

**Yukon Energy  
Corporation**

2011 Annual Report





# Table of Contents

<b>Message from the President</b>	<b>2</b>	<b>Protecting Our Environment</b>	<b>24</b>
<b>Corporate Profile</b>	<b>4</b>	Fish and Fish Habitat Protection	24
<b>Guiding Principles and Values</b>	<b>5</b>	Climate Change	25
<b>Strategic Priorities</b>	<b>6</b>	GHG Emission Reductions	25
<b>Alignment with Shareholders' Letter of Expectation</b>	<b>8</b>	<b>Engaging Yukoners</b>	<b>26</b>
<b>Our Employees</b>	<b>9</b>	Energy Charrette	26
Long Service Awards	9	20-Year Resource Plan Update	26
New Department	9	Public Opinion Surveys	26
Apprenticeship Program	10	Project-specific Public Information	27
<b>Summary of Utility Operations</b>	<b>11</b>	<b>Building Partnerships with First Nations</b>	<b>29</b>
<b>Ensuring Reliability of Service</b>	<b>12</b>	First Nations Energy Forum	29
<b>Meeting Demand</b>	<b>13</b>	Protocol Agreements	29
Mayo B	13	<b>Supporting Our Communities</b>	<b>30</b>
Mayo Substation	13	Whitehorse Food Bank	30
Carmacks-Stewart Transmission Project, Stage 2	14	Mae Bachur Animal Shelter	30
Aishihik 3	14	Skills Competition	30
Geothermal	14	Available Light Film Festival	30
Wind	15	Yukon Energy Klondike Heat Battle	30
Enhanced Storage Projects	15	Scholarships	30
New Hydro	15	School/Public Tours	31
Waste-to-Energy	16	Yukon Sustainable Community Award	31
Biogas	16	Swan Cam/Fish Cam	31
Biomass	16	<b>Board of Directors and Corporate Governance</b>	<b>32</b>
Liquefied Natural Gas	16	Board of Directors' Appointments	32
District Heat	16	Remuneration	32
Energy Conservation and Efficiencies	17	Code of Conduct	32
Independent Power Producers/Net Metering	19	ATIPP Legislation	32
Net Metering Solar Project	20	<b>Senior Management</b>	<b>33</b>
Secondary Sales	20	<b>Management Discussion and Analysis</b>	<b>34</b>
Minto Debt	20	Financial Overview	34
<b>Meeting Our Regulatory Obligations</b>	<b>21</b>	Outlook	35
Phase II Hearing	21	International Financial Reporting Standards	35
Rate Schedule 39	22	<b>Audited Financial Statements</b>	<b>37</b>
<b>Health and Safety</b>	<b>23</b>		
Safety Record	23		
Wellness Program	23		
Safety Video	23		
Public Safety Campaigns	23		

## Message from the President

Yukon Energy's 2011 annual report was prepared under our Board's direction and represents a balanced and accurate summary of the Corporation's economic, environmental and social performance for the calendar year ending December 31, 2011.

I must start by saying that 2011 was probably one of Yukon Energy's busiest on record, and the monumental feats that we were able to achieve are in large part because of our dedicated and highly skilled employees. I would like to thank all our staff for their extraordinary effort over the last 12 months.

Yukon Energy's primary focus in 2011 was two-fold: to complete some major projects started in previous years, and to engage Yukoners in a meaningful and wide-ranging discussion about the territory's energy future—what it should look like and how to get there.

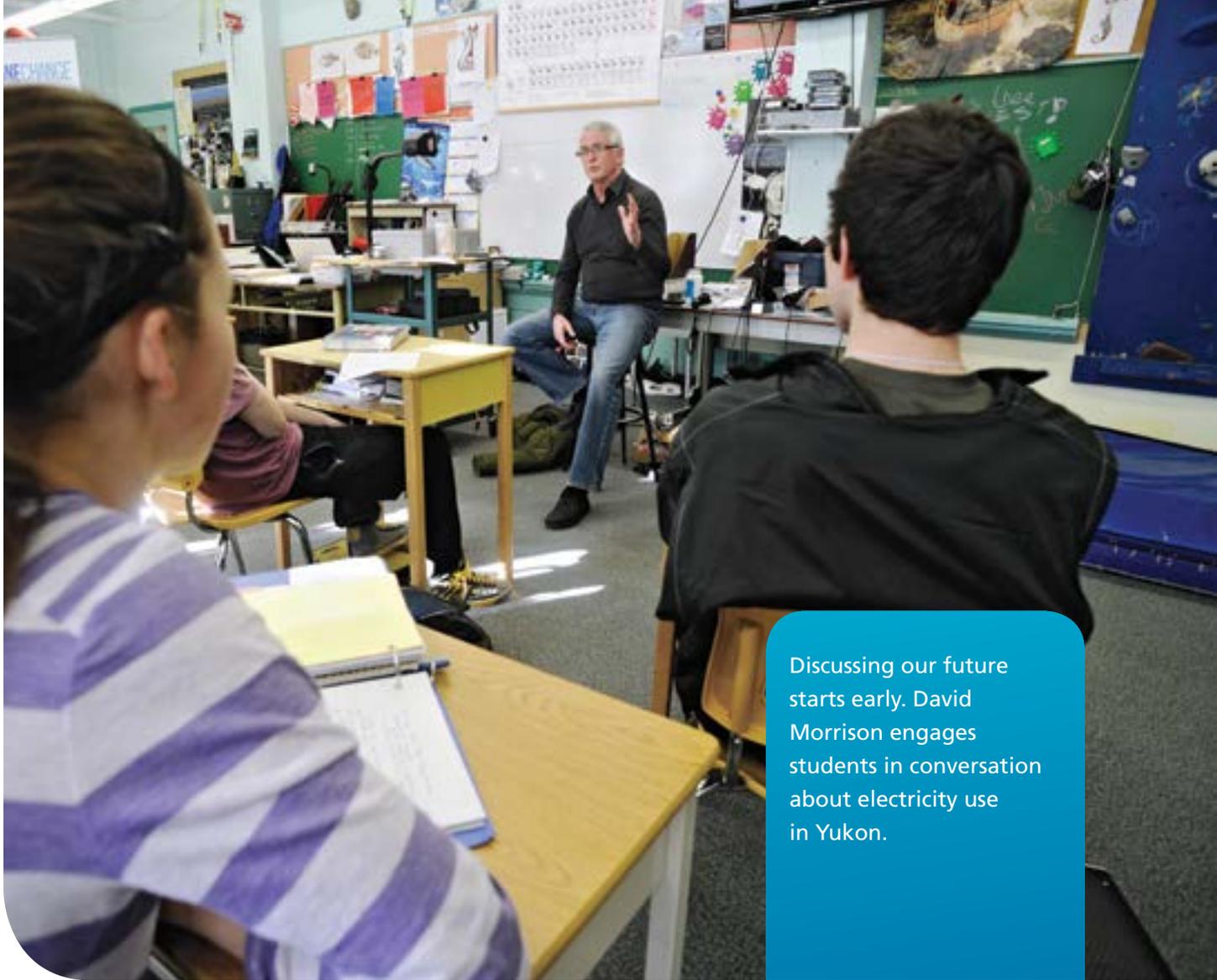
All our major projects and initiatives are outlined in detail in this report. Briefly, key projects include:

- Mayo B, which involved building a 3.7 kilometre penstock and new powerhouse downstream from the existing plant. It more than doubled the amount of hydro power that could be generated at our Mayo facilities.
- Carmacks-Stewart Transmission Project – Stage 2, which saw our transmission system extended from

Pelly Crossing to Stewart Crossing and allowed us to connect our two major hydro grids, thus providing more flexibility and reliability of service.

- Aishihik 3, which saw the installation of a seven megawatt hydro generator in our existing Aishihik hydro plant.
- Research into other clean energy options, including waste-to-energy, biomass and biogas, wind, geothermal, hydro enhancements and new hydro.
- Research into using liquefied natural gas as a transitional fuel to eliminate our reliance on diesel as a back-up fuel source.
- Establishment of an energy conservation department at Yukon Energy, and carrying out several energy conservation-related pilot projects and initiatives.
- A major energy-planning charrette that brought together a variety of Yukoners to help plan for a clean energy future for the territory.
- A Yukon-wide community tour to gather input for the development of a Yukon-wide energy conservation plan, and to share energy conservation tips and tools.
- Co-hosting a First Nations energy forum to explore business opportunities in clean energy and concluding protocol agreements with a number of Yukon First Nations.

I would be remiss if I did not make note of Yukon Energy's excellent safety record. Our staff have now gone nearly five years without a lost time incident, ranking us among the best small utilities in the country in terms of number of days lost.



Discussing our future starts early. David Morrison engages students in conversation about electricity use in Yukon.

Photo: Mike Thomas

As always, our ultimate goal is to achieve operational excellence. We measure our success by our ability to deliver safe, reliable and sustainable power to our customers, our ability to attract and retain a skilled and engaged workforce, our respect for the environment and for the communities and people we serve, and our recognition that Yukoners' needs power what we do.

David Morrison  
President and CEO

Our focus in 2011 was two-fold:  
complete existing major projects and  
engage Yukoners in a meaningful way.



Keynote speaker, Dr. Mark Jaccard, leads a conversation about clean energy systems during the energy charrette in March.

Photo: archbould.com

## Corporate Profile

Established in 1987, Yukon Energy is a publicly-owned electrical utility that operates as a business, at arm's length from the Yukon government.

We are the main generator and transmitter of electrical energy in Yukon. We work with our parent company Yukon Development Corporation to provide Yukoners with a secure supply of clean, electrical energy by focusing on renewable sources of power and energy solutions that complement our legacy hydro assets.

There are almost 15,000 electricity consumers in the territory. Yukon Energy directly serves about 1,800 of these customers, most of whom live in and around Dawson City, Mayo and Faro. Indirectly, we provide power to many other Yukon communities, including Whitehorse, Carcross, Carmacks, Haines Junction, Ross River and Teslin,

through distribution to the Yukon Electrical Company Limited. Yukon Electric buys wholesale power from Yukon Energy and sells it to retail customers in the territory.

Yukon Energy has the capacity to generate 129 megawatts of power. Ninety two megawatts of that are provided by our hydro facilities in Whitehorse, Mayo and Aishihik Lake (40 megawatts at Whitehorse, 37 megawatts at Aishihik and 15 megawatts at Mayo), 36 megawatts by diesel generators (which we currently only use as backup) and 0.8 megawatts by two wind turbines located on Haeckel Hill near Whitehorse.

Yukon Energy is incorporated under and regulated by the *Business Corporations Act*, the *Public Utilities Act* and the *Yukon Waters Act*.

Our headquarters are located near the Whitehorse Rapids hydro plant in Whitehorse, with community offices in Mayo, Faro and Dawson City.

## Guiding Principles and Values

We strive to:

- make safety a priority in all that we do;
- recognize and encourage integrity, learning, growth and development;
- foster an attitude of teamwork;
- operate with respect for one another;
- be accountable to our customers and shareholders;
- act sustainably at all times (social, environmental and economic bottom-line);
- be innovative when seeking energy solutions;
- take a proactive approach to meeting electrical needs;
- develop partnerships in working to meet electricity needs; and
- optimize the use of our existing assets for the benefit of ratepayers.

## Strategic Priorities

### Optimize system reliability and system efficiency

One of Yukon Energy's highest priorities is to continually improve system reliability and efficiencies. A significant portion of our capital budget is dedicated to upgrading and modernizing the system.

Efficiency projects like improving the performance of hydro generating equipment and transmission lines are ongoing. Other major reliability initiatives in 2011 included:

- Completion of Stage 2 of the Carmacks-Stewart transmission line. This allowed us to join the Whitehorse-Aishihik-Faro and the Mayo-Dawson transmission lines so we could manage our assets as one integrated system.
- Commissioning of a third turbine at Aishihik and our Mayo B hydro plant. Both projects have not only given us additional hydro capacity, but have allowed us to use the available water more efficiently.
- Working with Yukon Electrical Company Limited to improve distribution efficiencies. Changes meant that outages could be kept to a smaller geographic area; for the very first time, Yukon Energy did not have any grid-wide outages in 2011.
- First phase of construction of a new sub-station in Mayo.

### Develop clean energy solutions to meet forecast demand

Yukon Energy's 20-Year Resource Plan, developed in 2005, was assessed, and a great deal of work was done in 2011

to update it. The updated version will be ready for review by the public and the Yukon Utilities Board in 2012. This has provided another opportunity to work with Yukoners to develop options for meeting expected near-term and mid-term energy needs.

In 2011, new renewable energy projects included the addition of our Aishihik third turbine and Mayo B.

### Implement an energy conservation/efficiency program

A huge amount of time and effort was spent this year working towards the development of a Yukon-wide energy conservation plan/program.

Projects included:

- Creation of a new energy conservation department within Yukon Energy.
- Information gathered from the public and Yukon stakeholders about what they want to see in a territory-wide energy conservation plan. The input was received through a Conservation Potential Review process, community consultation, surveys and workshops.
- Pilot Projects: LED streetlight project in Dawson City, Energy Conservation Kids Ed-Ventures program, and work on a solar pilot project at the Whitehorse Rapids Fishladder.
- Audits of the Alexco mine and Yukon Energy's Whitehorse and Dawson facilities. More audits are planned for 2012.
- Public outreach and education: clothesline public awareness campaign, new online energy calculator, One Change community tour, energy management workshops and Earth Hour activities.



Face-to-face conversations are one of many ways to share information about reducing electricity usage.

Photo: archbould.com

## Secure project capital financing

The demand for electricity is growing year by year, and Yukon Energy does not have the capacity to develop new sources of energy all on our own. In 2011, Yukon Energy worked to find both public and private partners. Specific initiatives included:

- Completing the Mayo B project and Stage 2 of the Carmacks-Stewart transmission line through partnerships with the federal and Yukon governments and the First Nation of Na-Cho Nyak Dun.
- Working with the Yukon Indian Development Corporation and the Council of Yukon First Nations to host a First Nations Energy Forum to explore business opportunities in clean energy.
- Negotiating protocol agreements with the Champagne and Aishihik First Nations and the Kaska Dena Council.

Yukon Energy will continue to seek out partnerships where collaborative energy solutions can be found that both support the existing customers and support the growth of the economy.



Photo: archbould.com | Energy Audit of Yukon Energy buildings

## Alignment with Shareholders' Letter of Expectation

Under both the *Yukon Development Corporation Act* and the *Corporate Governance Act*, the Minister Responsible for Yukon Energy is to work with our parent, Yukon Development Corporation (YDC), to negotiate a protocol on an annual or bi-annual basis.

The protocol outlines what is expected each year of both Yukon Energy and YDC. In addition, it has been the practice of the Yukon government to provide the Corporations with additional guidance in the form of a Shareholders' Letter of Expectation.

The most recent letter—which covers the period from April 1, 2010 to March 31, 2012—states that the Corporations will:

- Work with the Yukon government and other stakeholders on the implementation of the *Energy Strategy for Yukon* and the *Yukon Government Climate Change Action Plan*, and in particular, by participating in the development of an independent power producer policy, a net metering policy and a demand side management program.
- Complete the financial arrangement transfer payment agreement with the Yukon government regarding YDC's financial assistance.
- Work with Yukon Energy to ensure both Corporations carry out their obligations under the Yukon Energy/First Nation of Na-Cho Nyak Dun project agreement.
- Work with the Yukon government and Yukon Energy in preparing and implementing a work plan for demand side management initiatives.
- Work with First Nation development corporations on economic development opportunities.
- Ensure that Yukon Energy completes construction of Carmacks-Stewart transmission line Stage 2, thereby connecting the territory's two existing grids.
- Ensure that Yukon Energy completes the Mayo B project prior to March 31, 2012.
- Ensure that Yukon Energy continues work in preparation for the installation of the third turbine at the Aishihik hydro facility in anticipation of a winter 2011–2012 in-service date.
- Work with Yukon Energy to increase energy capacity by enhancing existing infrastructure, including improved efficiencies at the Whitehorse hydro plant, assessing ways to reduce line losses and the continued evaluation of the Atlin River, Marsh Lake and Gladstone Lake storage concepts.

## Our Employees

Yukon Energy employs approximately 90 highly skilled and dedicated people in Whitehorse, Faro, Mayo and Dawson City. We are committed to being the employer of choice in Yukon.

We value our employees and ensure that we provide a respectful work environment. We offer competitive salaries, excellent benefits, generous paid vacations, vacation travel allowance and comprehensive training.

In Yukon Energy's overall human resources strategy, a strong, competent and professional workforce is deemed essential to the realization of the corporate vision. To maintain and enhance the skills needed to achieve our business objectives, the Corporation undertakes to:

- attract, recruit and retain a competent workforce that shares our values and is motivated to help sustain and improve the Corporation's assets;
- offer our employees opportunities for professional development to ensure a high level of skill, expertise and leadership; and
- ensure succession planning and the transfer of critical knowledge.

### Long Service Awards

We are proud of our workforce and we have adopted several initiatives to recognize our employees' efforts. These include an annual celebration to recognize employees achieving milestones, annual employee and children's Christmas parties, summer barbecues, golf tournaments and other ad-hoc get-togethers. We would like to congratulate our 2011 Long Service Award recipients:

- **Ed Chaplin** – 40 years
- **Ken Sawyer** – 25 years
- **Darrell Johnson** – 20 years
- **Attila Janits** – 15 years
- **Shelley Dixon** – 10 years
- **Steve Milner** – 10 years
- **Ed Mollard** – 10 years
- **Jim Petelski** – 10 years
- **Austin Osborne** – 5 years
- **Maureen Thompson** – 5 years

### New Department

Yukon Energy established an energy conservation department in 2011 to work with stakeholders on Yukon-wide energy conservation and efficiency programs. This department will also help the Corporation find ways of reducing our own energy use. Energy conservation is a critical element in helping us meet Yukon's growing energy needs.

Photo: archbould.com | Energy Audit of Yukon Energy buildings

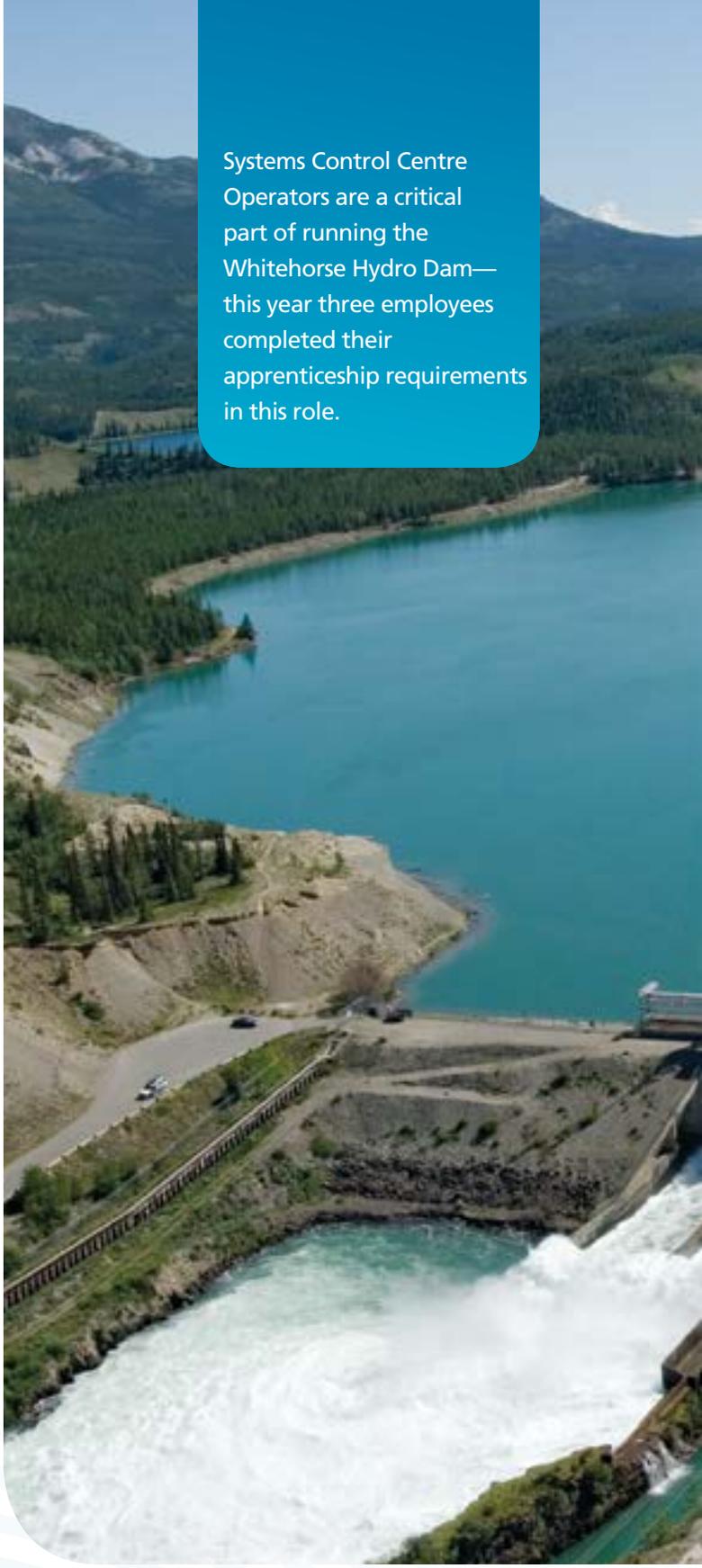


## Apprenticeship Program

Yukon Energy's apprenticeship program is an important part of our human resource strategy in meeting some of our labour needs for both the present and future. It is rewarding to see how far the program has progressed since it was implemented in 2006. Since that time, about 16 Yukoners have gone through our apprenticeship program in the areas of power systems electrician, power line technician, systems control centre operator and heavy duty equipment technician. Almost all of them continue to work for us now that they have their journey tickets.

Congratulations to the following employees for successfully completing their apprenticeship requirements in 2011:

- **Al Porter** – Power Systems Electrician
- **Steve Blysak** – Systems Control Centre Operator
- **Mike Hannah** – Systems Control Centre Operator
- **Myles O'Brien** – Systems Control Centre Operator

An aerial photograph of the Whitehorse Hydro Dam, showing the concrete dam structure, the turquoise water of the reservoir, and the surrounding forested mountains. A blue text box is overlaid on the top right of the image.

Systems Control Centre Operators are a critical part of running the Whitehorse Hydro Dam—this year three employees completed their apprenticeship requirements in this role.

## Summary of Utility Operations

	2011	2010	2009	2008	2007	2006
<b>Generating Capacity (in MW)</b>						
Hydro	92 <sup>1</sup>	75	75	75	75	75
Diesel	36	36	36	36	36	36
Wind	1	1	1	1	1	1
<b>Total</b>	<b>129</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>112</b>
<b>Peak Demand (in MW)</b>						
WAF System	Connected	67	65	64	59	61
Mayo	Grid	7	5	5	5	5
<b>Total</b>	<b>77<sup>2</sup></b>	<b>74</b>	<b>70</b>	<b>69</b>	<b>64</b>	<b>66</b>
<b>Generation (in GWh)</b>						
Whitehorse Rapids	232	234	224	206	206	217
Aishihik	132	112	119	107	98	81
Mayo	21	32	29	28	27	27
Wind	-	-	-	-	-	1
WAF Diesel	8	3	2	1	-	1
Other Diesel	8 <sup>3</sup>	2	1	-	1	-
<b>Total</b>	<b>401</b>	<b>383</b>	<b>375</b>	<b>342</b>	<b>332</b>	<b>327</b>
<b>Electric Sales (in \$000)</b>						
Residential	1,800	1,524	1,535	1,523	1,509	1,456
General Service	3,342	3,315	3,007	2,804	2,731	2,645
Industrial	4,599	3,311	3,191	329	-	-
Wholesale	24,170	23,301	22,291	22,999	22,459	22,127
Secondary Sales	46	644	1,442	777	1,000	917
Other	90	83	81	86	377	383
<b>Total</b>	<b>34,047</b>	<b>32,178</b>	<b>1,547</b>	<b>28,518</b>	<b>28,077</b>	<b>27,528</b>
<b>Electric Sales (MWh)</b>						
Residential	12,834	11,398	11,596	11,359	10,908	10,665
General Service	21,538	22,570	20,042	18,523	17,507	17,037
Industrial	43,259 <sup>4</sup>	30,255	29,355	3,200	-	-
Wholesale	290,541 <sup>5</sup>	276,345	267,229	263,820	254,914	251,861
Secondary Sales	552	10,489	17,384	18,753	24,225	22,185
<b>Total</b>	<b>368,724</b>	<b>351,056</b>	<b>345,607</b>	<b>315,655</b>	<b>307,554</b>	<b>301,748</b>
<b>Cents Per kWh</b>						
Residential	14.03	13.37	13.24	13.41	13.84	13.66
General Service	15.52	14.69	15.00	15.14	15.60	15.52
Industrial	10.63	10.94	10.87	10.27	-	-
Wholesale	8.32	8.43	8.34	8.72	8.81	8.79
Secondary Sales	8.30	6.14	8.30	4.14	4.13	4.13

<sup>1</sup> Hydro capacity was increased by the addition of the Mayo B and AH3 projects commissioned late in 2011.

<sup>2</sup> The Peak Demand for 2011 was achieved after the grids were connected. This reduces the relevance of system peak demands for the WAF and MD grids as reported in prior years.

<sup>3</sup> Diesel generation of 16 GWh equates to 4% of Total Generation. Two thirds of this was required to meet system peaks and one third was required for capital projects.

<sup>4</sup> 2011 is the first year that both the Minto and Alexco mines are on the system for the full 12 months.

<sup>5</sup> Year to year growth in Wholesales sales of 14 GWh (5%) reflects an increasing preference towards electric heat as the primary heat source for new residential and general service construction in Whitehorse.

## Ensuring Reliability of Service

We take our responsibility to provide reliable power very seriously.

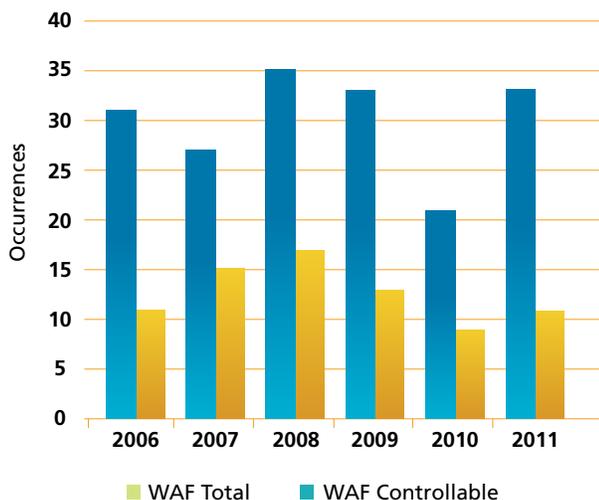
Three years ago, Yukon Energy embarked on an aggressive capital maintenance schedule that saw approximately two-thirds of our core capital budget go towards projects related to reliability. In 2011, we continued to work our way through a list of maintenance capital projects. While we had slightly more controllable outages on our Whitehorse-Aishihik-Faro transmission system in 2011 than in the previous year (11 in 2011 compared to nine in 2010) our trend over the longer term is improving. (We had 12 controllable outages in 2009 and 19 in 2008.) The good news for 2011 is that of the 11 controllable outages, none of them resulted in a grid-wide blackout. This shows the success of the modifications we have been making to our protection system. As the number of customers affected by an

outage decreases, so does the amount of time required to restore power.

On our Mayo-Dawson grid we experienced eight controllable outages, compared with nine the previous year. We did have an unfortunate number of uncontrollable outages on our northern grid, mostly as a result of heavy snow and lightning strikes. However, even those numbers were down from 2010 (13 uncontrollable outages in 2011 compared with 19 the previous year). While there is little we can do about weather-related outages, we will continue to work hard to decrease controllable outages throughout the territory.

One initiative that will help address reliability is our Computerized Maintenance Management System that we are phasing in starting in 2012. This tool will improve our ability to plan for, budget, and schedule equipment maintenance on a daily to multi-year basis.

### WAF Outage Data



### MD Outage Data

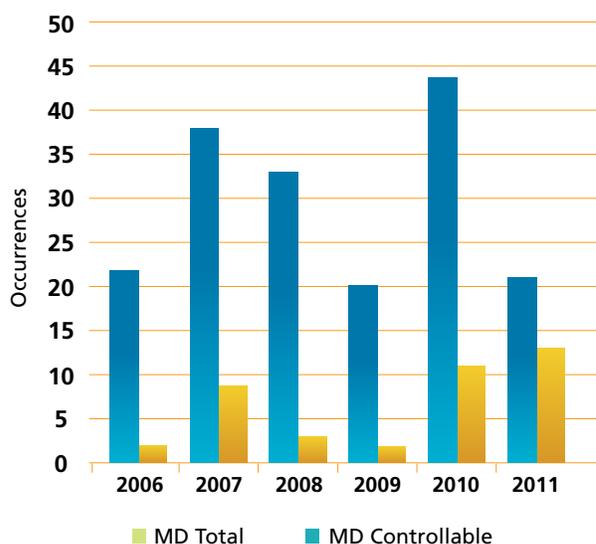




Photo: archbould.com | Mayo B powerhouse

## Meeting Demand

Yukon Energy is planning for the future in ways that will ensure a secure and continuous supply of energy that is sustainable, affordable and clean.

Our goal is to meet the growing demand for electricity with renewable energy that complements our existing hydro system. To that end, we pursued a number of initiatives in 2011 that will enhance our current infrastructure.

### Mayo B

The Mayo B hydro project involved building a new powerhouse 3.7 kilometres downstream from the existing hydro plant. Construction of Mayo B began in June 2010. In December 2011 it was tied into the territory's transmission grid and is now providing clean and renewable electricity to Yukoners. Mayo B increases our capacity to generate clean power at the existing site from five megawatts to 15 megawatts, without the need for a new dam or reservoir. It offsets several million dollars worth of diesel each year and reduces greenhouse gas emissions by about 25,000 tonnes annually.

Mayo B created more than 60 direct jobs for Yukoners and provided spin-off benefits to approximately 120 Yukon businesses. Close to \$12 million was spent in Yukon as a result of this project including labour, materials and supplies. Of that amount, close to \$2 million was spent in the Village of Mayo.

The Mayo B project was completed on time and within budget (\$120 million). Contributions came from the federal government's Green Infrastructure Fund (\$53.35 million), the Yukon Development Corporation, the Yukon government and through an investment by the First Nation of Na-Cho Nyak Dun (combined total of \$30.14 million), and from electrical customers (\$36.5 million). The cost to ratepayers will be spread over the lifetime of the project (50+ years).

### Mayo Substation

Our existing substation in Mayo is at the end of its life and needs upgrading. That's particularly important with our new Mayo B hydro facility now in service. The substation must be able to handle all the power coming from both Mayo A and Mayo B, and re-route it to any and all communities connected to the Yukon grid.

This year the civil and foundation work was done for the new substation; the project will be completed in 2012.

## Carmacks-Stewart Transmission Project, Stage 2

In June 2011, Stage 2 of the Carmacks to Stewart Crossing transmission line was completed. It involved building a new 138 kv transmission line from Carmacks to Stewart Crossing in Central Yukon (approximately 172 kilometres long), with a spur line to the Minto mine. Completing Stage 2 has allowed us to connect our northern and southern grids. Having one integrated transmission system has given us the ability to better manage our power.

Stage 1 of the project, from Carmacks to Pelly Crossing and a spur to the Minto mine, was completed and energized in November 2008. This allowed us to provide the mine and the community of Pelly Crossing with surplus hydro power. (Previously, both were on diesel.) It has led to reductions in greenhouse gas emissions of between 25,000 and 30,000 tonnes per year.

The cost of Stage 2 was approximately \$40 million, with \$17.65 million of that coming from the federal government's Green Infrastructure Fund and the rest from the Yukon Development Corporation.

The transmission line project resulted in substantial economic benefits for Yukon. It's estimated that approximately 200 Yukoners worked on Stage 1 of the project in one way or another, with a similar number involved in Stage 2 of the project directly or indirectly.

## Aishihik 3

This is another of our hydro enhancement projects completed in 2011. Adding a seven megawatt hydro generator to the Aishihik hydro facility (which until

December 2011 had two 15 megawatt hydro generators) has allowed us to use our plant more efficiently, since it has given us the ability to produce more power using less water. This new unit will save Yukoners \$1 million or more per year in diesel costs and reduce greenhouse gas emissions by an estimated 3,800 tonnes annually.

## Geothermal

Because Yukon is located in an area of the Pacific known as the Ring of Fire, the potential is good for finding significant geothermal resources that could be used to produce electricity.

In 2011, we planned to do further drilling at Jarvis Creek near Haines Junction, following good results from some early research. However, we were unable to secure a drilling rig due to the mineral exploration boom underway, so instead we focused on assessing potential sites in the Stewart Crossing/Mayo and Whitehorse regions. Early results show there is good geothermal potential in these areas, although much more work is needed before a decision could be made as to whether one or more geothermal plants would be feasible.

In 2012 we will collect additional temperature data in the Whitehorse area.

Photo: archbould.com | Aishihik 3



## Wind

We continue to look for ways of using wind as a part of our clean energy complement. Yukon Energy has completed an assessment of the wind regime on Tehcho (formerly Ferry Hill) near Stewart Crossing. The results are positive enough that we are now seriously looking at the feasibility of building up to a 20 megawatt wind farm on the site. In 2011, wind monitoring equipment was installed at Tehcho. We will use this equipment over the next one to two years to collect data that will help us determine if a wind farm is viable in the Tehcho area.

In 2011, we also did some wind mapping in the Haines Junction area, and we completed an assessment of the wind regime at Mt. Sumanik, another site we are considering for a wind farm. The data showed Mt. Sumanik wind regimes are similar to those at Tehcho.

## Enhanced Storage Projects

Yukon Energy is committed to optimizing our existing hydro infrastructure before developing new hydro projects. To this end, there are a number of enhancement concepts we are examining that could increase production at our Whitehorse, Mayo and Aishihik hydro facilities. These include increased storage ranges in the Southern Lakes (Marsh, Tagish and Bennett) and Mayo Lake, which together could increase the winter output of our Whitehorse and Mayo hydro facilities by 11 gigawatt hours per year on average. This is the energy equivalent of displacing approximately \$2.5–\$3 million of diesel generated electricity annually. Diverting water from Gladstone Creek into Aishihik Lake would allow more power to be produced at our Aishihik plant; up to 30 gigawatt hours per year increase in renewable energy production could result.

In 2011, Yukon Energy continued engaging with local stakeholders, First Nation governments and the general public on these potential projects. In particular, we held workshops and public meetings with residents of Mayo, Marsh Lake and Tagish to share results from our field studies and to determine information gaps where more research is needed. Our focus for the Gladstone Diversion Concept in 2011 was mainly to work with the Kluane and, Champagne and Aishihik First Nations to begin heritage and traditional use studies. We also collected additional water flows and lake elevation data.

There's an ongoing emphasis on workshops and public meetings as projects move forward.

## New Hydro

Yukon Energy is exploring the next generation of new hydro development projects (2012 to 2020 time frame). This includes possible sites on the upper reaches of the Pelly River (between 10 and 80 megawatts and up to 500 gigawatt hours a year) and in the area of Moon Lake and Tutshi/Windy Arm in the Southern Lakes region (up to 12 megawatts and up to 70 gigawatt hours a year).

In 2011, we looked at potential sites on the Upper Pelly River to gather hydrological data. We also investigated the potential to develop small hydro sites at Moon Lake and Tutshi/Windy Arm. We will follow up in 2012 by collecting water flow information on the Upper Pelly, Moon and Tutshi Lakes.

## Waste-to-Energy

In 2011, Yukon Energy continued the work started in 2010 looking at the possibility of using municipal waste to produce electricity and district heat. We believe this process could allow production of up to two megawatts of electricity year-round, using waste from Whitehorse area landfills and possibly supplemented with mill waste or other surplus wood material.

There are a number of issues that still must be addressed, including how to maintain continued emphasis on recycling and waste diversion, ensuring all harmful emissions will be removed to air emission/control standards, and finding local uses for the valuable steam and waste heat available from a waste-to-energy facility.

In October 2011, we hosted a workshop that allowed Yukoners to learn more about this idea. The feedback from the public will be invaluable to us as we continue to explore this potential energy option.

## Biogas

Yukon Energy began a study in 2011 on the potential of using organic matter (food, brewery spent grains, waste cooking oil, slaughterhouse waste and sewage sludge) to produce a methane-rich gas known as biogas. This process would complement the waste-to-energy process and could produce in the range of 1,600 megawatt hours of electricity a year. The organic waste would be taken from the City of Whitehorse's compost collection program.

## Biomass

Another concept Yukon Energy is assessing for a possible energy source is to use fire kill and beetle kill wood, along with waste from sawmills, to produce electricity and

district heat. In June 2011, Yukon Energy had a biomass preliminary energy evaluation done. The report identified biomass resources within a 250 kilometre radius of Whitehorse that could potentially provide the feedstock required to maintain a 25 megawatt electrical generating facility for 20 years.

Subsequent to that report, however, stakeholders and members of the public attending a Yukon Energy-sponsored workshop on this issue asked us to look at smaller scale biomass options instead. In partnership with the Alsek Renewable Resource Council, the Village of Haines Junction, and the Champagne and Aishihik First Nations, we are now assessing the viability of a smaller plant in the Haines Junction area.

## Liquefied Natural Gas

In 2011, Yukon Energy began assessing the feasibility of using liquefied natural gas (LNG) as a transition source of energy for power and district heat. LNG is less expensive than diesel and produces fewer greenhouse gas emissions. The idea would be to use LNG in the short term until new, clean, and preferably renewable, sources of energy can be developed. We will continue to investigate this potential option in 2012.

## District Heat

The benefits of any thermal project in Yukon, whether it is waste-to-energy, biomass, biogas or liquefied natural gas, can only be fully realized if use can be made of the waste heat that is produced as a by-product of this form of generation. In 2011, Yukon Energy—in partnership with the City of Whitehorse and the Yukon government—began work on a feasibility study assessing the potential of a district heat system in Whitehorse. The work is



Photo: archbould.com | Energy Charrette

examining areas of potential load and energy sources to supply the system with heat. The study will be completed in 2012.

### Energy Conservation and Efficiencies

Energy conservation is a crucial element in helping us meet Yukon's growing electricity needs. In August 2011, Yukon Energy created an energy conservation department to work with Yukon Electrical Company Limited, the Yukon government, and other stakeholders to develop a territory-wide energy conservation and efficiency plan. The new department is also helping Yukon Energy find ways of reducing our own energy use.

The energy conservation plan is expected to be ready for implementation in 2013.

Yukon Energy chairs an energy conservation working group, made up of representatives from Yukon Electrical Company Limited and the Yukon government's Energy Solutions Centre along with two of our own staff. We also participate in a demand side management steering committee, made up of senior officials from the two utilities and the Yukon government. Both groups meet regularly to ensure planning is done collaboratively and that programs are executed in a transparent, cooperative manner that avoids duplication.

### Conservation Potential Review

Yukon Energy has been working to find out more about how people use electricity in the territory and where the greatest gains might be in terms of energy

conservation and efficiencies. In 2011, we partnered with the Yukon Electrical Company Limited and the Yukon government's Department of Energy, Mines and Resources to collect this information.

We hired ICF Marbek to do a conservation potential review. Through its research, the company sought answers to the following questions:

- How do Yukoners currently use energy? (i.e. What percentage of energy consumption goes towards heat, hot water, lighting, plug loads, etc.?)
- How much power would Yukon need in future years if there weren't any energy conservation/efficiency initiatives put in place?
- How much potential is there in Yukon for energy savings through conservation/efficiency initiatives?
- Where are the greatest gains to be made in terms of conservation of electricity?

The consultants gathered the information using customer billing data, stakeholder consultation and customer surveys. They processed all the collected data and returned to Yukon in November to share their initial findings. Through stakeholder workshops they asked participants to talk about how much of the electricity savings identified in the draft report can realistically be achieved within Yukon's residential, commercial and renewable sectors.

ICF Marbek is using the feedback it received during these workshops to further refine its report. The final report will be available in early 2012.

### One Change Community Tour

In the summer of 2011, Yukon Energy took our conservation message on the road. Together with Yukon Electrical Company Limited and the non-profit group One Change, we visited almost every community in the territory. We set up tents with interactive displays in highly visible areas, gave away energy efficient products, and talked to hundreds of Yukoners about what they think a territory-wide electricity conservation plan should look like. The input will assist us in our work to develop conservation programs for Yukon.

### LED Streetlight Pilot Project

In 2011, we did research on light-emitting diode (LED) streetlights in Dawson City, with positive results. The research shows that the annual energy used by the traditional high pressure sodium streetlights is 416 kilowatt hours per light, compared with only 150 kilowatt hours per LED streetlight, a savings of 64 percent.

However, LED technology is changing rapidly and we would like to test some options that weren't available to us when we started the pilot project. In 2012, we will experiment with several different types of LED streetlights to determine which will be the best for our northern needs.

### Alexco Mine Audit

In the summer of 2011, we partnered with Alexco Resource Corporation to do an audit of their mine site near Keno. We'll continue working with Alexco in 2012 to implement some of the suggested energy saving measures. We will conduct similar initiatives with other Yukon mines and we will work with the City of

Whitehorse to audit their facilities. Audits are a great way to identify opportunities for savings and start to plan for a conservation based future.

### Internal Audit

Yukon Energy is looking at our own operations as well with an eye to conserving energy. In 2011, we completed an audit of our Whitehorse and Dawson City offices and plant buildings, and we are prioritizing actions that will increase the efficiency of our facilities. Yukoners will be able to follow our progress on our website [yukonenergy.ca](http://yukonenergy.ca).

### Fridge and Freezer Retirement Program

In 2011, Yukon Energy partnered with the Yukon government's Energy Solutions Centre to help members of the public replace their old refrigerators and freezers with new more energy-efficient models. The used appliances must be at least five years old and in working condition. Not only will Yukoners receive \$50 for each fridge or freezer they have replaced (up to two appliances), but the Energy Solutions Centre will remove the old model, take it to the landfill, and pay the landfill tipping fee. Yukon Energy will continue to support this program into 2012.

### Online Energy Calculator

With assistance from Maritime Electric, we developed an online energy calculator in 2011. It allows Yukoners to determine how much electricity each of their household appliances and other electronic equipment requires to operate. The tool gives members of the public the ability to better manage their electricity usage and lower their power bills.

### Celebrating the Clothesline

In the spring of 2011, Yukon Energy ran a public awareness campaign that promoted the use of clotheslines. Employees set up a booth at an annual trade show in Whitehorse and gave away hundreds of packages of clothespins, along with several drying racks and clotheslines. We also provided tip sheets that included other energy saving information.



Photo: Mike Thomas | Stuart Hickox from One Change talks about energy conservation with high-school students.

We're listening. Collecting data on electricity use helps us understand conservation potential.

### Dollars to Sense Workshops

Yukon Energy, working with Yukon Electrical Company Limited, and Natural Resources Canada, hosted a series of energy management workshops in 2011 for Yukon businesses and First Nation and municipal governments. Sessions were offered both in the spring and fall. We will offer them again in future years if there is demand.

### Energy Conservation Kids Ed-Venture Program

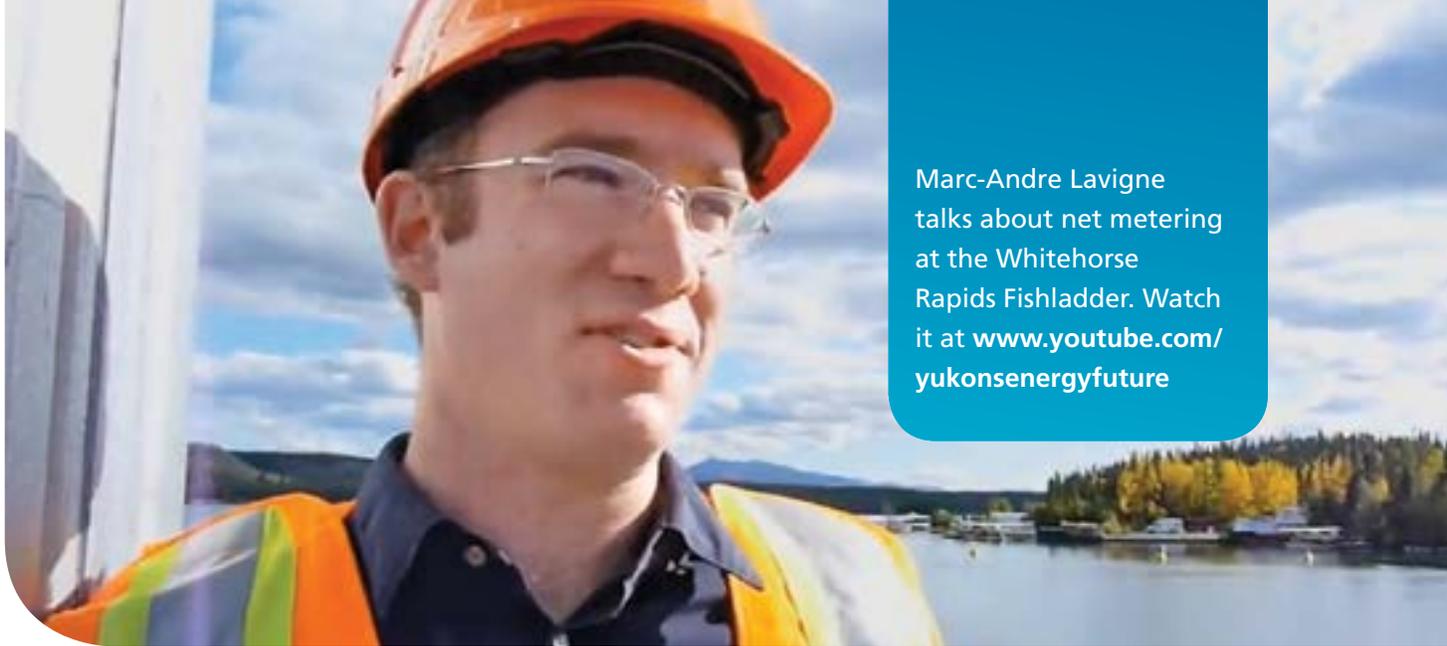
Yukon Energy and the Yukon Conservation Society partnered in 2011 to provide an afternoon of learning and fun for pre-schoolers, focused on energy conservation and electricity. The aim was to teach the children about using electricity safely and wisely. This was done through music and dance, storytelling, hands-on science and crafts. We plan to expand this program to other locations in 2012.

### Earth Hour

Yukon Energy worked with the Yukon Conservation Society and the Yukon government's Energy Solutions Centre this year to promote Earth Hour. It's an annual event that encourages people to reduce their energy consumption as much as possible for one hour, and think of ways that they could continue to conserve throughout the year. This year Yukoners reduced their energy consumption by about one megawatt. That's up from 2010, at which time Yukoners cut their consumption by 0.8 of a megawatt during Earth Hour.

### Independent Power Producers/Net Metering

Yukon Energy is working with Yukon Electrical Company Limited and the Yukon government on independent power producers (IPPs) and net metering policies. Work will continue in 2012 on these initiatives. When implemented, a net metering policy will allow customers to generate their own clean electricity and reduce the amount of power they buy from a utility. An IPP policy will enable Yukon Energy to buy power from private sources and support the development of Yukon's renewable economy.



Marc-Andre Lavigne talks about net metering at the Whitehorse Rapids Fishladder. Watch it at [www.youtube.com/yukonsenergyfuture](http://www.youtube.com/yukonsenergyfuture)

### Net Metering Solar Project

Yukon Energy began work in 2011 on a net metering solar pilot project. We selected a site for the demonstration project (the Whitehorse Rapids Fishladder) and ordered the solar panels and related equipment. The system will be installed at the fishladder during the summer of 2012. It will serve two purposes: to help power the ladder's visitor reception building, and to allow us to test run the steps other Yukoners will need to take if they wish to generate renewable power and send a portion of it back to Yukon Energy's grid. We will also monitor the amount of solar generation produced.

### Secondary Sales

There was good news in 2011 for 13 Yukon businesses and government departments. A surplus of available water for electrical generation allowed us to once again offer our secondary sales program for several weeks between late August and early October.

The secondary sales program gives eligible Yukon businesses the option of using hydro power to heat their facilities instead of diesel fuel or propane, both of which are more expensive and generate greenhouse gas emissions. They pay two-thirds of the cost of heating with diesel fuel, in exchange for the service being limited and fully interruptible. They are required to

maintain a backup heating system for use when secondary sales are not available.

In September 2010, low water at the Aishihik and Mayo hydro facilities forced us to indefinitely suspend the secondary sales program. However, this summer, with all our reservoirs essentially full, we could offer the program for a limited time.

### Minto Debt

In February 2011, the Minto mine repaid a Yukon Energy loan in full, some four years ahead of schedule.

As part of the Power Purchase Agreement with the mine, Yukon Energy agreed to provide an \$18 million loan, repayable at 6.5 percent over seven years (to November 2015). The money was used to cover the cost of the spur line into the mine property, plus a \$7.2 million contribution to the main Carmacks-Stewart transmission line.

The reason for the loan was to allow the Minto mine to go into operation, so it could provide jobs for Yukoners and give Yukon Energy a new customer that would help reduce rates for other customers. Rates to residential customers decreased by 2.47 percent as a result of Minto coming on line. Ratepayers also benefitted from the \$3.7 million in interest that we earned on the loan.

## Meeting Our Regulatory Obligations

### Phase II Hearing

In the fall of 2010, Yukon Energy and the Yukon Electrical Company Limited appeared before our regulator, the Yukon Utilities Board, for a Phase II hearing. The purpose of the hearing was to provide the Utilities Board with the information it needed to make decisions regarding three topics:

- 1) What percentage of the total amount of money the utilities need to operate should be paid by each class of customer (residential, small business, government and industry);
- 2) How the rates within each class should be designed; and
- 3) Whether there should be any changes in the terms under which the utilities provide service to customers.

The Yukon Utilities Board made its ruling in January 2011. In summary, the board said the following:

- 1) The Board recognized that as a result of Yukon government Orders-in-Council, no changes can be made before 2013 to the overall revenues charged to each rate class. The Board also observed that the revenues from the residential rate class are considerably below the costs to serve this class—residential customers pay less than 80 percent of the true cost of their power, while business and industry pay more than 100 percent and government general service customers pay over 140 percent of what it costs to provide them with power. In its Order, the Board said that once the government's Orders-in-Council expire at the end of 2012, "the Board expects that both utilities will jointly come before this Board with a new Phase II Application to correct the current imbalances."

- 2) In terms of how the rates within each class should be designed, both Yukon Energy and Yukon Electrical Company Limited had argued that there should be price signals set to encourage people to conserve electricity. The utilities suggested that a new rate block be established and that the more power used, the higher the rate charged for that power. Yukon Energy had also proposed that there be a substantial increase in the cost of any power consumed by residential customers above 2,500 kilowatt hours per month, and there be a decrease in power bills for those residential customers who keep their usage under 1,000 kilowatt hours per month. (The average monthly residential usage is about 800 kilowatt hours per month.)

The Utilities Board did create three blocks instead of the current two for residential and small business customers, each block being at a higher rate.

The Board rejected Yukon Energy's idea for a decrease for non-government residential customers in the First Block (up to 1,000 kilowatt hours per month), making the observation that a reduction in these first-energy block rates is not warranted because the revenues paid by these residential customers are below the cost of their power and that this issue should be corrected when Order-in-Council 2008/149 expires (see Point 1). The Second Block, between 1,001 and 2,500 kilowatt hours per month, would see a slight reduction of up to 0.2 percent, and the Third Block, also known as the runoff rate, (anything over 2,500 kilowatt hours per month) would see an increase of between 0.2 percent (at 2,600 kilowatt hours per month) and 4.4 percent (at 5,000 kilowatt hours per month).

The Utilities Board approved the utilities' proposal for four blocks for non-government small business and municipal

government rates, with the Fourth Block being an initial step toward the transition to a new large business rate class that the Board directed the utilities to put forth in their next General Rate Applications. The First Block (up to 2,000 kilowatt hours per month, would see reductions of between 0.8 and 2 percent. The Second Block (from 2,001 to 15,000 kilowatt hours per month) would see reductions of between 0.1 to 1.5 percent. The Third Block (15,001 to 20,000 kilowatt hours per month) would see increases of up to 4.8 percent. And the Fourth Block (over 20,000 kilowatt hours per month) would see increases of between 0.7 and 3.8 percent.

For the government residential and general service rate class, the Board agreed to the same rate blocks as for non-government customers with inclining block rates for the first three rate blocks. Compared to the equivalent

non-government rate classes, the Board suggested higher runoff rates for the government rate classes and also adjusted the utilities' proposals to ensure that rates increase as monthly use increases.

### Rate Schedule 39

Rate Schedule 39 is the rate charged to our industrial customers. (Current customers include the mines at Minto and Keno.) This rate was set by the Yukon government for the period from 2007 to 2012 in an Order-in-Council (2007/94) and was later approved by the Yukon Utilities Board. The rate provides for increases for inflation each year starting in 2010. For that initial year (2010) there was no increase, as inflation was negative. However in 2011, Yukon Energy requested an increase of 2.8 percent to reflect the rise in inflation. The YUB approved the request in April 2011.

Video is playing an increasing role in public engagement. How to safely use the boat lock at the Lewes dam is one of many Yukon Energy videos now online.



## Health and Safety

### Safety Record

Yukon Energy's excellent safety record continued in 2011. Yukon Energy employees have worked nearly five years without a lost time incident. This safety record is a testament to our employees' high standard of safe work practices.

The final phase of the implementation of the Certificate of Recognition (COR) requirement for contractors will take effect July 1, 2012. After that date, any contractor bidding on construction work for us will need to provide proof of COR as a tendering or bidding requirement.

Also in 2012, Yukon Energy will be required to undergo an independent external maintenance audit. This audit is a requirement of the COR program. The COR is issued to employers who develop and implement health and safety programs that meet established standards set out by the Northern Safety Network and the Yukon Workers' Compensation Health and Safety Board.

Construction projects were the main focus of our safety field work in 2011. There were no serious injuries on the Mayo B project, Yukon Energy's largest capital project this year.

### Wellness Program

Yukon Energy recognizes the benefits of a healthy workforce and we promote a healthy and active lifestyle for our employees. In 2011, more than 52 percent of the employees used the company's wellness subsidy program. That's a 20 percent increase from 2010.

### Safety Video

Every year in Canada there are more than 1,000 contacts with energized high voltage power lines (with vehicles, heavy equipment, trees, etc.). Incidents of break-ins at

electrical substations are also fairly common. In both cases, first responders such as the RCMP, fire department, or ambulance attendants are called. If these first responders are not aware of the dangers of energized power lines, they could be seriously injured or killed.

This is why Yukon Energy, along with a number of other electrical utilities, partnered with the Canadian Electricity Association in 2011 to produce a safety DVD called *Electricity: the Invisible Killer*. Yukon Energy distributed the DVD to first responders throughout the territory.

### Public Safety Campaigns

Yukon Energy's Whitehorse Rapids hydro dam is located within city limits and in the heart of a popular recreational area used by runners, hikers, kayakers and dog walkers. Because of this, public safety is a priority for us. As in previous years, we ran an annual media campaign in 2011 that warned people of the dangers of being near a hydro dam. In addition, we continued to distribute a safety booklet aimed at elementary school children. The booklet focuses on the importance of taking care when playing or recreating near or on water that is close to our hydro facilities.

The boat lock at Yukon Energy's Lewes dam is frequently used by travellers on the Yukon River. In 2011 we produced a short video on how to safely and correctly use the lock. The video is accessible through our website and our newly established YouTube channel. We also gave an evening workshop so members of the public could receive personal instruction on using the boat lock.



Balancing Yukon's energy needs with a commitment to environmental stewardship.

Photo: archbould.com | Shannon Mallory taking water samples.

## Protecting Our Environment

Yukon Energy is proud of our commitment to environmental stewardship and biodiversity. We are a member of the Canadian Electricity Association (CEA) and as such we actively participate in the CEA's Sustainable Electricity Program.

Yukon Energy recognizes that in providing services and products to Yukoners, there will always be environmental impacts. Our goal is to balance the need for safe, reliable, and affordable energy with that of meeting Yukoners' energy requirements without significant adverse effects to the environment or the people and animals that depend on that environment.

### Fish and Fish Habitat Protection

In cooperation with our partner the Yukon Fish and Game Association, we maintain one of the world's

longest fishladders. It not only provides passage for migrating Chinook salmon beyond the Whitehorse dam, but offers opportunities for scientific and cultural information gathering and sharing. Last year, 1,534 salmon passed through the ladder, compared to 672 in 2010.

Yukon Energy, in partnership with the Yukon government, operates an important fish hatchery on the Yukon River in Whitehorse. For the third year in a row, the hatchery was able to support a Ta'an Kwäch'än First Nation initiative to re-introduce Chinook salmon to Fox Creek by providing salmon eggs for the program.

In 2012, Yukon Energy will evaluate the potential to participate in salmon habitat enhancement activities with the Carcross/Tagish First Nation.

Yukon Energy, in cooperation with the First Nation of Na-Cho Nyak Dun, has two fish and fish habitat enhancement studies underway that will continue in 2012 on the Mayo River.

As part of the Mayo B project, a salmon rearing channel will be constructed on the Mayo River in 2012. The nearly 1,000 metre long channel will provide high quality rearing habitat for juvenile Chinook salmon as well as resident fish species throughout the year.

## Climate Change

During the summer of 2011, Yukon Energy hired scientists from the Northern Climate Exchange at Yukon College to gather information on the expected impacts of climate change on the glaciers that feed our hydro systems. We also asked them to make recommendations about what we should do to better prepare for any changes in flow from glaciers.

The scientists gathered information through satellite and aerial photographs and verified it through work on the ground. They then compared it with historical data. They will submit their report to us in 2012.

Some of our staff also received training this year that will help them better understand climate change science, and provide them with tools that can be used when doing current and future resource planning.

In 2012, we will begin a three-year study that looks in more detail at the effects of climate change on the Southern Lakes area. Partners for this project include Yukon College's Northern Climate Exchange, the University of Alberta and the Yukon Geological Survey.

## GHG Emission Reductions

Yukon Energy is committed to managing greenhouse gas (GHG) emissions to mitigate the impact of our operations on climate change, while adapting to its effects.

Some of our 2011 initiatives aimed at minimizing greenhouse gas emissions included:

- Completion of Stage 2 of the Carmacks-Stewart transmission line project;
- Completion of the Aishihik third turbine project;
- Completion of a pilot energy efficiency program with light-emitting diode (LED) streetlights in Dawson City; and
- Continuing to research renewable alternative energy supplies with low carbon footprints to offset diesel generation (e.g., geothermal, wind, hydro-enhancements).

## Engaging Yukoners

As part of our priority to engage Yukoners, we are changing the way we involve First Nations and other local governments, stakeholders and the Yukon public in our project-specific and longer term resource planning.

Previously, public involvement began once a decision was made to move forward on a specific project or a resource plan was finalized and ready for filing with the Yukon Utilities Board.

It is now corporate practice to engage Yukoners at the concept stage of a project so that we can all work together to identify issues, research priorities and opportunities for project collaboration.

### Energy Charrette

One of the first concrete examples of this approach was a three-day charrette we hosted in March 2011. Close to 100 Yukoners, along with national and international energy experts, came together to talk about how to meet the territory's future energy needs. The purpose of the charrette was to educate the participants, help inform Yukon Energy's updated 20-Year Resource Plan, develop guiding principles for energy decision making and to find out how Yukoners want to be involved in planning Yukon's energy future. We also held discussions in three rural Yukon communities, and input from those meetings was included as part of the charrette process.

That event was followed up by a series of one-day workshops that focused on individual energy options identified at the March charrette as having the most potential for the territory. There were two such workshops in 2011: one on waste-to-energy and the other on biomass, with more planned for 2012.

### 20-Year Resource Plan Update

As was mentioned in the previous section, Yukon Energy is in the midst of revising our 20-Year Resource Plan, last updated in 2006. We are using the early engagement approach in developing this document. The energy charrette and subsequent workshops have provided a great deal of fodder in helping us with this plan. A draft is expected to be ready for public review and input in the first half of 2012. Once it is finalized it will be filed with the Yukon Utilities Board for review.

### Public Opinion Surveys

As part of Yukon Energy's ongoing public education work, we completed another set of public and stakeholder opinion surveys in 2011. (The first survey was done in June 2010.) The initial surveys were designed to find out what Yukoners knew and believed about the Corporation. The findings helped us design a public awareness campaign to give people a better understanding about Yukon Energy, what we are trying to achieve, and why.

Following the campaign, a second round of phone and internet surveys was done to gauge whether the public's knowledge about Yukon Energy had changed. The results indicated an increased awareness about energy issues, specifically about Yukon Energy's operations. However, there was a slight decline in the level of confidence that Yukon Energy could effectively plan and develop



We engage Yukoners at the concept stage of a project to identify issues, research priorities and discover opportunities for further collaboration.

Photo: archbould.com

clean energy sources for future needs. In response, we developed a public information campaign to provide concrete information about the work we are doing to find new clean energy sources. That campaign will continue into 2012, and when it concludes more public surveys will be done to measure the impact.

### Project-specific Public Information

To help keep the public up to date on specific projects and concepts that Yukon Energy is undertaking, the Corporation held several public meetings and/or open houses in 2011 in the communities of Marsh Lake, Tagish, Mayo and Whitehorse. This is in addition to a Yukon-wide community tour we undertook with the Yukon Electrical Company Limited and the Ottawa-based organization One Change to talk about developing energy conservation programming for the territory.

Yukoners were provided with regular updates on all our major projects via several newsletters that were distributed to households and posted on our website, as well as a series of videos we produced and posted on YouTube, our website, and our social media sites. Frequent project updates were also provided on our blog, Twitter, and Facebook.

At spring meetings held in the Southern Lakes communities, Yukon Energy took the opportunity to update the public on what we expected peak summer water levels would be. The information is useful to residents because it assists them in preparing their properties for possible flooding in high water years. *Note that 2011 was not a high water year.*

Public awareness, consultation, and engaging stakeholders in planning is key to our electricity future.

In addition to the public meetings, Yukon Energy provided regular summer water level updates to Tagish and Marsh Lake residents via email, posters, and our website and blog.



Photo: archbould.com | Energy Charrette

## Here is what some of the charrette participants said about the process:

“In my opinion, the Yukon Energy Charrette has been a huge success and is a fantastic starting point in terms of facing our present and future energy challenges.”

– **Katie Peters**, Grade 11 student

“Yukon Energy is the new benchmark in effective public consultation. Energy is the number one issue facing Yukon and Yukon Energy engaged the public in a meaningful way to communicate the challenges and options. They demonstrated that they were listening and have earned lots of trust by acting on that input and continuing to maintain that relationship.”

– **Sandy Babcock**, Yukon Chamber of Commerce president

“The Yukon Energy Charrette was a good learning opportunity for many Yukoners. Participants have gone out into the community with their new-found knowledge and shared information about complex (energy) issues. I feel there is a greater understanding and appreciation for the process that Yukon Energy has to undertake when juggling the competing priorities and the struggle to come to the best decisions.”

– **Sally Wright**, Kluane Lake, Yukon



Photo: Justin Kennedy | Taking the energy conservation message to Old Crow

## Building Partnerships with First Nations

Yukon Energy believes in building enduring business partnerships with local First Nations for energy projects. We devoted considerable time in 2011 to develop a comprehensive plan to engage Yukon First Nations on renewable energy projects within their traditional territories.

### First Nations Energy Forum

Partnering with the Yukon Indian Development Corporation and the Council of Yukon First Nations, we held a two-day First Nations energy forum, which brought together representatives from First Nation governments and development corporations, along with other interested parties, to explore business opportunities in clean energy.

There was great discussion and a general agreement that this forum was a good first step. There was a request for continued dialogue and sharing of information on the topic of energy in the territory, and an overall sense that First Nation governments and development corporations are interested in exploring potential energy-related projects that would be a good investment for them.

### Protocol Agreements

In 2010, we began a process aimed at reaching protocol agreements with a number of local First Nation governments and their development corporations. The purpose of the agreements is to provide a framework for us to work on energy development in a collaborative and respectful manner. In 2011, we signed agreements with several First Nations, including members of the Kaska Dena Nation and the Champagne and Aishihik First Nations.

Yukon Energy will continue to pursue this in 2012.

## Supporting Our Communities

While Yukon Energy's primary job is to ensure a secure and sustainable energy future, we also feel a responsibility to help Yukon communities be as strong and healthy as possible.

That's why each year we give some of our profits to local organizations. In 2011, we donated approximately \$75,000 to more than 30 community groups. The list covered everything from sports and recreation, the arts, education, and health and social services. Here are just a few examples of the types of organizations that we help.

### Whitehorse Food Bank

Yukon Energy is a fervent supporter of the Whitehorse Food Bank, a facility that assists hundreds of needy Yukoners. 2011 was the fourth year in a row that Yukon Energy contributed financially to the organization.

### Mae Bachur Animal Shelter

Yukon Energy has supported the Mae Bachur Animal Shelter for several years. However, in 2011 we tried something a little different. We invited members of the public to "like" our Facebook page. For every new "like" we promised to donate a dollar to the shelter. Our list of Facebook friends grew from fewer than 100 to more than 1,500, and in the process we were able to provide some much needed assistance to the animal shelter.

### Skills Competition

Trades and technologies are crucial to our business. That's why we are happy to support Skills Canada Yukon's skills competitions. The territorial competitions are held every two years. This year's event took place in April in Whitehorse.

### Available Light Film Festival

This winter film festival is a popular event; thousands of people turn out each year to view quality movies from all over the world. For the past three years Yukon Energy has been the co-presenter of the festival along with the Yukon Film Society.

### Yukon Energy Klondike Heat Battle

Once again in 2011, Yukon Energy was the presenting sponsor for this annual event organized and hosted by Breakdancing Yukon. This dance competition drew some of the best b-boys and b-girls from Yukon and across Canada. The weekend included demonstrations, competitions (battles), and dance challenges. It was pure fun and entertainment for both the participants and audience members.

### Scholarships

Again this year, Yukon Energy offered several scholarships for pre-apprenticeship as well as post-secondary programs. In total, scholarships were given to 11 deserving post-secondary students in 2011.

Photo: archbould.com | Mae Bachur Animal Shelter



## School/Public Tours

Yukon Energy believes in the importance of educating tomorrow's generation about electrical production, energy conservation and electrical safety. To this end we offered numerous school tours in 2011 of our Whitehorse hydro plant, wind energy production site, and fishladder.

## Yukon Sustainable Community Award

Five years ago, Yukon Energy entered into a partnership with the Association of Yukon Communities to recognize leadership in sustainable community development. Each year we present an award to an individual or group for a project that demonstrates environmental sustainability. In 2011, the award went to the City of Whitehorse, for broadening its purchasing practices to incorporate sustainability considerations.

## Swan Cam/Fish Cam

One of the first signs of spring in Yukon is the return of the swans and other waterfowl, as they head to their nesting grounds further north. The birds gather by the hundreds at M'Clintock Bay on Marsh Lake in the southern Yukon. The bay is the first open water in the region and offers the birds easy access to food.

Each spring Yukon Energy sets up a webcam so that people can view the waterfowl in real time via their computers. The public response has been very favourable, with people from all over the world going online to see the swans.

Later in the season the web cam is moved to our Whitehorse Rapids Fishladder so that people can view the migrating Chinook salmon as well as the various species of freshwater fish that travel up and down the ladder.



Photo: Justin Kennedy | Whitehorse Rapids Fishladder

Research has shown that Yukoners are passionate about engaging in conversation about energy conservation.

## Board of Directors and Corporate Governance

The Board of Directors at Yukon Energy oversees the conduct of business and supervises the President and Chief Executive Officer, who is in turn responsible for the day-to-day operations at Yukon Energy along with the Senior Management team.

The Board models its approach to corporate governance on best practices in Canada and abroad, as reflected in the advice and recommendations of bodies such as the Conference Board of Canada.

### Board of Directors' Appointments

Section 3(1) of the *Yukon Development Corporation Act Regulations* (OIC 1993/108) sets out the process for being appointed to the Yukon Energy board. The Board of the Yukon Development Corporation (YDC) is appointed by the Yukon government, and in turn, the YDC board appoints the board of Yukon Energy.

One new person joined Yukon Energy's Board in 2011. We welcome Jason Bilsky, who joined the board in January. Our other board members include Chair Piers McDonald, Paul Birkel, Justin Ferbey, Judy Gingell, Pat Irvin, Luke Johnson and Diane Lister.

### Remuneration

Remuneration for Yukon Energy board members has been benchmarked against two Conference Board of Canada reports entitled *Compensation of Boards of Directors 2003* and *Compensation of Board of Directors 2005*. Yukon Energy's board remuneration has also been benchmarked against the Conference Board's report *Board Practices in Crown Corporations 2008*.

The Board Chair is paid \$400 per half day meeting (four hours or less) and \$800 for a full day meeting (more than four hours). In addition, he is paid for a full day (\$800) to prepare for each board meeting.

Board members receive \$200 per half day meeting, and \$400 per full day meeting, plus they receive a full day's remuneration (\$400) for meeting prep time.

There are three committees that fall under Yukon Energy's board: the Audit, Governance, and the Human Resources committees. Committee Chairs are paid \$300 per half day meeting and \$600 per full day meeting, with one day (\$600) of prep time per committee meeting.

Committee Members receive \$200 per half day meeting and \$400 per full day meeting. They do not receive remuneration for prep time.

### Code of Conduct

Yukon Energy has a Code of Conduct to which all Board members are expected to adhere. A copy of the policy can be found on our web site at [yukonenergy.ca/about/profile/board/](http://yukonenergy.ca/about/profile/board/).

### ATIPP Legislation

Yukon Energy is now subject to the Yukon government's *Access to Information and Protection of Privacy Act*. The legislation is intended to protect the privacy of individuals who provide information to government. It also offers the public a formal method for requesting information if they are denied access to it by an organization and as such is a method used once other informal avenues have been exhausted.

Openness and transparency are important to Yukon Energy, and as a result, we already provide a great deal of information on our website. More information about the Corporation can be found on the Yukon Utilities Board, Yukon Environmental and Socio-economic Assessment Board and the Yukon Water Board websites.



Photo: archbould.com | Energy Charrette

## Senior Management

**David Morrison**  
President and C.E.O.

**Hector Campbell**  
Director, Resource Planning  
& Regulatory Affairs

**Linda Greer**  
Director, Human Resources  
& Information Management

**Lawrence Joudry**  
Director, Engineering Services  
& Operations

**Ed Mollard**  
Chief Financial Officer

**Shelley Dixon**  
Corporate Secretary



Photo: archbould.com | First Nations energy forum

## Management Discussion and Analysis

The Management Discussion and Analysis (MD&A) reports on the financial results of the corporation for the year ended December 31, 2011. It should be read in conjunction with the audited financial statements and notes that accompany this report.

As a territorial-owned corporation, Yukon Energy's mandate is to provide a continuous supply of electricity to meet the energy needs of consumers in Yukon. Yukon grids are not connected to other jurisdictions and Yukon Energy is the prime generator and transmitter of electrical energy in the territory.

### Financial Overview

Net income from all sources in 2011 was \$4.9 million (2010 – \$4.8 million) which translates to a return on equity of 6.6 percent (2010 – 7.5 percent). Analysis of these results by income statement category follows.

### Revenue

Revenue from electricity sales totaled \$34 million (2010 – \$32.2 million) which was over four percent higher than budgeted volumes. Wholesale sales, representing about 79 percent of sales volumes, were about \$24.2 million of the total, a 4.9 percent increase over 2010.

During 2011, Secondary Sales were unavailable due to a lack of surplus hydro generation (with the exception of a few weeks in fall).

In the Industrial customer class, 2011 was the first full year of industrial operations for the Alexco resources operation in Keno, Yukon. This allowed sales in this category to exceed 40 GWh for the year.

Other retail sales were fairly flat in terms of growth for the year with total sales volumes about 34.3 GWh for the year (2010 – 34.0).

### Expenses

Despite continued upward pressure on costs, Yukon energy successfully managed operating expenses to within four percent of budget. This result was achieved despite material diesel generation costs in early 2011 brought on by colder than average weather.

## Capital

The 2011 capital program saw the completion of three very significant projects: Mayo B hydro enhancement, Stage 2 of Carmacks to Stewart Crossing Transmission Project and the installation of a third turbine at the Aishihik facility. These projects, at a gross capital cost over \$170 million, will improve reliability of supply and provide the utility with greater flexibility to manage our supply resources. Due to significant contributions from the federal and territorial governments, these projects will only affect the regulated rate base by about \$40 million.

The utility also continued a number of resource option studies aimed at finding the next generation of supply projects. These projects are crucial to ensuring an adequate inventory of cost effective, sustainable, clean and reliable electrical energy.

## Outlook

In 2012, management will continue to pursue new clean energy supply options while ensuring operations are run as cost-effectively as reasonably possible. Despite this, the utility expects to file a general rate application seeking rate increases in 2012 and 2013 to help defray cost increases. This will be the first increase to base rates from Yukon Energy since 1999.

## International Financial Reporting Standards

In early 2008, the Accounting Standards Board (AcSB) announced that publicly accountable entities will be required to prepare financial statements in accordance with International Financial Reporting Standards (IFRS) for annual periods in fiscal years beginning on or after



Photo: archbould.com | Carmacks-Stewart transmission line

January 1, 2011. Since that time, the AcSB has granted two extensions to this deadline, most recently in May 2012. This deferral is offered to qualifying rate-regulated entities as a result by the International Accounting Standards Board to consider adding rate regulation to its agenda in 2012. As this could have a material impact on Yukon Energy's accounting structure, the utility has chosen to accept this deferral.



# Financial Statements

December 31, 2011

Management's Responsibility for Financial Reporting	38
Auditor's Report	39
Balance Sheet	41
Statement of Operations, Comprehensive Income and Retained Earnings	42
Statement of Cash Flows	43
Notes to Financial Statements	44

## Management's Responsibility for Financial Reporting

Management is responsible for the preparation of the financial statements and all other financial information relating to the Corporation contained in this annual report. The financial statements have been prepared in conformity with Canadian generally accepted accounting principles using methods appropriate for the industry in which the Corporation operates and necessarily include some amounts that are based on informed judgments and best estimates of management. The financial information contained elsewhere in the annual report is consistent with that in the financial statements.

Management has established internal accounting control systems to meet its responsibilities for reliable and accurate reporting. These systems include policies and procedures, the careful selection and training of qualified personnel and an organizational structure that provides for the appropriate delegation of authority and segregation of responsibilities.

The Board of Directors, through its Audit Committee, oversees management's responsibilities for financial reporting. The Audit Committee meets regularly with management and the independent auditor to discuss auditing and financial matters to assure that management is carrying out its responsibilities and to review the financial statements. The auditors have full and free access to the Audit Committee and management.



David Morrison,  
President and CEO



Ed Mollard  
Chief Financial Officer

May 9, 2012



## INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of Yukon Energy Corporation

### Report on the Financial Statements

I have audited the accompanying financial statements of Yukon Energy Corporation, which comprise the balance sheet as at 31 December 2011, and the statement of operations, comprehensive income and retained earnings and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### *Auditor's Responsibility*

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

#### *Opinion*

In my opinion, the financial statements present fairly, in all material respects, the financial position of Yukon Energy Corporation as at 31 December 2011, and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.



## Report on Other Legal and Regulatory Requirements

In my opinion, the transactions of Yukon Energy Corporation that have come to my notice during my audit of the financial statements have, in all significant respects, been in accordance with the *Public Utilities Act* and regulations, the *Business Corporations Act* and regulations and the articles and by-laws of the Yukon Energy Corporation.

A handwritten signature in black ink that reads "Terrance DeJong".

Terrance DeJong, CA  
Assistant Auditor General  
for the Auditor General of Canada

9 May 2012  
Edmonton, Canada

## Yukon Energy Corporation

### Balance Sheet

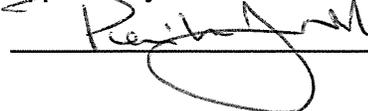
(in thousands of dollars)

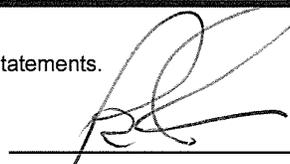
As at December 31,	2011	2010
<b>Assets</b>		
<b>Current</b>		
Cash (note 4)	\$ 7,235	\$ 25,847
Accounts receivable (Note 5)	25,577	29,242
Materials and supplies	2,830	2,648
Prepaid expenses	614	368
	<b>36,256</b>	<b>58,105</b>
Customer contribution financing (Note 6)	-	17,424
Deferred uninsured losses (Note 7)	576	432
Diesel contingency fund (Note 8)	902	891
Property, plant and equipment (Note 9)	374,591	287,350
Deferred charges and intangible assets (Note 10)	24,240	18,963
	<b>\$ 436,565</b>	<b>\$ 383,165</b>
<b>Liabilities</b>		
<b>Current</b>		
Bank indebtedness (Note 11)	\$ 5,540	-
Accounts payable and accrued liabilities (Note 12)	28,031	16,859
Construction financing (Note 13)	13,905	47,500
Current portion of long-term debt (Note 16)	4,974	3,864
	<b>52,450</b>	<b>68,223</b>
Faro mine dewatering deferral revenue (Note 14)	397	397
Long-term pension liability (Note 22)	1,137	1,035
Contributions in aid of construction (Note 15)	173,566	140,686
Regulatory provision for future removal and site restoration costs	4,711	4,764
Diesel contingency fund (Note 8)	902	891
Long-term debt (Note 16)	120,190	101,449
	<b>353,353</b>	<b>317,445</b>
<b>Shareholder's Equity</b>		
<b>Share capital</b>		
Authorized: Unlimited number of a single class of shares with no par value		
Issued: 3,900 shares	39,000	39,000
Contributed surplus (Note 17)	14,600	-
Retained earnings	29,612	26,720
	<b>83,212</b>	<b>65,720</b>
	<b>\$ 436,565</b>	<b>\$ 383,165</b>

#### Commitments and Contingencies (Notes 23 and 24)

The accompanying notes are an integral part of the financial statements.

#### Approved by the Board

 \_\_\_\_\_, Chair

 \_\_\_\_\_, Director

## Yukon Energy Corporation

### Statement of Operations, Comprehensive Income and Retained Earnings (in thousands of dollars)

For the year ended December 31,	2011	2010
<b>Revenue</b>		
Sales of power (Note 18)	\$ 34,047	\$ 32,178
Other	496	476
	<b>34,543</b>	<b>32,654</b>
<b>Operating expenses</b>		
Operations and maintenance (Note 19)	10,288	7,899
Administration (Note 20)	8,872	7,938
Amortization of property, plant and equipment	6,013	5,657
Amortization of deferred charges	905	860
Amortization of intangible assets	528	548
	<b>26,606</b>	<b>22,902</b>
<b>Income from operations</b>	<b>7,937</b>	<b>9,752</b>
<b>Other income</b>		
Allowance for funds used during construction	555	514
Amortization of capital assistance	546	378
Interest income	309	1,238
	<b>1,410</b>	<b>2,130</b>
<b>Other expenses</b>		
Interest on borrowings	4,302	7,005
Provision for uninsured losses (Note 7)	100	100
	<b>4,402</b>	<b>7,105</b>
<b>Net income</b>	<b>4,945</b>	<b>4,777</b>
<b>Other comprehensive income</b>	-	-
<b>Comprehensive income</b>	<b>4,945</b>	<b>4,777</b>
<b>Retained earnings, beginning of year</b>	<b>26,720</b>	<b>21,943</b>
<b>Dividend</b>	<b>(2,053)</b>	-
<b>Retained earnings, end of year</b>	<b>\$ 29,612</b>	<b>\$ 26,720</b>

The accompanying notes are an integral part of the financial statements.

**Yukon Energy Corporation**  
**Statement of Cash Flows**  
(in thousands of dollars)

For the year ended December 31,	2011	2010
<b>Operating activities</b>		
Cash receipts from customers	\$ 34,511	\$ 32,679
Cash paid to employees and suppliers	(17,208)	(5,923)
Interest paid	(3,558)	(7,005)
Interest received	309	1,616
<b>Cash provided by operating activities</b>	<b>14,054</b>	<b>21,367</b>
<b>Financing activities</b>		
Receipt of construction financing	20,000	47,500
Repayment of short-term financing	-	(25,000)
Repayment of long-term debt	(21,197)	(4,139)
Contributions in aid of construction	38,358	61,813
<b>Cash provided by financing activities</b>	<b>37,161</b>	<b>80,174</b>
<b>Investing activities</b>		
Additions to property, plant and equipment	(86,334)	(79,505)
Additions to deferred charges and intangible assets	(6,457)	(6,920)
Repayment of long-term receivable	17,424	-
<b>Cash used in investment activities</b>	<b>(75,367)</b>	<b>(86,425)</b>
<b>Net increase (decrease) in cash</b>	<b>(24,152)</b>	<b>15,116</b>
<b>Cash, beginning of year</b>	<b>25,847</b>	<b>10,731</b>
<b>Cash end of year</b>	<b>\$ 1,695</b>	<b>\$ 25,847</b>
Cash includes:		
Cash (Note 4)	7,235	25,847
Bank indebtedness	(5,540)	-
<b>Total</b>	<b>1,695</b>	<b>25,847</b>

The accompanying notes are an integral part of the financial statements.

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# Yukon Energy Corporation

## Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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### 1. NATURE OF OPERATIONS

Yukon Energy Corporation (the "Utility") is incorporated under the Yukon *Business Corporations Act* and is a wholly-owned subsidiary of Yukon Development Corporation (YDC), a corporation owned by the Government of Yukon (YG). Yukon Energy Corporation generates, transmits, distributes and sells electrical energy in the Yukon. The Utility is not subject to income taxes.

The Utility is subject to overall regulation by the Yukon Utilities Board ("YUB") and specific regulation by the Yukon Territory Water Board. Both boards are independent from the Utility.

#### Rate regulation

The operations of the Utility are regulated by the YUB pursuant to the *Public Utilities Act*. There is no minimum requirement for the Utility to appear before the YUB to review rates. However, the Utility is not permitted to charge any rate for the supply of power that is not approved by an Order of the YUB. The Utility is subject to a cost of service regulatory mechanism under which the YUB establishes the revenues required (i) to recover the forecast operating costs, including depreciation and amortization, of providing the regulated service, and (ii) to provide a fair and reasonable return on utility investment in rate base. As actual operating conditions may vary from forecast, actual returns achieved can differ from approved returns.

The regulatory hearing process used to establish or change rates typically begins when the Utility makes an application for its proposed electricity rate changes over the next one or two forecast years. The YUB must ensure that its decision, which fixes electricity rates, complies with appropriate principles of rate making, all relevant legislation including the *Public Utilities Act* and directives issued by the Yukon Government through Orders-In-Council that specify how the interests of the customer and Utility are to be balanced.

The YUB typically follows a two-stage decision process. In the first stage, the total costs that the Utility will incur to provide electricity to its customers over the immediate future are reviewed and approved. The approval of these costs determines the total revenues the Utility is allowed to collect from its customers. It is the responsibility of the YUB to examine the legitimacy of three classes of costs:

- the costs to the Utility to run its operations and maintain its equipment (personnel and materials);
- the cost associated with the amortization of all capital equipment; and
- the return on rate base (the borrowing costs related to borrowing that portion of the rate base which is financed with debt plus the costs to provide a reasonable rate of return on that portion of the rate base which is financed with equity).

The YUB assesses the prudence of costs added to rate base, which includes an allowance for funds used during construction (AFUDC) charged to capital projects. The YUB also reviews the appropriateness of asset depreciation rates, which are periodically updated by the Utility through depreciation studies.

In the second stage, the YUB approves how the revenue will be raised. This stage essentially determines the electricity rates for the various customer classes in the Yukon: residential, government, commercial and industrial. This process is guided mainly by requirements of Yukon Government Order-in-Council 1995/90 and can include a cost-of-service study which allocates the Utility's overall cost of service to the various customer classes on the basis of appropriate costing principles.

Normally, the Utility applies for rates in advance of the applicable years (Note 28).

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# Yukon Energy Corporation

## Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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### 1. NATURE OF OPERATIONS - continued

#### Water regulation

The Yukon Territory Water Board pursuant to the *Yukon Waters Act* decides if and for how long the Utility will have a water license for the purposes of operating hydro generation stations in the Yukon. The licenses will also indicate terms and conditions for the operation of these facilities.

#### Capital structure

The Utility's policy is to maintain a capital structure of 60% debt and 40% equity at year end. Annual dividends are declared to the parent and typically loaned back in order to maintain this ratio during normal on-going operations. When large assets are purchased or constructed, the parent may be required to make an equity contribution.

### 2. SIGNIFICANT ACCOUNTING POLICIES

#### Financial statement presentation

The financial statements of the Utility have been prepared by management. They conform to Canadian generally accepted accounting principles ("GAAP") and take into account generally accepted methods and practices of regulated bodies. The regulatory accounting policies adopted by the Utility differ from the accounting policies prescribed by using GAAP. In particular, the timing of the Utility's recognition of certain assets, liabilities, revenues and expenses as a result of regulation differ from that of a non-regulated enterprise. The impact on the financial statements of accounting for rate regulated operations are further described in Note 3. The significant accounting policies have been classified accordingly in the notes below:

#### Rate regulated accounting policies

##### Allowance for funds used during construction

The cost of the Utility's property, plant and equipment and deferred charges includes an allowance for funds used during construction (AFUDC) as allowed by the regulator. In prior years, the AFUDC rate estimate was based on the Utility's weighted average cost of capital (which included a cost of debt component and a return on equity component). In 2011 management revised its AFUDC rate estimate to remove the return on equity component and calculated the estimate based on the Utility's weighted average cost of debt. This change in estimate was applied prospectively effective January 1, 2011. The AFUDC rate estimate was 4.483% for 2011 (2010 - 7.09%).

##### Property, plant and equipment

The gain or loss on the disposal or retirement of property, plant and equipment, with the exception of land and vehicles, is deferred and amortized over the remaining expected useful lives of the assets.

##### Faro mine dewatering deferral revenue

Faro mine dewatering deferral revenue represents amounts ordered by the YUB to be held by the Utility on behalf of ratepayers. The YUB has sole discretion to direct disposition of these funds, typically through refunds to customers or applied to ratepayer deficits.

##### Deferred uninsured losses

The Utility maintains a regulatory account for recording uninsured losses. An annual provision is approved by the YUB and collected through customer rates. Variances between the approved annual provision and actual costs incurred are deferred until the following general rate application or until a specific application is made to the YUB requesting recovery from or refund to customers.

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 2. SIGNIFICANT ACCOUNTING POLICIES - continued

##### **Regulatory provision for future removal and site restoration costs**

The Utility maintains a provision for the future removal of property, plant and equipment and the costs of site restoration related to those assets. Per YUB Order 2005-12 no additional provision is permitted. This account provides for the costs of demolishing, dismantling, tearing down, or otherwise disposing of an asset and any site restoration costs, net of actual recoveries. This account is not used when the costs relate to an asset retirement obligation.

##### **Deferred charges**

Deferred charges are recorded at cost and include an AFUDC component as allowed by the regulator.

All deferred charges are amortized to earnings on a straight-line basis over terms approved by the YUB.

Cost of feasibility studies and infrastructure planning which did not result in a capital project are amortized over terms ranging between five and ten years.

IFRS costs are associated with the accounting conversion from Canadian Generally Accepted Accounting Principles to International Financial Reporting Standards.

Deferred customer service costs are amortized over twelve years.

The deferred hearing cost account is used to record the deferral of costs associated with preparation and defense of applications to the YUB. The periods of amortization range from 10 to 45 years.

##### **Deferred insurance proceeds**

Deferred insurance proceeds represents a gain on fire insurance proceeds received related to a fire at the Whitehorse Rapids Generating Station in 1997. The proceeds are being amortized to income on the same basis as the replacement assets.

##### **Diesel contingency fund**

The Utility maintains an asset and an offsetting liability on behalf of ratepayers. The fund is used to reimburse costs associated with diesel generation required when there is not sufficient water for hydraulic generation to meet demand. The Utility is required to file an annual report with the YUB on the fund's activity.

##### **Generally Accepted Accounting Principles**

###### **Materials and supplies**

Diesel fuel, materials and supplies are recorded at the lesser of average cost and net realizable value. Obsolete materials and supplies are recorded at salvage value in the period when obsolescence is determined. Major spare parts are recorded in the Utility's books as property, plant and equipment.

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# Yukon Energy Corporation

## Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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### 2. SIGNIFICANT ACCOUNTING POLICIES - continued

#### Property, plant and equipment

Property, plant and equipment is stated at cost and includes an AFUDC component which is recorded under rate regulated accounting. Cost includes materials, direct labour, applicable actual directly attributable administration overhead, and, if applicable, direct finance charges capitalized during construction, less accumulated amortization. Amortization is based on the straight-line method over the estimated economic life of the assets as follows:

Generation	
Hydro-electric plants	30 to 65 years
Diesel plants	25 to 45 years
Wind Turbines	30 years
Transmission	40 to 50 years
Distribution	30 to 40 years
Buildings	20 to 40 years
Transportation	9 to 31 years
Other equipment	5 to 20 years

#### Asset retirement obligations

On an annual basis, the Utility identifies legal obligations associated with the retirement of tangible long-lived assets. Where a reasonable estimate of the fair value of these obligations can be determined, the total retirement costs are to be recorded as a liability at fair value, with a corresponding increase to property, plant and equipment. The Utility has determined that it has tangible long-lived assets with associated future legal obligations for retirement. As the Utility anticipates using the assets for an indefinite period, the date of removal of these assets cannot be reasonably determined, and therefore an asset retirement obligation has not been recorded. When the timing and amount of the retirement can be reasonably estimated, an asset retirement obligation and the corresponding increase in property, plant and equipment asset will be recognized.

#### Contributions in aid of construction

Certain property, plant and equipment additions are made with the assistance of cash contributions from customers or capital assistance from the Utility's parent or Government. These contributions are deferred upon receipt and amortized to income on the same basis as the assets to which they relate. Amortization of contributions from customers is netted on the statement of operations against amortization expense while amortization of capital assistance from the parent or Government is disclosed separately under Other income.

#### Deferred licensing costs

Costs related to obtaining license renewals for hydro and diesel generation facilities are deferred and amortized to earnings on a straight-line basis over the term of the license. The Utility operates its hydro generation facilities under separate licenses, with terms ranging from 17 to 25 years. Diesel generation air emission permits have a term of three years. These costs are treated as intangible assets and are measured at initial cost and amortized over the life of the license.

#### Environmental liabilities

Environmental liabilities consist of the estimated costs related to the remediation of environmentally contaminated sites. The Utility will accrue a liability and record an expense, related to present or past activities of the Utility, when there is a legal obligation to remediate the contamination and the costs can be reasonably estimated. If the likelihood of the Utility's obligation to incur these costs is either not determinable or the costs cannot be reasonably estimated, the contingency is disclosed in the notes to the financial statements. The Utility reviews its estimates of future environmental liabilities on an ongoing basis as described in Note 24.

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# Yukon Energy Corporation

## Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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### 2. SIGNIFICANT ACCOUNTING POLICIES - continued

#### Employee pension plan

The Utility sponsors an employee defined benefit pension plan which provides benefits based on the length of service and average salaries for the five highest-paid consecutive years of service. Employees joining the Utility after January 1, 2002 are not eligible to participate in the defined pension plan. Effective January 1, 2011, the Utility also sponsors an executive defined benefit pension plan and supplemental executive retirement plan. The Utility contributes amounts to the pension plans as recommended by an independent actuary.

The cost of pension benefits is actuarially determined using the projected benefits method, prorated on service, and reflects management's best estimates of investment returns, wage and salary increases, and age at retirement. Pension costs include the adjustments resulting from the plan enhancements, actuarial gains and losses, and changes in assumptions which are amortized over the expected average remaining service period of active employees. The excess of the net unrecognized actuarial gains and losses over 10% of the greater of the accrued benefit obligation and the fair value of the plan assets is amortized on a straight-line basis over the expected average remaining service period of active employees, which is currently 9 years for the employee plan (2010 - 9 years) and 5 years for the executive plan. The transitional asset (liability) arising when these policies are first applied is amortized over the average remaining service period of active employees when the amendment is recognized, which is 18 years for the employee plan and 5 years for the executive plan. The expected return on plan assets is based on the fair value of these assets.

#### Revenue recognition

All revenues are recognized in the period earned. Revenue from the sale of power is recognized based on cyclical meter readings. Sales of power includes an accrual for electricity deliveries not yet billed.

#### Measurement uncertainty

The preparation of financial statements in accordance with Canadian GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. This mainly affects revenue, accounts receivable, property, plant and equipment, asset retirement obligations, employee pension obligations and regulated assets and liabilities. Actual results could differ by a significant amount from these estimates.

Management's estimates and assumptions, especially those affecting the reported amounts of regulated assets and the Utility's ability to recover the cost of these assets through future rates, are subject to decisions of the Yukon Utilities Board as described in Note 3.

### ACCOUNTING CHANGES

#### Future Accounting Changes

Publicly accountable enterprises are required to move from Canadian Generally Accepted Accounting Principles to International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board (IASB) and adopted by the Canadian Institute of Chartered Accountants, for years beginning on or after January 1, 2011. IFRS uses a conceptual framework similar to Canadian GAAP, but there are significant differences in recognition, measurement and disclosures.

On October 1, 2010, the Canadian Accounting Standards Board (AcSB) issued guidance to allow, but not require, entities with rate regulated activities to defer the transition. The Utility had elected to take this deferral option. In March 2012, the AcSB announced a further one year deferral for qualifying rate regulated entities to January 1, 2013. This further extension is offered in recognition that the IASB may choose to include rate-regulated activities on its future agenda. The Utility has chosen to adopt this deferral and continues to monitor the situation.

# Yukon Energy Corporation

## Notes to Financial Statements (tabular amounts in thousands of dollars)

December 31, 2011

### 3. FINANCIAL STATEMENT EFFECTS OF RATE REGULATION

Certain items in these financial statements are accounted for differently than they would be in the absence of rate regulation.

Where regulatory decisions dictate, the Utility defers certain costs or revenues as assets or liabilities on the balance sheet and records them as expenses or revenues on the statement of operations as it collects or refunds amounts through future customer rates. Any adjustments to these deferred amounts are recognized in income in the period that the YUB renders a subsequent decision.

Regulatory assets represent future costs associated with certain revenues, incurred in the current period or in prior periods, which are expected to be recovered from customers in future periods through the rate-setting process. Regulatory liabilities represent future reductions or limitations of increases in revenues associated with amounts that are expected to be refunded to customers as a result of the rate-setting process.

In the absence of rate regulation the Utility's net income would have decreased by \$4,923,000 in 2011 (2010 - decreased by \$6,893,000). The following describes each of the circumstances in which rate regulation affects the accounting for a transaction or event:

	2011	2010	Expected remaining recovery/settlement (years)	For 2011: In the absence of Rate Regulation the Utility's Net Income would have increased (decreased) by:
<b>Regulatory assets:</b>				
Deferred charges (Note 10), net book value				
Feasibility studies and infrastructure planning	\$ 14,884	\$ 11,463	5 to 10	\$ (3,421)
Deferred customer service costs	571	635	10	64
Hearing costs	2,376	1,635	10 to 45	(741)
Dam safety review	95	119	5	24
IFRS planning	566	434	Indeterminate	(132)
Deferred uninsured losses (Note 7)	576	432	Indeterminate	(144)
Diesel contingency fund (Note 8)	902	891	Indeterminate	(11)
	19,970	15,609		(4,361)
<b>Regulatory liabilities:</b>				
Faro mine dewatering deferral revenue (Note 14)	397	397	Indeterminate	-
Deferred insurance proceeds (Note 15)	6,546	6,816	25	(270)
Regulatory provision for future removal and site restoration costs	4,711	4,764	Indeterminate	(53)
Diesel contingency fund (Note 8)	902	891	Indeterminate	11
	12,556	12,868		\$ (312)
Net impact of assets and liabilities	\$ 7,414	\$ 2,741		\$ (4,673)
Impact of other items through Income statement				(250)
Fuel Price Adjustment				(250)
<b>Total effect</b>				<b>\$ (4,923)</b>

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 3. FINANCIAL STATEMENT EFFECTS OF RATE REGULATION - continued

##### Regulatory assets

###### (a) Deferred charges

Deferred charges represent costs which have been deferred and are being amortized over various periods. In the absence of rate regulation, GAAP would require such costs to be recognized as expenses in the year incurred.

###### Feasibility studies and infrastructure planning

The Utility undertakes certain projects whose objective is to determine the feasibility of a range of solutions. While in progress, the costs of these feasibility projects are included in these accounts. As well, if the feasibility project determines there is not a viable solution, these projects are closed out and amortized to income over a prescribed number of years. These values are also included in the feasibility accounts. The cost of feasibility projects that result in a capital project are transferred to the cost of the resultant project. In the absence of rate regulation, expenses in 2011 would have been \$3,421,000 higher (2010 - \$5,263,000 higher expenses).

###### Deferred customer service costs

The costs associated with negotiating terms of service with a new industrial customer. In the absence of rate regulation, expenses in 2011 would have been \$64,000 lower (2010 - \$65,000 lower expenses).

###### Hearing costs

These costs are associated with the YUB regulatory proceedings. The costs consist primarily of various rate and project review proceedings. The Utility is directed to defer and amortize the costs over terms at the discretion of the YUB. In the absence of rate regulation, expenses in 2011 would have been \$741,000 higher (2010 - \$561,000 higher expenses).

###### Dam safety review

The Utility has a program of conducting reviews of the safety of its dams in accordance with standards set by the Canadian Dam Association. External consultants are hired every five years with intermittent costs incurred in the interim periods. These costs are amortized over five years as approved by the Utility's 1991/92 General Rate Application and reconfirmed in YUB Order 2005-12 and YUB Order 2009-8. In the absence of rate regulation, expenses in 2011 would have been \$24,000 lower (2010 - \$119,000 higher expenses).

###### IFRS planning

These costs are associated with the accounting conversion from Canadian Generally Accepted Accounting Principles to International Financial Reporting Standards. In the absence of rate regulation, expenses in 2011 would have been \$132,000 higher (2010 - \$179,000 higher expenses).

###### (b) Diesel contingency fund

The Diesel contingency fund ("DCF") was established by YUB Order 1996-6 through the Negotiated Settlement process. The DCF is administered by the Utility on behalf of the YUB, and as such is recorded as an asset and a liability. The DCF attracts interest based upon short-term bond rates. Any negative balance attracts interest at the lowest short-term borrowing rate available to the Utility through its line of credit.

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 3. FINANCIAL STATEMENT EFFECTS OF RATE REGULATION - continued

##### (b) Diesel contingency fund - continued

Pursuant to YUB order 1996-6, the Utility from time to time is required to transfer amounts to or from the fund it maintains on behalf of ratepayers to reimburse the Utility for costs associated with diesel generation required when there is not sufficient water for hydraulic generation to meet demand. In the absence of regulation, GAAP would have required any interest earned or incurred to be included in the Utility's net income in the year in which they occurred. In the absence of rate regulation, the Utility's income and expenses in 2011 would have been higher by \$11,000 from interest earned on the DCF (2010 - \$4,000 higher income and expenses).

##### (c) Deferred uninsured losses

The YUB has approved the use of a deferral account for uninsured damages and injuries as a means of self-insurance. The account is maintained through an annual provision approved by the YUB. In order to eliminate the deficit rate payers owed as a result of uninsured losses, the Utility was directed by YUB Order 2009-8 to record an annual provision of \$100,000 in 2010 and each subsequent year. In the absence of rate regulation, GAAP would require costs to be expensed as incurred and, therefore, expenses in 2011 would have been higher by \$144,000 (2010 - \$321,000 higher expenses). The period over which the provision will be recovered is dependent on the magnitude of future actual losses incurred and cannot be estimated.

##### Regulatory liabilities

##### (d) Faro mine dewatering deferral revenue

As directed by YUB Order 1998-5, all revenues, less any incremental costs to provide the service, collected from the Faro Mine under Rate Schedule 34 (Faro Mine Firm Shutdown Power) prior to December 31, 2004, were deferred for the benefit of ratepayers pending direction from the YUB. YUB Order 2005-12 confirmed that effective January 1, 2005 the Faro minesite would be charged the General Service-Government rate so there will be no further increases to Faro mine dewatering deferral revenue account.

The period over which the remaining liability will be recognized as revenue for the benefit of ratepayers is dependent on future YUB Board orders and, therefore, cannot be estimated.

##### (e) Deferred insurance proceeds

The deferred insurance proceeds relates to a fire at the Whitehorse Rapids Generating Station in 1997 which, pursuant to YUB Order 2000-3, is being amortized to income at the same rate as the replacement assets. In the absence of rate regulation, GAAP would have required the gain to have been completely recognized as income in the year received. As a result, the Utility's net income in 2011 would have been lower by the amount of the amortization of \$270,000 (2010 - \$270,000 lower).

##### (f) Regulatory provision for future removal and site restoration costs

Pursuant to amortization rates approved by the YUB in the Utility's previous general rate applications the Utility has maintained a reserve for future removal and site restoration costs. As a result of the YUB Order 2005-12, effective January 1 2005, the Utility is required to maintain this reserve as a regulatory provision in addition to any asset retirement obligations. The provision is not to exceed the cumulative value of the provision at December 31, 2004 of \$5,757,000. YUB Order 2005-12 also directs the Utility to notify interveners and interested parties when the balance of the provision reaches \$2,000,000.

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 3. FINANCIAL STATEMENT EFFECTS OF RATE REGULATION - continued

##### (f) Regulatory provision for future removal and site restoration costs - continued

Costs of dismantling capital assets, including site remediation, will be applied to this regulatory liability if they do not otherwise relate to an asset retirement obligation. In a non-regulated industry, future removal and site restoration costs would be limited to asset retirement obligations, and the removal and site restoration costs would be expensed in the year incurred if they did not relate to an asset retirement obligation. In the absence of rate regulation, the Utility's 2011 expense would have been higher by the amount of actual removal and site restoration costs incurred in the year of \$53,000 (2010 expenses - \$244,000 higher).

The period over which the provision will be settled is dependent on the future costs of demolishing, dismantling, tearing down, or otherwise disposing of the asset, and site restoration net of actual recoveries, and is, therefore, indeterminate.

##### (g) Fuel price adjustment

OIC 1998/90 directs the YUB to permit the Utility to adjust electricity rates to reflect fluctuations in the price of diesel fuel. The amount by which actual fuel prices vary from the YUB approved rates is deferred and recovered from or refunded to customers in a future period.

In the absence of rate regulation, GAAP would require that actual diesel fuel expenses be included in the operating result of the year that they are incurred. In 2011, fuel expenses were recovered and consequently higher by \$250,000 (2010 fuel expense lower by \$111,000).

##### Other items affected by rate regulation

The Utility is required under the Public Utilities Act to obtain prior approval from the YUB before making changes to depreciation, amortization, and depletion rates and methods. The YUB permits an allowance for funds used during construction ("AFUDC"). For the year 2010 AFUDC was based on the Utility's weighted average cost of capital. AFUDC is also included in the cost of property, plant and equipment for financial reporting purposes, and is amortized over future periods as part of the total cost of the related asset, based on the expectation that amortization expense, including the AFUDC component, will be approved for inclusion in future customer rates. Because the AFUDC rate for 2010 included a cost of equity component, the amount capitalized in that year exceeds what would otherwise be allowed in the absence of rate regulation. In the absence of rate regulation, revenue for 2010 would be \$112,000 lower. The impact on revenue for 2011 is nil.

It is the Utility's policy to charge to income, in the year of disposal, any gain or loss upon retirement or disposal of land or vehicles. As approved by the YUB, the gain or loss on all other property, plant and equipment is deferred and amortized over the expected life of the remaining pool of similar assets. In the absence of rate regulation, GAAP would require the gain or loss on the disposal or retirement of all property, plant and equipment to be included in income in the period of disposal or retirement.

The Utility's policy of maintaining a constant capital structure of 60% debt and 40% equity is reviewed by the YUB as part of the rate-setting process and in the determination of the return on rate base. In the absence of rate regulation, the Utility would determine the appropriate capital structure solely based on decisions by the Board of Directors of the Utility, which may differ from the current policy.

All amounts maintained as regulatory assets and liabilities are expected to be recovered or settled over the periods noted above. However, there are risks and uncertainties associated with the recovery or settlement related to potential future decisions of the regulator which could result in material adjustments to these assets and liabilities.

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 4. CASH

The cash balance includes an amount of \$7,235,404 (2010 - \$2,691,308) that is restricted for the payment of a contractor holdback.

#### 5. ACCOUNTS RECEIVABLE

	2011	2010
Green Infrastructure Funding (Note 15)	\$ 19,724	\$ 22,757
Wholesale energy sales	2,663	3,015
Retail energy sales	1,528	1,774
Other	1,662	1,696
	<b>\$ 25,577</b>	<b>\$ 29,242</b>

#### 6. CUSTOMER CONTRIBUTION FINANCING

Under the terms of a Power Purchase Agreement with an industrial customer, the Utility agreed to finance the cost of transmission assets built to serve the customer. YDC also loaned the Utility cash in an amount equal to this receivable at substantially the same terms which was recorded as long term debt (see Note 16). During 2011, this financing was paid in full by the industrial customer, and on the same day, the loan owing to YDC was paid in full.

#### 7. DEFERRED UNINSURED LOSSES

	2011	2010
Opening balance	\$ 432	\$ 111
Provision	(100)	(100)
Losses incurred		
Asset replacements	244	421
Closing balance	<b>\$ 576</b>	<b>\$ 432</b>

YUB Order 2009-8 directed the Utility to charge \$100,000 to this provision starting in 2010.

#### 8. DIESEL CONTINGENCY FUND

	2011	2010
Opening balance	\$ 891	\$ 887
Interest	11	4
Closing balance	<b>\$ 902</b>	<b>\$ 891</b>

The annual return on investments for 2011 was 1.21% (2010 - 0.50%). The fair market value of these investments is equal to their carrying amount due to the short term maturity of the investments.

## Yukon Energy Corporation

### Notes to Financial Statements

(tabular amounts in thousands of dollars)

December 31, 2011

#### 9. PROPERTY, PLANT AND EQUIPMENT

	Cost	Accumulated Amortization	2011 Net book Value	2010 Net book Value
Generation	\$ 276,335	\$ 60,374	\$ 215,961	\$ 91,263
Transmission	134,495	18,524	115,971	68,986
Distribution	28,265	9,599	18,666	19,119
Buildings and other equipment	20,327	8,456	11,871	12,071
Transportation	4,578	1,624	2,954	2,946
Land and land rights	1,112	-	1,112	1,114
Construction-in-progress	8,056	-	8,056	91,851
	<b>\$ 473,168</b>	<b>\$ 98,577</b>	<b>\$ 374,591</b>	<b>\$ 287,350</b>

#### 10. DEFERRED CHARGES AND INTANGIBLE ASSETS

	Cost	Accumulated Amortization	2011 Net book Value	2010 Net book Value
Intangible assets:				
Deferred licensing costs	\$ 10,796	\$ 5,049	\$ 5,747	\$ 4,677
Deferred charges:				
Feasibility studies and infrastructure planning	18,046	3,161	14,885	11,463
IFRS planning	566	-	566	434
Hearing costs	4,633	2,257	2,376	1,635
Deferred customer service costs	769	198	571	635
Dam safety review	332	237	95	119
	<b>\$ 35,142</b>	<b>\$ 10,902</b>	<b>\$ 24,240</b>	<b>\$ 18,963</b>

#### 11. BANK INDEBTEDNESS

The Utility has access to a \$10 million line of credit. The account accrues interest on withdrawals at prime rate minus 0.25% per annum. At December 31, 2011, the balance of this line of credit was \$4,782,352 (2010 - \$0).

#### 12. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

	2011	2010
Trade payables	\$ 27,367	\$ 16,263
Employee compensation	219	428
Other	445	168
	<b>\$ 28,031</b>	<b>\$ 16,859</b>

## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

December 31, 2011

#### 13. CONSTRUCTION FINANCING

	2011	2010
Construction financing	\$ 13,905	\$ 47,500
	\$ 13,905	\$ 47,500

Construction financing balances are monies advanced from the parent to assist in the development of Utility infrastructure, primarily the Mayo B Hydro Electric Project and Stage 2 of the Carmacks to Stewart Crossing Transmission Project. Interest on this funding is based on the Bankers Acceptance rate on the date of the cash draws plus 50 basis points. Interest is payable annually at December 31 and at the maturity date.

The Utility received an additional \$20,000,000 in construction financing during the year. The Utility also entered into agreements with YDC, effective December 31, 2011, to roll-over \$38,995,000 of the construction financing into long-term debt - \$17,095,000 term note and \$21,900,000 flexible term note (Note 16). In addition, YDC agreed to convert \$14,600,000 of the construction financing into equity in order to maintain the Utility's capital structure of 60% debt and 40% equity which has been approved by the YUB. The \$14,600,000 equity contribution has been recorded as contributed surplus on the Utility's balance sheet (Note 17).

#### 14. FARO MINE DEWATERING DEFERRAL REVENUE

	2011	2010
Faro mine dewatering deferral revenue account:		
Opening balance	\$ 397	\$ 397
Closing balance	\$ 397	\$ 397

#### 15. CONTRIBUTIONS IN AID OF CONSTRUCTION

			2011	2010
	Gross	Accumulated Amortization	Net	Net
Contributions from Canada (Note 5)	\$ 67,277	\$ 148	\$ 67,129	\$ 32,747
Capital assistance from parent since 1998	68,312	3,022	65,290	65,836
Contributions from customers since 1998	38,893	4,913	33,980	34,623
Pre-1998 contributions	1,739	1,118	621	664
Deferred insurance proceeds	11,602	5,056	6,546	6,816
	\$ 187,823	\$ 14,257	\$ 173,566	\$ 140,686

The Utility has entered into a contribution agreement with the Government of Canada for Green Infrastructure Funding for Stage 2 of the Carmacks to Stewart Crossing Transmission Line and the Mayo B Hydro Enhancement projects. The Utility is entitled to reimbursement of 50% of eligible costs to a maximum of \$71 million during the period May 2009 to March 2012.

The sources of contributions received prior to 1998 were not recorded separately.

## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

December 31, 2011

#### 16. LONG-TERM DEBT

The Utility's long-term debt is summarized as follows:

	2011	2010
<b>Yukon Development Corporation</b>		
\$81,890,873 term note bearing interest at 4.25% repayable in annual installments of \$3,000,000 principal, plus accrued interest with the balance of \$68,890,873 due December 31, 2015	\$ 78,891	\$ -
\$17,095,000 term note bearing interest at 3.69% repayable in annual installments of \$683,800 principal, plus accrued interest, due December 31, 2036	17,095	-
\$21,900,000 flexible term note bearing interest at 5.46% repayable in annual installments of \$336,923 principal, plus accrued interest with the balance of \$8,423,078 due December 31, 2051	21,900	-
\$40,000,000 flexible term note bearing interest at 7% repayable in annual installments of up to \$1,000,000 principal, plus accrued interest and secured by mortgage over specific assets	-	24,111
\$27,313,661 unsecured term note bearing interest at 5.88%, repayable monthly and semi-annual principal payments commencing June 30, 2007 and ending December 31, 2023	-	20,887
\$18,000,000 flexible unsecured term note related to the Mayo to Dawson Transmission Line project bearing interest at 6.55%, repayable in annual installments of \$450,000 principal, plus accrued interest with the balance of \$307,000 due December 31, 2043	-	14,707
\$18,000,000 term note related to the Transmission Line Construction Financing, bearing interest at 6.50%, repayable in variable monthly installments due December 2017	-	17,424
Unsecured advance bearing interest at 3.97%, due one year after demand	2,053	-
Unsecured advance bearing interest at 5.28%, due one year after demand	-	8,214
Unsecured advance bearing interest at 4.65%, due one year after demand	-	3,901
Unsecured advance bearing interest at 6.03%, due one year after demand	-	3,649
Unsecured advance bearing interest at 5.34%, due one year after demand	-	3,583
Unsecured advance bearing interest at 5.40%, due one year after demand	-	2,839
Carried forward to next page	\$ 119,939	\$ 99,315

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 16. LONG-TERM DEBT - continued

The Utility's long-term debt is summarized as follows:

	2011	2010
Carried forward from previous page	\$ 119,939	\$ 99,315
<b>TD Bank</b>		
\$12,400,000 term note bearing interest at 4.02% (2010 - 7.81%) payable in monthly installments of \$94,406 (2010 - \$102,000) interest and principal, with the balance due September 30, 2016. The note is guaranteed by the Yukon Government. The terms of the note were renewed October 3, 2011	4,891	5,724
<b>Carmacks Stewart First Nation Liability</b>		
Long-term liability payable to several First Nations related to the building of the Carmacks Stewart Transmission Line. These are non interest bearing, repayable in varying installments, due in 2028	334	274
	<b>125,164</b>	105,313
Less current portion	4,974	3,864
	<b>\$ 120,190</b>	<b>\$ 101,449</b>

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#### **\$81,890,873 Term note**

On January 1, 2011, the Utility entered into an agreement with YDC to renegotiate terms of all outstanding debt, excluding the term note related to the transmission line construction financing, between the two companies in the amount of \$81,890,873.

#### **\$17,095,000 Term note**

On December 31, 2011, the Utility entered into an agreement with YDC to arrange financing for the purpose of continuing to develop the electrical infrastructure in the Yukon.

#### **\$21,900,000 Flexible Term Note**

The terms of the flexible term note provide for a maximum amount of interest payable within a calendar year, calculated based on the grid generation and purchased power on the electrical grid system connected with the Mayo Hydro Enhancement Project. The amount of interest payable as a result of the interest rate exceeding the maximum interest payable will abate forever.

#### **Unsecured Advance**

The Utility declared a dividend to YDC in the amount of \$2,053,000 (2010 - \$0) and this was loaned back to the Utility at an interest rate of 3.97% in order to maintain the capital structure. This advance is unsecured and due one year after demand.

#### **Long-term debt repayment**

Scheduled repayments for all long-term debt are as follows:

2012	4,974
2013	5,051
2014	5,091
2015	72,024
2016	1,893
Thereafter	36,131
	<b>\$ 125,164</b>

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 16. LONG-TERM DEBT - continued

##### Fair value

Fair value at December 31, 2011 of \$135 million (2010 - \$124 million) for all long-term debt including current portions was estimated using discounted cash flows based on an estimate of the Utility's current borrowing rate for similar borrowing arrangements.

#### 17. CONTRIBUTED SURPLUS

Due to the amount of capital additions during the year, the Utility received an equity contribution of \$14.6 million from YDC in order to maintain its capital structure at 60% debt and 40% equity. The funding for this contribution was sourced from the existing YDC construction financing (Note 13).

#### 18. SALES OF POWER

	2011	2010
Wholesale	\$ 24,170	\$ 23,301
Industrial	4,599	3,311
General service	3,342	3,315
Residential	1,800	1,524
Sentinal and street lights	90	83
Secondary sales	46	644
	<b>\$ 34,047</b>	<b>\$ 32,178</b>

#### 19. OPERATIONS AND MAINTENANCE EXPENSES

	2011	2010
Wages and benefits	\$ 4,005	\$ 3,923
Maintenance		
- hydro, diesel and wind	1,297	1,031
- building and vehicle	1,205	1,011
- lines and substations	898	587
Fuel	2,727	1,189
Water level measurement	156	158
	<b>\$ 10,288</b>	<b>\$ 7,899</b>

## Yukon Energy Corporation

### Notes to Financial Statements

(tabular amounts in thousands of dollars)

December 31, 2011

#### 20. ADMINISTRATION EXPENSES

	2011	2010
Wages and benefits	\$ 4,339	\$ 3,811
General office	1,281	994
Insurance and taxes	1,071	1,078
Information systems	583	733
Training, recruitment and development	459	546
Environmental	325	298
Board of Directors	289	87
Intercompany services	251	252
Regulatory loss	248	58
Material management and contracting	26	81
	<b>\$ 8,872</b>	<b>\$ 7,938</b>

#### 21. RELATED PARTY TRANSACTIONS

The Utility is related in terms of common ownership to all Government of Yukon (YG) departments, agencies and Crown Corporations. Transactions are entered into in the normal course of operations with these entities. All transactions are recorded at the rates set out by the YUB.

Revenue from related parties is included in other revenue on the statement of operations. Interim Electrical Rebate program revenues are received from YDC in accordance with terms established by YG which established the program to protect certain ratepayers by minimizing the impact of rate increases. These revenues are included in the sales of power on the statement of operations.

The following table summarizes the Utility's related party transactions for the year:

	2011	2010
<b>Revenue</b>		
Sales of service to YDC	\$ 231	\$ 236
Program cost reimbursement from YG	100	109
Rate subsidy received from YDC	262	246
<b>Operating expenses</b>		
Payment of interest on borrowings from YDC	\$ 3,961	\$ 6,472
<b>Other receipts</b>		
Project contribution from YDC	\$ 1,300	\$ -
Capital contributions from YDC	-	53,417
Construction financing from YDC	-	47,500
<b>Other payments</b>		
Repayment of principal on borrowings from YDC	\$ 20,424	\$ 3,057
Repayment of short-term financing to YG	-	25,000

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## Yukon Energy Corporation

### Notes to Financial Statements

(tabular amounts in thousands of dollars)

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December 31, 2011

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#### 21. RELATED PARTY TRANSACTIONS - continued

At the end of the year, the amounts receivable from and due to related entities are as follows:

	2011	2010
YDC		
Accounts receivable	\$ 499	\$ 233
Accounts payable	\$ 836	\$ 110
Construction financing	\$ 13,905	\$ 47,500
Current portion of long-term debt	\$ 4,021	\$ 3,056
Long-term debt	\$ 115,918	\$ 96,258
YG		
Accounts receivable	\$ 420	\$ 152

These balances are non-interest bearing and payable on demand except for construction financing and long-term debt.

The Utility also entered into agreements with YDC, effective December 31, 2011, to roll-over \$38,995,000 of construction financing into long-term debt - \$17,095,000 term note and \$21,900,000 flexible term note (Note 16). In addition, YDC agreed to convert \$14,600,000 of the construction financing into equity in order to maintain the Utility's capital structure of 60% debt and 40% equity which has been approved by the YUB. The \$14,600,000 equity contribution has been recorded as contributed surplus on the Utility's balance sheet (Note 17).

In addition, the Utility declared a dividend to YDC in the amount of \$2,053,000 (2010 - nil) and this was loaned back to the Utility at an interest rate of 3.97% in order to maintain the capital structure. This advance is unsecured and due one year after demand.

#### 22. PENSION COSTS AND OBLIGATIONS

An actuarial valuation for funding purposes of the employee defined benefit plan was performed as of January 1, 2010. The next valuation for funding purposes will be conducted as of January 1, 2012. An actuarial valuation for funding purposes of the executive defined benefit plan and supplemental executive retirement plan was performed as of January 1, 2011. The pension costs and obligations are based on the data used in these funding valuations and have been projected to December 31, 2011 in accordance with generally accepted actuarial standards.

The fair value of the plan assets is based on market values as reported by the plans' custodians as at December 31, 2011. The distribution of assets by major asset class is as follows:

	<u>December 31, 2011</u>	<u>December 31, 2010</u>
Equities	45.9%	53.1%
Fixed income securities	43.5%	37.9%
Real estate	10.6%	9.0%

## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

December 31, 2011

#### 22. PENSION COSTS AND OBLIGATIONS - continued

Information about the Utility's defined benefit plans as at December 31, in aggregate, is as follows:

	2011	2010
Accrued benefit obligation determined by actuarial valuation	\$ 13,568	\$ 11,100
Fair value of plan assets	9,665	8,902
Funded status - plan deficit	\$ 3,903	\$ 2,198
Unrecognised amounts:		
- Transitional asset (liability)	(192)	119
- Net accumulated actuarial losses	(2,573)	(1,143)
Accrued benefit liability	\$ 1,137	\$ 1,174
Current portion of accrued benefit liability	\$ -	\$ 139
Long-term portion of accrued benefit liability	1,137	1,035
Accrued benefit liability	\$ 1,137	\$ 1,174
Pension costs	\$ 561	\$ 510
Employer contributions	\$ 596	\$ 508
Employee contributions	\$ 111	\$ 121
Benefits paid	\$ 137	\$ 132
Significant assumptions for employee defined benefit plan:		
Discount rate - accrued benefit obligation	5.25%	5.75%
Discount rate - pension costs	5.75%	6.25%
Expected long-term rate of return on plan assets	6.50%	6.50%
Assumed rate of salary escalation	3.00%	3.00%
Significant assumptions for executive pension plans:		
Discount rate - accrued benefit obligation	4.50%	-
Discount rate - pension costs	5.75%	-
Expected long-term rate of return on plan assets	5.50%	-
Assumed rate of salary escalation	3.50%	-

The accrued benefit liability has been recorded by the Utility and its current portion of \$0 (2010 - \$139,000) is included in accounts payable and accrued liabilities on the balance sheet.

Employees joining the Utility after January 1, 2002 are not eligible to participate in the employee defined benefit plan. The Utility makes contributions to a Registered Retirement Savings Plan ("RRSP") on behalf of these employees and employees hired before January 1, 2002 who belonged to the employee defined benefit plan and elected to opt out of that plan. The RRSP is a defined contribution plan. The costs recognized for the period are equal to the Utility's contribution to the plan. During 2011, these were \$306,000 (2010 - \$289,000).

Total cash payments for employee future benefits for 2011, consisting of cash contributed by the Utility to its funded defined benefit pension plans and cash contributed directly to the RRSP were \$902,000 (2010 - \$681,000).

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 23. COMMITMENTS

##### **Aishihik water licence**

The Yukon Territory Water Board issued a water use license in 2002, valid until December 31, 2019, for the Utility's Aishihik Lake facility. In addition to maintaining a minimum and maximum water level, this license commits the Utility to meet a number of future requirements including:

- a) annual payments of \$25,000 until 2011 for the purpose of construction and maintenance of a heritage camp and delivery of programs at the camp;
- b) Heritage Mitigation Plan. The Utility did not incur expenditures in 2011 on heritage projects and the amount to be expended in the future has not yet been determined; and
- c) annual fish monitoring programs.

Fish monitoring programs are also required under an authorization provided by the federal government Department of Fisheries and Oceans, which is valid until December 31, 2019. The costs of meeting these requirements are accounted for as water licence costs in the year they are paid.

##### **Contractual obligations**

The Utility has entered into contracts to purchase products or services for which the liability has not been incurred as at December 31 2011 as the product or service had not been provided. The total commitments at year end are \$4,356,000 (2010 - \$89,963,000).

#### 24. CONTINGENCIES

##### **Carmacks to Stewart Crossing Transmission Project**

The Utility completed the construction of the Mayo to Dawson City Transmission Line project during 2011. In April 2011, the line construction contractor notified the Utility of a potential claim under the contract alleging increased costs of \$1,800,000 due to scheduling delays and change in scope caused by the Utility. The outcome of the potential claim is not determinable at this time and no amount has been recognized in the financial statements.

#### 25. ENVIRONMENTAL LIABILITIES

The Utility's activities are subject to various federal and territorial laws and regulations governing the protection of the environment or to minimize any adverse impact thereon. The Utility conducts its operations so as to protect public health and the environment and believes its operations are materially in compliance with all applicable laws and regulations.

The Utility has conducted environmental site assessments at all its diesel plant sites. At sites where environmental contamination was found and a legal obligation to remediate the site existed, the Utility has conducted a full remediation. As at December 31, 2011 no new environmental liabilities, for which a legal obligation exists to remediate, have been identified by the Utility. The Utility will continue to use its Environmental Management System to monitor and assess previous and potential existing environmental liabilities on an ongoing basis.

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 26. RISK MANAGEMENT AND FINANCIAL INSTRUMENTS

At December 31, 2011, the Utility's financial instruments included cash, accounts receivable, bank indebtedness, accounts payable and accrued liabilities, construction financing and long term debt. The fair value of cash, accounts receivable, bank indebtedness, accounts payable and accrued liabilities and construction financing approximate their carrying value due to the immediate or short-term maturity of these financial instruments.

The long-term debt is accounted for at amortized cost using the effective interest rate method. The fair value of the long-term debt is estimated by discounting the future cash flows using current rates for debt instruments subject to similar risks and maturities as disclosed in Note 16.

##### **Interest rate risk**

Interest rate risk is the risk that future cash flows or fair value of a financial instrument will fluctuate due to changes in market interest rates. The Utility is not exposed to significant interest rate risk due to its long-term debt having fixed interest rates.

##### **Credit risk**

Credit risk is the risk of failure of a debtor or counterparty to honour its contractual obligations resulting in financial loss to the Utility. The Utility's credit risk is minimal in that its primary customer is a regulated utility.

##### **Liquidity risk**

Liquidity risk is the risk that the Utility will not be able to meet its financial obligations as they fall due. The Utility's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Utility's reputation.

The Utility does not engage in hedging transactions.

#### 27. CAPITAL MANAGEMENT

The Utility's capital is its shareholder's equity which is comprised of share capital, contributed surplus and accumulated funds in the form of retained earnings. The Utility manages its equity by managing revenues, expenses, assets and liabilities to ensure the Utility effectively achieves its objectives while remaining a going concern.

The Utility monitors its capital on the basis of the ratio of total debt to total capitalization. Debt is calculated as total borrowings, which is comprised of long-term debt, including the portion of long-term debt due within one year. Short term debt related to assets under construction at the balance sheet date is excluded from the cost of debt calculation, as the assets are similarly excluded from the determination of rate base. Total capitalization is calculated as total debt plus total shareholder's equity as shown on the balance sheet. The Utility maintains a balance in retained earnings as an indicator of the Utility's equity position.

The Utility has a policy which defines its capital structure at a ratio of 60% debt and 40% equity. This policy has been reviewed and accepted by the YUB.

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## Yukon Energy Corporation

### Notes to Financial Statements (tabular amounts in thousands of dollars)

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December 31, 2011

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#### 27. CAPITAL MANAGEMENT - continued

The table below summarizes the Utility's total debt to total capitalization position:

(thousands of dollars)	2011	2010
Long-term debt due within one year	\$ 4,974	\$ 3,864
Long-term debt	120,190	101,449
Total debt	125,164	105,313
Less debt related to the Transmission Line Construction Financing (Note 16)	-	17,424
Total debt to include in the calculation	\$ 125,164	\$ 87,889
Share capital	\$ 39,000	\$ 39,000
Contributed surplus (Note 17)	14,600	-
Retained earnings	29,612	26,720
Total equity	83,212	65,720
Total capitalization	\$ 208,376	\$ 153,609
Total debt to total capitalization	60 %	57 %

There were no changes in the Utility's approach to capital management during the period.

#### 28. SUBSEQUENT EVENTS

a) Subsequent to the year end, the Utility received a \$10 million short term loan from YDC. The monies were used to finance working capital requirements while the Utility was claiming for cost reimbursement under Federal funding programming for the Mayo B and for Stage 2 of the Carmacks to Stewart Crossing Transmission Line projects.

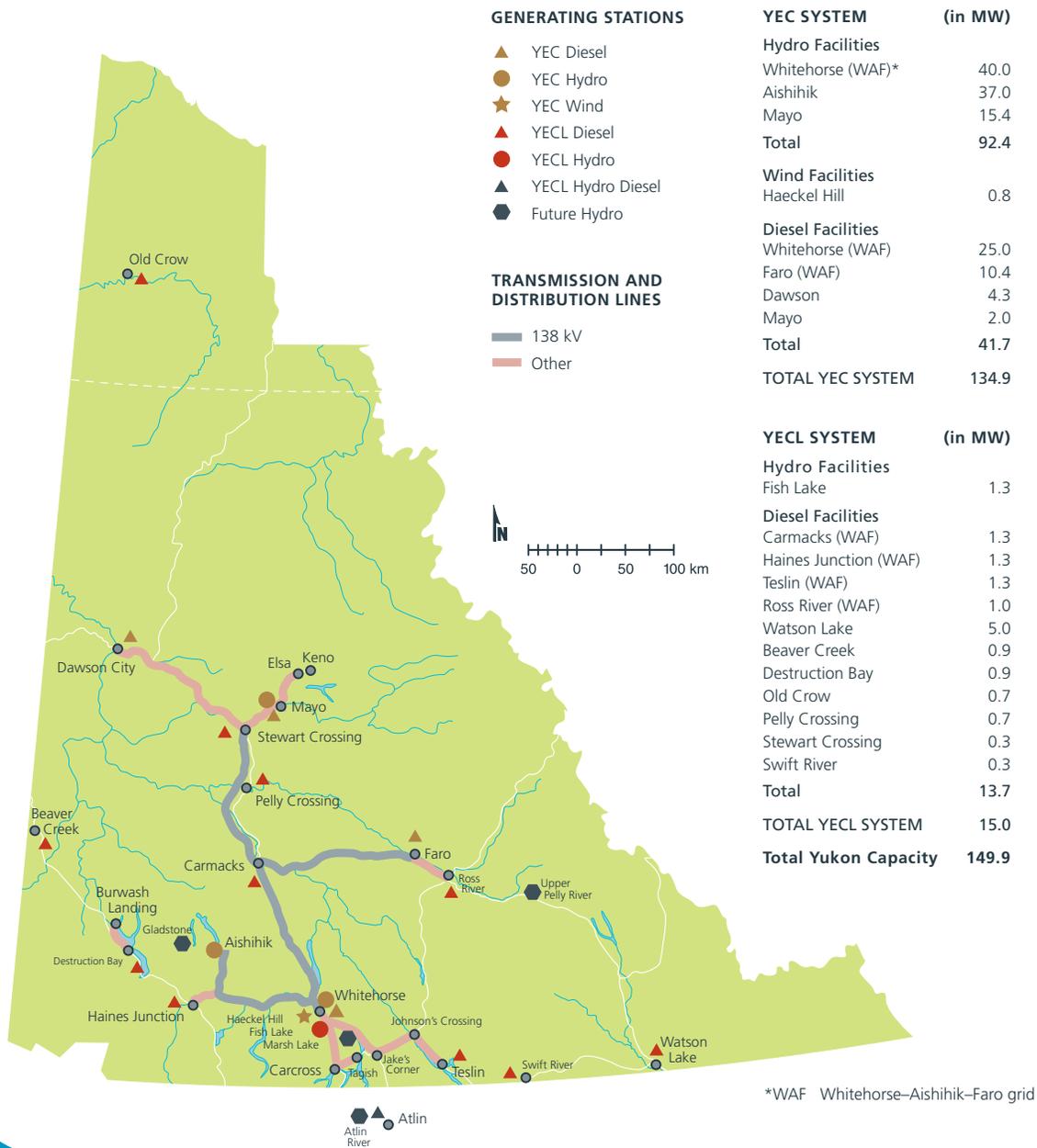
b) On April 27, 2012 the Utility filed a General Rate Application with the YUB for test years 2012 and 2013.

c) Aishihik Third Turbine Project. This project was commissioned into service in December 2011. On March 2, 2012, the general contractor filed a claim with the Supreme Court of Yukon for \$4,000,000 plus interest and costs alleging the Utility has not paid for work performed. The Utility has informed the contractor of claims for incomplete contract scope, uncorrected deficiencies and other claims. The outcome of the claim is not determinable at this time and no amount has been recognized in the financial statements.

#### 29. COMPARATIVE FIGURES

Certain 2010 figures have been reclassified to conform with the current year's presentation.

# Yukon Energy Transmission and Generation Facilities



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Cover: Learning about renewable energy  
fosters good energy conservation habits.

Photo: [archbould.com](http://archbould.com)



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