

Nova Scotia Department of Energy

**Annual Accountability Report
For the Fiscal Year 2012-2013**

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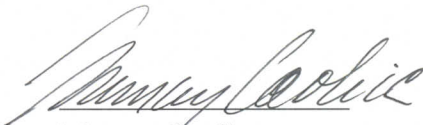
Accountability Statement

The accountability report of the Department of Energy for the year ended March 31, 2013 is prepared pursuant to the Finance Act and government policies and guidelines. These authorities require the reporting of outcomes against the Department of Energy Statement of Mandate for the fiscal year 2012-2013. The reporting of the Department of Energy outcomes necessarily includes estimates, judgments and opinions by the Department of Energy management.

We acknowledge that this accountability report is the responsibility of Department of Energy management. The report is, to the extent possible, a complete and accurate representation of outcomes relative to the goals and priorities set out in the Department of Energy 2012-2013 Statement of Mandate.



Charlie Parker
Minister



Murray Coolican
Deputy Minister

Message from the Minister

I am pleased to bring you the highlights of the Department of Energy's achievements during the 2012-13 fiscal year through the Annual Accountability Report. The report provides insight into the department's activities and accomplishments for the period ending March 31, 2013.

The Department of Energy is proud to play an important role in the development of the province's energy resources while helping to build Nova Scotia's energy industry and capitalize on the many exciting opportunities in the oil and gas and renewable energy sectors.

A key priority in the past fiscal year was to diversify our energy mix with cleaner, renewable energy sources, as part of our provincial energy plan. In doing so, we continue to ensure Nova Scotians the lowest, fairest energy rates while taking care of our environment. In the past fiscal year we had a number of significant accomplishments that support these priorities, including:

- Creating a cleaner energy economy: a number of renewable, clean energy projects came on line that involved wind, hydro, natural gas and biomass.
- Implementing an energy plan aimed at diversifying our energy mix and helping us meet tough federal coal-reduction and greenhouse gas emission standards. We also have our own provincial environmental objectives to meet, and our energy plan is leading us toward this goal.

The energy plan can be summed up in just five words: local, reliable, green, tax-free and efficient.

- Approving numerous applications to our Community Feed-in Tariff (COMFIT) Program, an initiative that helps provide a secure supply of clean energy at stable prices, build community support for renewable energy projects and create jobs. This program allows Nova Scotians to become leaders in renewable energy, while helping the province towards its legislated goal of 40 per cent renewable energy by 2020.
- Working tirelessly on the Maritime Link project, providing strategic support for Nova Scotia Power Maritime Link Inc.'s application for approval of the project by the Nova Scotia Utility and Review Board (NSUARB) at the end of July.
- Developing a marine renewable strategy that lays out clear goals and actions for the development of the province's tidal energy sector.

- Establishing a sustainable transportation strategy that gives us a clear path for promoting sustainable transportation and creating a new mandate for this important initiative.
- Supporting Efficiency Nova Scotia programs that helps homes and businesses in the province save money and help the environment. Funding in the amount of \$11.95 million for non-electricity efficiency programs for existing homes was provided during the past fiscal year.
- Aiding major developments in our offshore petroleum sector. Since 2011, new investment commitments from Shell and British Petroleum have a combined worth of more than \$2 billion and are a clear indication that the world is paying attention to Nova Scotia's offshore petroleum industry.

You will find more information about these initiatives in the 2012-2013 Accountability Report. I hope this report gives you an even greater understanding of the importance of these projects to our province, both now and in the future.

Sincerely,



Honourable Charlie Parker
Minister of Energy

Financial Results

	2012-2013 Estimate	2012-2013 Actual Expense	2012-2013 Variance
Program & Service Area	(\$ thousands)	(\$ thousands)	(\$ thousands)
Gross Departmental Expenses:			
Office of the Minister and Deputy Minister	435	383	(52)
Administrative Services	1,404	1,847	443
Sustainable and Renewable Energy	1,676	1,782	106
Business Development and Corporate Services	2,678	3,086	408
Petroleum Resources	1,925	1,587	(338)
Non-Electricity Energy Efficiency	17,900	17,010	(890)
Canada/NS Offshore Petroleum Board	3,550	3,610	60
Total: Gross Departmental Expenses	29,568	29,305	(263)
Additional Information:			
Ordinary Recoveries	1,775	2,385	610
Provincial Funded Staff (FTEs)	58	53	(5)

Variance Explanation:

1. Total: Gross Departmental expenses were less than 1% below budget.
2. Ordinary Recoveries were higher than budgeted due primarily to Canada/NS Offshore Petroleum Board funds received relating to the 2011-12 fiscal year.
3. Provincial Funded staff (FTEs) were less than budgeted due primarily to temporarily vacant positions.

Measuring our Performance

The mandate of the Department of Energy is to manage and promote energy resources to achieve optimum economic, social and environmental value from the energy sector. The strategic priorities of the department will enable Nova Scotia to develop a diverse energy supply which is more sustainable than traditional sources of energy in the province. A sustainable energy supply can lead to stable energy pricing in the longer term. The strategic priorities developed by the department's senior team focus on a cleaner and more diverse energy economy, furthering the investment in the offshore petroleum sector, promoting awareness of energy efficiencies for Nova Scotians, and collaborating on regional energy matters.

The performance measures in this section track the progress of the initiatives implemented to meet the strategic priorities of the department. Although the performance measures identified have only been measured over a short period of time, significant progress has resulted in greenhouse gas (GHG) reductions and greener energy solutions for the province from major projects (e.g. Maritime Link) and for communities (Community Feed In Tariff (COMFIT)). The province is also experiencing industry growth in the offshore petroleum sector and marine renewables sector. Collaboration with other departments and other provinces is progressing energy sustainability and security through initiatives such as the sharing of skilled labour amongst major energy projects and providing for a better business environment for industry players by improving regulations and energy policy.

1. Moving Towards a Cleaner Energy Economy

a. Renewable Energy Projects contributing to a diverse energy mix and greater energy security

Outcome: Achieve 40% renewable sources of electricity generation by 2020 through medium and large scale projects leading to greater energy security.

Annual Target: Procure a minimum of 300 gigawatt hours (GWh) of new low-impact renewable electricity from independent power producers (IPPs) towards achieving the 2015 Renewable Energy Standard (RES) of 25%.

Ultimate Target: Continue to increase the renewable energy mix, decreasing greenhouse gas (GHG) and improving air quality, and decreasing energy bills.

Measure/Rationale: Through the Renewable Electricity Administrator (REA) process, the approval of viable medium and large scale renewable energy projects will contribute to achieving the 2015 and 2020 Renewable Energy Standard (RES): 2015: 25% electricity from renewable energy sources; 2020: 40% electricity from renewable energy sources. Increase the percentage of energy mix drawn from renewable sources.

Progress on Target

- ✓ The Renewable Electricity Administrator led a competitive procurement process in the summer of 2012, resulting in three successful projects.
- ✓ The three projects (the combined South Canoe projects in Lunenburg County, and the Sable Wind project in Guysborough County) are expected to generate 355 GWh beginning in 2015.
- ✓ 2012 – 18% of electricity was generated from renewable sources.
- ✓ 2013 – Q1 Forecast shows that Nova Scotia Power Inc. (NSPI) is on track to meet 2013 RES requirements.
- ✓ Maritime Link project is currently in front of Nova Scotia Utility and Review Board (NSURB) for approval. This project is expected to be on stream in 2017 and is projected to provide a minimum of 10% of Nova Scotia's electricity supply with a potential to meet 10% to +20% of our electricity demand from a clean hydro-electricity source.

Continued: 1. Moving Towards a Cleaner Energy Economy

a. Renewable Energy Projects contributing to a diverse energy mix and greater energy security

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|--|--|
| Strategic Action to Achieve this Target | <ul style="list-style-type: none">✓ REA manages independent power producer (IPP) bids for medium and large scale renewable energy projects✓ Implement the Renewable Electricity Plan✓ Maritime Link Project progression and NSUARB approvals |
|--|--|

New Measures N/A

b. Community Feed in Tariff (COMFIT)

Outcome: Smaller scale community driven renewable/cleaner energy projects

Annual Target: 100 megawatt (MW) approved by June 30, 2012 and all projects applied for in 2011 are processed by June 30, 2012

Ultimate Target: Increased electricity generation capacity and uptake on COMFIT

Measure/Rationale: Through approved COMFIT projects, the community benefits economically through - local suppliers providing goods and services, the community experiencing price security and revenue generation through the sale of excess electricity; cleaner environment through the generation of renewable electricity decreasing greenhouse gas emissions. The current capacity of 100 megawatts (MW) will contribute to this measure.

Progress on Target

- ✓ Approved and announced: 75 project approvals totaling more than 165 MW
- ✓ More than 32 community groups have applied to the program
- ✓ 6 projects are currently producing electricity
- ✓ 8 projects have registered environmental assessments
- ✓ All project applications complete as of January 2013 have been reviewed
- ✓ COMFIT Review announced September 2012

Strategic Action to Achieve this Target

- ✓ Evaluate success and effectiveness of COMFIT program during the 18 month program review
- ✓ Continue to work with applicants throughout the life-cycle of their projects to ensure maximum success for the program

New Measures

- ✓ Number of COMFIT Projects in commercial operation

c. Energy Efficiency: Nova Scotia Corporation (ENSC) Programs

i. Existing Homes Energy Efficiency Program (homes heated with non-electric sources)

Outcome: Energy savings gigajoules (GJs) through programs for existing homes; lower energy consumption through a coordinated set of efficiency programs, incentives, regulations, and public awareness for non-electric fuels.

Annual Target: 36,515 gigajoule (GJ) savings in energy consumption

Ultimate Target: Incremental decreases in energy consumption for existing houses;

Measure/Rationale: Meeting the annual target of 36,515 GJs in energy savings results in a cleaner environment through lower energy consumption of other fuels, and saves homeowners money.

<p>Progress on Target</p>	<ul style="list-style-type: none"> ✓ 10,228 participants (increase from 2,594 participants in 2011-12) ✓ 148,780 GJs in energy savings (increase from 75,693 GJs in energy savings in 2011-12) ✓ 12,329 tonnes CO2 reduction (increase from 6,273 tonnes CO2 reduction in 2011-12)
<p>Strategic Action to Achieve this Target</p>	<p>Decrease energy consumption in existing houses, through ENSC programs</p> <ul style="list-style-type: none"> ✓ \$5.92 million was spent on non-electricity efficiency programs for existing houses in 2012-13.
<p>New Measures</p>	<p>N/A</p>

ii. New Homes Energy Efficiency Program (new homes heated with non-electric sources)

Outcome: Energy savings gigajoules (GJs) through programs for new homes; lower energy consumption through a coordinated set of efficiency programs, incentives, regulations, and public awareness for non-electric fuels.

Annual Target: 17,010 gigajoule (GJ) savings in energy consumption

Ultimate Target: Incremental decreases in energy consumption for newly built houses.

Measure/Rationale: Meeting the annual target of 17,010 GJs in energy savings in 2012 from newly built homes results in a cleaner environment through lower energy consumption of other fuels, and saves homeowners money.

Progress on Target

- ✓ 1,253 participants (increase from 723 participants in 2011-12)
- ✓ 29,281 GJs energy savings (increase from 13,527 GJs in energy savings in 2011-12)
- ✓ 2,427 tonnes CO2 reduction (increase from 1,121 tonnes CO2 reduction in 2011-12)

Strategic Action to Achieve this Target Decrease energy consumption in new 2012 built houses, through ENSC programs

- ✓ \$5.05 million was spent on non-electricity efficiency programs for new houses in 2012-13.

New Measures

N/A

iii. Low Income Homes Energy Efficiency Program (homes heated with non-electric sources)

Outcome: Energy savings gigajoules (GJ) through programs for low income houses; lower energy consumption through a coordinated set of efficiency programs, incentives, regulations, and public awareness for non-electric fuels.

Annual Target: 24,734 gigajoule (GJ) savings in energy consumption

Ultimate Target: Incremental decreases in energy consumption for low income houses.

Measure/Rationale: Meeting the annual target of 24,734 GJs in energy savings from investing in homes of low-income home owners results in a cleaner environment through lower energy consumption of other fuels, and saves homeowners money.

Progress on Target	<ul style="list-style-type: none"> ✓ 4,211 participants (increase from 2,934 participants in 2011-12) ✓ 55,233 GJ energy savings (increase from 13,247 GJ in energy savings in 2011-12) ✓ 4,577 tonnes CO2 reduction (increase from 1,098 tonnes CO2 reduction in 2011-12)
Strategic Action to Achieve this Target	<p>Decrease energy consumption in low income houses, through ENSC programs</p> <ul style="list-style-type: none"> ✓ \$7.22 million was spent on non-electricity efficiency programs for low income households in 2012-13.
New Measures	N/A

d. Marine Renewable Strategy

Outcome: Develop an innovative marine renewable sector to take advantage of the vast tidal resource in Nova Scotia enabling quality research and collaboration, supporting technology and local marketplace development.

Annual Target: Release of Strategy in 2012

Ultimate Target: Up to 300 MW of competitively-priced in-stream tidal energy generated in Nova Scotia in the long-term

Measure/Rationale: There is an opportunity to develop the marine renewable industry as it is an emerging sector and there is significant tidal resource in Nova Scotia. Releasing the Marine Renewable Energy Strategy will provide direction to take advantage of this emerging industry.

Progress on Target

- ✓ Released Strategy in May 2012
- ✓ Publicized Strategy at various industry events, conferences, and online (www.novascotia.ca/energy; www.twitter.com/NS_MRE)
- ✓ Continued public and stakeholder support for marine renewable energy and engagement of Nova Scotians through a stakeholder forum
- ✓ Increased industry activity in Nova Scotia related to device deployments, environmental monitoring, and related activities

Strategic Action to Achieve this Target

- ✓ Conducted significant stakeholder and public consultation through the 'Fournier Report' consultation process to ensure Strategy reflects the input of Nova Scotians
- ✓ Establish feed-in tariffs set for developmental in-stream tidal energy projects (large-scale)
- ✓ Engage Nova Scotia's supply chain (ocean technology, etc.) in the growth of this industry

- ✓ Response to request for proposals for vacant subsea berth at Fundy Ocean Research Center for Energy (FORCE) to test/demonstrate a large-scale in-stream tidal energy device(s)
- ✓ Establish a Developmental Tidal Energy Feed-in Tariff (FIT) Program to outline process to obtain a FIT rate
- ✓ Gain better understanding of tidal resource through Strategic Environmental Assessments, Resource Assessments, environmental monitoring, and facilitating further research and collaboration through a research forum
- ✓ Develop and formalize a Statement of Best Practice nationally for the development and deployment of tidal energy projects
- ✓ Develop Marine Renewable Energy Legislation (long-term), including a licensing system outlined in the Appendix A of the *Marine Renewable Energy Strategy*
- ✓ Expansion of environmental approvals at FORCE in anticipation of increased industry activity and the demand for array (multiple device) projects
- ✓ Continued coordination with federal and provincial partners for the review of project proposals

New Measures

N/A

e. Sustainable Transportation

Outcome: More citizens using sustainable transportation options including active transportation (e.g. walking and biking), public and community transit, efficient vehicles and fleets and participating in land use planning to enable sustainable transportation.

Annual Target: Completion of Strategy 2012-2013

Ultimate Target: N/A

Measure/Rationale: Modal shift in Nova Scotia to move away from single occupancy vehicles to other sustainable modes of transportation.

Progress on Target

- ✓ Released Strategy in Fall 2012 called Choose How You Move- Sustainable Transportation Strategy
- ✓ Developed and released two rounds of Nova Scotia Moves funding for sustainable transportation initiatives across the province.

Strategic Action to Achieve this Target

- ✓ Worked with an interdepartmental committee consisting of Energy, Environment, Transportation and Infrastructure Renewal, Service Nova Scotia and Municipal Relations, Economic and Rural Development and Tourism, and Health and Wellness to develop the strategy and an interdepartmental approach to strategy implementation.
- ✓ Created a new mandate for Sustainable Transportation which will be led by the Department of Energy
- ✓ Secured 6 million in funding and a full time equivalent (FTE) staff person to lead the initiative at the Department of Energy.

New Measures

- ✓ transport-related indicators, such as modal shifts, vehicle kilometers travelled;
- ✓ trip rates and lengths, and usage frequency of sustainable transportation options;
- ✓ levels of energy use, greenhouse gas emissions, and air pollution from the transportation sector;
- ✓ land use indicators, such as employment density and proximity to transit stops;
- ✓ indirect health and economic benefits linked to increased use of sustainable transportation options

2. Transforming our Energy Industry

Outcome: Develop Compressed Natural Gas (CNG) projects and CNG usage in Nova Scotia.

Annual Target: Complete study on CNG economics with the QUEST Nova Scotia Caucus in 2012-13

Ultimate Target: Complete Phase 2 (2013-2014)

Measure/Rationale: Complete study on CNG (two phases)

Progress on Target	<ul style="list-style-type: none"> ✓ QUEST Study on CNG Complete ✓ Government has accepted policy direction on competitive CNG market <ul style="list-style-type: none"> ○ The province accepted all recommendations in a report commissioned in April of 2012 (prepared by Bill Lahey) into how compressed natural gas should be delivered in Nova Scotia. The report concludes that delivery to customers without pipeline access should be treated the same as fuel oil and propane delivery - on an unregulated open market. ✓ Three large energy users have publicly signed with CNG providers ✓ Irving and Heritage Gas have developed markets for CNG in Nova Scotia and we envision more Nova Scotia CNG purchasers to come forward over the coming years.
Strategic Action to Achieve this Target	<ul style="list-style-type: none"> ✓ Further development of Natural Gas Infrastructure
New Measures	N/A

3. Develop the Offshore and Onshore Petroleum Sector

a. Exploration Bids Offshore

Outcome: Successful call for bids.

Annual Target: 2012-2013 roll out of Phase 1 Play Fairway analysis results

Ultimate Target: Evergreen geoscience information resulting in a growing petroleum exploration and development sector.

Measure/Rationale: New investment in the offshore – total blocks and total \$\$ committed

Progress on Target

- ✓ The offshore Call for Bids NS12-1, closed November 2012, resulted in 8 blocks being awarded with total work commitment of \$31.8 million from Shell Canada Limited and \$1.05 billion from BP Exploration Operating Company Limited.
- ✓ This Call for Bids was promoted extensively by attending various international trade shows and hosting industry seminars in Houston.
- ✓ Additional geoscience work was completed to identify prospects and leads across all of the Call for Bids area. The Department of Energy staff conducted one-on-one meetings with industry clients to promote the research.
- ✓ 2013-2014 roll out of Phase 2 - additional analysis of existing geo-science research

Strategic Action to ✓ Geoscience offshore and Play Fairway Analysis:

Achieve this Target ○ Conduct additional geoscience studies required to keep the PFA work current as new information and analysis become available.

New Measures

N/A

b. Industry investment

Outcome: New investment in offshore Nova Scotia

Annual Target: 2012-2013 Attract new companies to offshore Nova Scotia

Ultimate Target: Evergreen geoscience information resulting in a growing petroleum exploration and development sector.

Measure/Rationale: Marketing initiatives will focus and engage new exploration companies currently not present in our offshore.

<p>Progress on Target</p>	<ul style="list-style-type: none"> ✓ As a result of the marketing and geoscience work, we were able to attract industry leaders to bid on the NS12-1 Call. ✓ The Canada Nova Scotia Offshore Petroleum Board (CNSPOB) published a multi-year plan highlighting future Call for Bids areas. This provided the areas where additional geoscience and marketing efforts will be undertaken to attract exploration attention to increase investment. ✓ Attraction of key industry players could not have been achieved without the Department of Energy's attendance at International Trade Shows and the promotion and marketing of the PFA. ✓ Marketing at various trade shows and meetings with industry to highlight all the geoscience work that supports investment decisions. ✓ 2013-2014 (Phase 2) additional analysis of existing geo-science research <p>Strategic Action to Achieve this Target</p> <ul style="list-style-type: none"> ✓ Marketing the offshore Nova Scotia hydrocarbon potential – Geoscience research results from the Play Fairway Analysis. ✓ Undertake additional geoscience projects to compliment the marketing package
<p>New Measures</p>	<p>N/A</p>

4. Encourage Socially Responsible Development of Nova Scotia's Energy Sector

a. Public Awareness

Outcome: Greater public understanding and support of the COMFIT program and renewable energy; provide information to assist developing future energy policy

Annual Target: Determined on completion of results of 2012 survey; participation of 2,200 Nova Scotians

Ultimate Target: Enhance public understanding of wind energy and COMFIT benefits to communities

Measure/Rationale: Public awareness percentage of COMFIT

Progress on Target Note – The survey was not conducted in 2012.

- ✓ Department representatives attended approximately 20 community meetings throughout the province to educate communities on COMFIT.
- ✓ The Department hosted a session specifically for municipalities.

Strategic Action to Achieve this Target

- ✓ Develop and conduct a comprehensive public opinion survey to assess energy issues
- ✓ Build public understanding of the benefits of wind energy for renewable electricity

New Measures N/A

b. Community involvement

Outcome: Diverse community groups participate in generating renewable electricity encouraging local economic development

Annual Target: 24 Distinct communities; 10 Megawatts (MW) of energy generated through Aboriginal community participation; percent of goods and services sourced locally by COMFIT project developments increase over time

Ultimate Target: 35 % of local goods and services measured after projects are operational

Measure/Rationale: Increase COMFIT participation; increase generation of electricity through COMFIT projects (MW)

Progress on Target

- ✓ More than 32 community groups have applied to the COMFIT program.
- ✓ COMFIT projects are currently proposed in all 18 of Nova Scotia's counties.
- ✓ More than 20 MW have been awarded to Nova Scotia's First Nations communities.
- ✓ More than 10 million has been raised from Nova Scotian investors for COMFIT projects.

Strategic Action to Achieve this Target ✓ Encourage widespread participation in the COMFIT program through assisting in project execution to ensure overall success of COMFIT Projects.

New Measures

N/A

c. Regional approach to energy planning and development

Outcome: Atlantic provinces shared approach to energy planning and development in the Atlantic Energy Gateway (AEG).

Annual Target: Not identified

Ultimate Target: Not identified

Measure/Rationale: Completion of eight key studies by the AEG showing significant potential benefits from regional collaboration, focusing on two key areas: power system planning and operations modeling, and clean energy industrial and economic development. Studies will lead to more knowledge and increased economic opportunities for the Atlantic region.

Progress on Target

- ✓ Atlantic Energy Gateway reports were released in 2012.
- ✓ Maritime Link studies support and are the based upon AEG work.
- ✓ Atlantic Energy Ministers continue to meet top ensure progress.

Strategic Action to Achieve this Target

- ✓ Collaborate with the other Atlantic provinces to build on opportunities of technology and skills transfer and learnings,
- ✓ Atlantic Energy Gateway leadership progressing regional energy industry opportunities and initiatives.
- ✓ Natural gas infrastructure expansion is now part of AEG Agenda.
- ✓ Energy efficiency collaboration and policy/program sharing has been added to Agenda.

New Measures

N/A