at 84,000 per annum.

OEER contracted the services of a Process Lead to carry out a Strategic Environmental Assessment of the Bay of Fundy. This is a one year project at a cost of \$85,000.

As part of the SEA, OEER funded an Environmental and Socio-economic Impact Assessment (ESIA) of the Bay of Fundy, in the amount of \$250,000. The Province of New Brunswick has partnered with OEER, with a contribution of \$50,000, to carry out this ESIA.

OEER provided funding to NRCan, in the amount of \$35,000, for the mapping of Basin to better understand the ocean bottom and sub-bottom physical and geophysical characteristics

OEER provided funding, in the amount of \$15,800, for an evaluation of existing lab facilities and capabilities for seismic research in the region and seek the input of international experts

OEER provided funding, in the amount of \$15,000 to the Department of Fisheries and Oceans to develop baseline knowledge of the Minas Basin that will assist in planning discussions related to potential tower projects in this area.

OEER provided funding, in the amount of \$3,500 to Cape Breton University to conduct a desk-type review and theoretical calculation of energy absorbed by a snow crab during a seismic shoot.

WHERE DO WE WANT TO GO/BE IN THE FUTURE?

The Department will complete studies scheduled for completion in fiscal 2007-08. We will also perform internal geoscience analysis and encourage additional coordinated geoscience studies with the GSC, CNSOPB, academia, PRAC and the private sector. The Department will continue to garner reliable geoscience information and theory to better understand the inter-relation of both seismic testing and tidal electrical generating systems with the marine environment. This research effort will be conducted chiefly through OETR and OEER.

7.4 Outcome: *Increased opportunities for education and training in the energy sector.*

Measure: *Number of students accessing scholarship program.
Number of students who have had private sector work experience in energy related industries through the Energy Training program.*

WHERE ARE WE NOW?

The Department's public education initiatives in 2006-2007 also enhanced knowledge of opportunities for careers in alternative forms of energy as well as conventional energy. The Pengrowth/Energy Scholarship Program awarded scholarships valued at \$10,000 (\$2500 renewable over 4 years) to Nova Scotia

students attending universities. In addition \$2500 non-renewable scholarships were awarded to Nova Scotia students enrolled in trades and technology programs at the Nova Scotia Community College. In 2006-07, fifteen students took advantage of the Pengrowth Scholarship program. The total for the first two years is now 31 students.

Pengrowth/ Energy Scholarships:

<u>Year</u>	<u># scholarships</u>
2005-06	16
2006-07	15
Total for first two years:	31students

The number of students getting experience in the energy industry via the Energy Training Program in 2006-07 was 28. The wage subsidy component was increased from \$5.00 to \$7.50 in 2006-07. The program was originally geared for the petroleum sector, but by expanding it, more companies in the renewable and alternative energy sector have submitted applications to the program. Nearly all of these applications have been approved.

WHERE DO WE WANT TO BE IN THE FUTURE?

The Department of Energy will continue to look for ways to increase opportunities for Nova Scotia students to gain training in the energy sector here in Nova Scotia. Our goal is to increase funding for and participation in the Scholarship Program in future years.

- 7.5 Outcome:** *Improved energy efficiency and conservation and reduced GHG Emissions.*
- Measure:** *Number of homes that have increased energy efficiency through the Smart Energy Choices program.*

WHERE ARE WE NOW?

In 2006-07 the Department was allocated \$10 million for the Smart Energy Choices program. The program and funding was subsequently transferred to Conserve Nova Scotia when that office was created in January, 2007.

Smart Energy Choice program is designed to contribute to improving residential energy efficiency. In 2006-2007 the program included the Provincial *EnerGuide* rebate, the incentive for *EnerGuide* audits, the top-up for both the audits and *EnerGuide* upgrades for modest income homeowners, the incentive for new wood pellet and EPA wood stoves, and the incentives for energy efficient oil furnaces and hot water boilers.

In 2006/07 the following results were logged:

- ◆ 1100 homeowners received a provincial EnerGuide rebate;
- ◆ 100 modest income homeowners received the \$400 EnerGuide top-up rebate;
- ◆ 2100 homes received their first EnerGuide audit;
- ◆ 2500 homeowners registered for their rebate for an energy efficient oil furnace or hot water boiler;
- ◆ Provincial incentives supported the installation of 3500 new wood pellet or EPA rated wood stoves; The Energy Retrofits pilot project has been initiated. A Request For Quotations was sent out and the Province has a list of 5 qualified Energy Service Contractors (ESCOs). A Request for Proposals has been developed and is ready to be sent to tender pending Tangible Capital Assets (TCA) approval of funding for the project.

From inception in September 2005 to March 31, 2007 the *Smart Energy Choices* program incentives have supported:

- ◆ Installation of 3500 new wood pellet or EPA rated wood stoves;
- ◆ 2500 new high efficiency oil fired boilers or furnaces;
- ◆ 1450 provincial EnerGuide rebates;
- ◆ Direct provincial EnerGuide payments to homeowners of over \$1.8 million for energy efficiency upgrades;
- ◆ 1600 first EnerGuide audits; (Plus Federal support for 2100 EnerGuide audits)
- ◆ Delivery of approximately 65,000 energy savings kits to Nova Scotia households;
- ◆ Distribution of more than 200,000 compact fluorescent lights to Nova Scotians.

From its inception to end of March, 2007 the EnerGuide program has involved over 10,600 Nova Scotia homeowners.

WHERE DO WE WANT TO GO/BE IN THE FUTURE?

The Department will continue to support, promote, and compliment the activity of Conserve Nova Scotia and their delivery of the consumer Smart Energy Choices program, as well as initiatives within other government departments (Phase II) and Municipalities, universities, schools and hospitals (Phase III).

- 7.6 Outcome:** *Increased awareness of our offshore potential by exploration companies.*
- Measure:** *number of targeted promotional events and technical meetings that took place at local, national and international venues.*

WHERE ARE WE NOW?

In fiscal 2006-2007, the Department of Energy participated in over 30 targeted promotional and technical meetings in Halifax, Houston, London UK, Trinidad, Calgary, and Edmonton, to promote Nova Scotia's onshore and offshore to potential investors (see 5.2.2 above for list of events).

WHERE DO WE WANT TO GO/BE IN THE FUTURE?

In January 2007 the department initiated a multi-year oil and gas investment attraction initiative. This initiative will result in an enhanced marketing effort over the coming years that will showcase the province's infrastructure and energy resource opportunities to targeted companies. An additional \$600,000 has been allocated to implement this initiative. Marketing of Nova Scotia's potential will occur through a number of avenues including hosting of international conferences and workshops, one-on-one meetings with exploration companies, and active participation at international trade shows and conferences.

- 7.7 Outcome:** *Exportation of goods and services related to the energy sector.*
- Measure:** *Number of Offshore/Onshore trade shows/missions attended.*

WHERE ARE WE NOW?

In 2006-07 the Department attended and participated in 6 major international trade show/missions:

May 1-4, 2006: Offshore Technology Conference, Houston, Texas

June 13-15, 2006: Global Petroleum Show, Calgary, Alberta

October 3-6, 2006: CORE Conference, Halifax, Nova Scotia

December 4-8, 2006: Alberta Mission, Calgary and Edmonton, Alberta

February 4-10, 2007: Trinidad Mission, Port of Spain, Trinidad and Tobago

March 13-15, 2007: Buyers and Sellers Forum, Edmonton, Alberta

In the follow-up survey administered to participants after OTC in May 2006, 95% of our companies indicated that were very satisfied with the Department of Energy booth and promotions at the event.