



2010-2011



**WUSKWATIM**

Power Limited Partnership

**2010-2011 YEAR IN REVIEW**

FOR THE YEAR ENDED MARCH 31, 2011

***The Vision Becomes Reality – Moving Towards Completion***







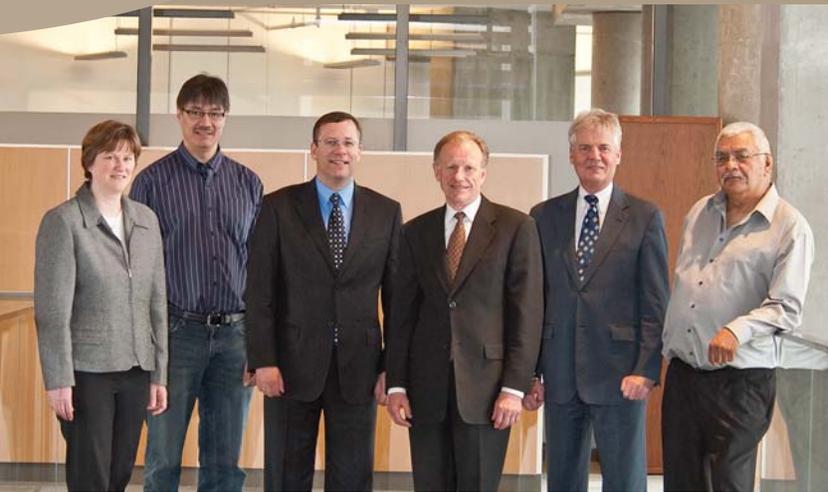
# 2010-2011

## The Vision Becomes Reality – Moving Towards Completion

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**Directors of the general partner of WPLP (L to R)**

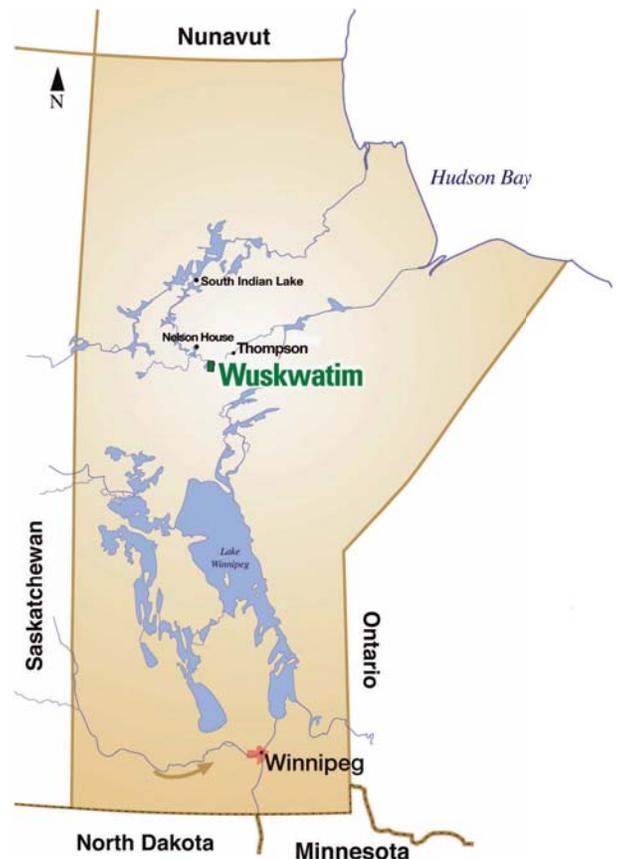
- Joanne Flynn (Manitoba Hydro)
- Marcel Moody (Nisichawayasihk Cree Nation)
- Darren Rainkie (Manitoba Hydro)
- Ken Adams (Manitoba Hydro)
- Vince Warden (Manitoba Hydro)
- Jimmy Hunter-Spence (Nisichawayasihk Cree Nation)



# WUSKWATIM

Power Limited Partnership

Wuskwatim Power Limited Partnership (WPLP), a legal entity involving Manitoba Hydro and Nisichawayasihk Cree Nation (NCN), is developing the Wuskwatim Generating Station on the Burntwood River in northern Manitoba. This is the first time in Manitoba and Canada that a First Nation and an electric utility have entered into a formal equity partnership to develop a hydroelectric project. Manitoba Hydro is providing construction and management services to WPLP in accordance with the Project Development Agreement (PDA) signed in June 2006.



# Message From the Chair

Wuskwatim Power Limited Partnership (WPLP) is pleased to present its fifth Year in Review for the fiscal year 2010-2011.

This year marked a historic milestone with the closure of Taskinigup Falls in August as part of constructing the stage II upstream cofferdam and diversion of all the Burntwood River flow through the spillway. This was part of preparations to allow construction of the main dam to proceed. Water-quality monitoring indicated no significant change in total suspended solids occurred during the considerable in-channel work required for the diversion.

To commemorate the closure, NCN Citizens held a traditional Cree ceremony attended by Manitoba Hydro and contractor representatives.

WPLP's third Construction Update video for the Wuskwatim Project is available in English and Cree on the WPLP Website – [www.wuskwatim.ca](http://www.wuskwatim.ca).

Project employment peaked this past year at just over 1 050 workers, slightly lower than the previous year peak but reflecting a high-level of construction activity. Aboriginal and Manitoba workers continued to comprise a significant proportion of the workforce – from the start of construction to March 2011, about 40 percent of project hires have been Aboriginal people

and 65 percent of the total project hires were from Manitoba.

During the course of building a generating station, most jobs are relatively short-term and the types of skills required change as the project unfolds. As project completion moves nearer many of the jobs available at the site require specialized trades and industrial construction experience and in many cases, workers outside Manitoba were needed to provide these specialized services.

Total wages earned at the site from the start of construction on the Project up to March 2011 were approximately \$172 million. Nearly 62 percent of these wages were associated with direct Manitoba employment. From the start of construction to March 2011, WPLP also spent almost \$144 million on goods and services purchased from Northern Manitoba Aboriginal businesses, including several contracts with entities owned by Nisichawayasihk Cree Nation. This total includes over \$21 million spent this year.

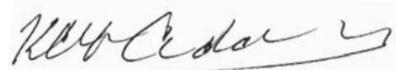
Maintaining Wuskwatim as one of the safest construction sites in the Province of Manitoba is a priority for the project. All project employees are given a comprehensive site-specific safety orientation upon hire, and the active participation by all involved in the project assists in creating safe working conditions.

Cross-cultural training workshops, cultural ceremonies and counseling services are continuing and being managed and provided on site by Nisichawayasihk Cree Nation and are available to all employees. Cross-cultural workshops and traditional ceremonies are designed to express respect for the environment and for local culture.

A comprehensive environmental protection program continued throughout the year and details and results are reported in the WPLP Wuskwatim Monitoring Overview 2010-2011 available at [www.wuskwatim.ca](http://www.wuskwatim.ca).

The majority of civil works for the Wuskwatim Generating Station are on track and scheduled to be completed in the coming year with the first of the three generating units expected to produce power in early 2012.

Sincerely,



Ken R. F. Adams, P. Eng.  
*Chair of the general partner of Wuskwatim Power Limited Partnership (5022649 Manitoba Ltd.)*



# Introduction and Background

The province of Manitoba with a large, self-renewing supply of waterpower has developed many hydroelectric generating stations to provide electrical energy for its citizens.

The Wuskwatim Project is the first generating station to be built in Manitoba in nearly two decades and it marks the first time in Canada that a First Nation and an electric utility have entered into a formal equity partnership arrangement to develop a hydroelectric project. The Wuskwatim Generation Project, now nearing completion on the Burntwood River in northern Manitoba, will add to Manitoba's generation assets. Wuskwatim energy will help meet Manitoba's future domestic needs and provide energy to export customers.

Wuskwatim Power Limited Partnership (WPLP), involving Nisichawayasihk Cree Nation (NCN) and Manitoba Hydro, is responsible for the development, operation and maintenance of the 200-megawatt Wuskwatim Generation Project. The project is located in NCN's traditional territory downstream of Wuskwatim Lake at Taskinigup Falls and will produce clean, renewable hydroelectric power.

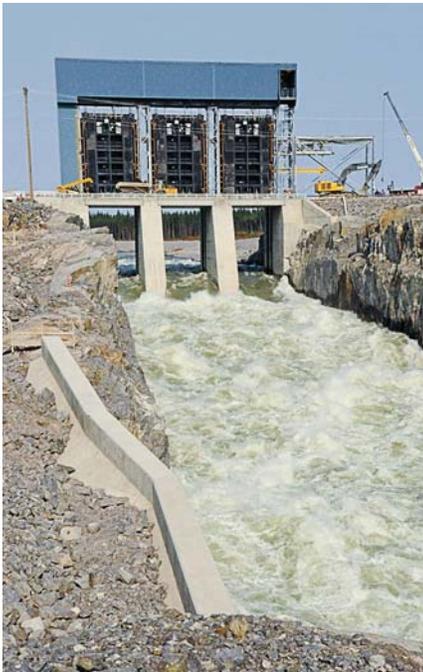
NCN and Manitoba Hydro spent nearly a decade discussing, planning and undertaking the environmental studies and regulatory processes for the \$1.3 billion Wuskwatim Generation Project. In June 2006 senior Manitoba Hydro officials and NCN's Chief and Council signed the Project Development Agreement (PDA) and construction commenced in August 2006.

Through its wholly owned corporation, Taskinigahp Power Corporation (TPC), NCN currently owns 33 percent of the Wuskwatim Generating Station. TPC will make a decision regarding its level of ownership after the first unit is in service (anticipated to be early 2012).

The business affairs of WPLP are carried out by a general partner (GP), 5022649 Manitoba Ltd., a wholly owned Manitoba Hydro subsidiary. A Board of Directors consisting of two NCN and four Manitoba Hydro representatives governs the GP. Pursuant to the PDA, Manitoba Hydro has been contracted to construct, manage, operate and maintain the Wuskwatim Generating Station.

# 2010-2011

## Year In Review



Continued intensive construction activity resulted in project employment peaking at just over 1 050 workers this year, slightly lower than the previous year peak. Aboriginal workers continued to be a significant part of the workforce, comprising 39 percent of all hires from construction start to March 2011.

This year 54 600 cubic metres of concrete were poured in addition to the 65 000 cubic metres placed since concrete work began in May 2009. By year-end, about 98 percent of the concrete had been placed with most structures now complete including the spillway, service bay, intake, tailrace and south transition. Additional concrete placement is still required for the powerhouse and miscellaneous structures.

Since the start of construction, WPLP has purchased almost \$144 million in goods and services from Northern Manitoba Aboriginal businesses, including several contracts with Nisichawayasihk Cree Nation-owned entities. This included \$21 million spent this year.

Nisichawayasihk Cree Nation also provides and manages on-site cross-cultural training sessions, cultural ceremonies and counseling

services available to all employees. Since 2007 more than 1 300 workers have participated in 92 cross-cultural awareness-training workshops and 28 traditional ceremonies have been held. Workshops and traditional ceremonies demonstrate respect for the environment and local culture.

A comprehensive environmental-protection program was ongoing this year and included environmental protection plans and environmental, social and economic monitoring plans. Environmental protection plans provide measures to protect the environment, minimize adverse effects from construction activities and decommission and rehabilitate sites.

Environmental monitoring and management programs are being conducted in accordance with monitoring and management plans approved by provincial and federal regulatory agencies. Ethinesewin, the traditional knowledge and collective wisdom of the Nisichawayasihk Citizens, along with conventional scientific analysis, continue to be used equally for project monitoring activities. Monitoring programs began before construction and will continue throughout construction and well into project operation.

In the area of environmental mitigation, a number of fish habitat compensation projects were constructed on Wuskwatim Lake during the winter of 2010-2011, continuing a process that had begun the previous winter.

Following is a summary of achievements on the Wuskwatim Generating Project during 2010-2011.



### STAGE II RIVER DIVERSION

At the beginning of the year the stage I upstream cofferdam diverted the Burntwood River over Taskinigup Falls allowing the powerhouse and spillway concrete structures to be constructed on the dry riverbed.

After the spillway structure and gates were completed, a portion of the stage I upstream cofferdam was removed to permit the entire flow of the Burntwood River to pass through the spillway. This allowed construction of the stage II upstream cofferdam across Taskinigup Falls and enabled construction of the main dam to commence in the dry.

With completion of the stage II upstream cofferdam in late summer, the entire flow of the river was diverted through the spillway. A traditional Cree ceremony was held by NCN to commemorate the river diversion.

The stage II downstream cofferdam was constructed by the fall allowing dewatering to proceed to provide full access for excavation of the tailrace channel. By early spring 2011, the channel was substantially complete which will

allow the contractor to “water-up” the tailrace and intake in July 2011.

### MAIN DAM

Construction of the main dam started in the fall of 2010.

Foundation cleaning, drilling and filling holes to create a grout curtain, and installation of dental concrete to roughly level the rock surface, were complete before winter set in. Installation of impervious, granular and rock-fill materials had also begun to raise the elevation of the structure.

Construction was suspended for the winter season, and to prevent frost penetration into the impervious core, a layer of sand was placed on the top of the structure. The sand layer will be stripped off in spring 2011 to allow an early start to complete main dam construction.

### TURBINES AND GENERATORS

Installation of the turbines and generators started in early summer. The process began with unit 1, involving aligning and embedding

the draft tube liner in concrete followed by installation of the stay ring and turbine pit liner. The same process followed at intervals for generator unit 3 and concluded with unit 2.

In the fall, the contractor began installing non-embedded parts in unit 1 and by January installations were underway in all three units.

The first shipment of turbine components left China at the end of 2010 and was on site at the end of the fiscal year. Unit 3 turbine tower assembly acceptance tests in China have been completed.

A material quality issue was discovered with the discharge rings and new discharge rings were manufactured in Quebec under an expedited schedule to maintain in-service dates.

#### INTAKE GUIDES

Work began in January to install roller paths and seal faces for the intake gates and was completed in early spring. Over the winter, the intake was sealed off temporarily to keep heat inside the powerhouse.

#### POWERHOUSE CRANE

Since commissioning was completed at the end of the 2009-2010 fiscal year, the 275-metric-ton capacity powerhouse crane has been key to the ongoing generating-station construction and the installation of the three 66-megawatt turbine generators.

#### ELECTRICAL AND MECHANICAL

Electrical and mechanical work began this year with the installation of cable trays, exposed piping in the lower level of the service bay and miscellaneous electrical works in the spillway. In the fall installations began in the powerhouse.



Around the end of the fiscal year, the focus was on installation of systems and equipment required to meet the project's "water-up" milestone. Cable tray and 600V distribution and piping system installations were still ongoing throughout the powerhouse with significant progress on the HVAC system in the service bay.

#### CONCRETE PLACEMENT

Concrete placement began in early 2009 and continued in 2010. Approximately 54 600 cubic metres were placed this year for a total of about 120 000 cubic metres or 98 percent of the total required by year-end consisting of:

- Spillway: 11 150 cubic metres (structure complete)
- Service Bay: 16 050 cubic metres (structure complete)
- Intake: 29 000 cubic metres (structure complete)
- Tailrace: 19 075 cubic metres (structure complete)
- South Transition: 2 800 cubic metres (structure complete)
- Powerhouse: 34 200 cubic metres
- Miscellaneous Structures: 7 325 cubic metres.

Enclosing and heating the service bay, powerhouse and tailrace area allowed concrete placement to continue over the winter uninterrupted by sub-freezing weather.

#### MAJOR CONTRACTS

Manitoba Hydro acting as Project Manager continued to oversee work underway for the following contracts:

- General Civil Works
- Generator Step-up Transformers
- Supply and Installation of Intake Gates, Guides and Hoists
- Supply and Installation of Powerhouse Crane
- Supply and Installation of Spillway Gates, Guides and Hoists
- Supply and Installation of Turbines and Generators
- Supply and Delivery of Motor Control Centers
- Supply and Installation of Electrical and Mechanical Systems and Services
- Supply and Installation of Powerhouse and Service Bay Elevators.



## TRANSMISSION PROJECT

Manitoba Hydro is responsible for constructing the transmission project scheduled for completion by summer 2011.

At the beginning of the fiscal year construction of the transmission line from Birchtree to Wuskwatim had been completed along with construction of the transmission lines from Wuskwatim to Herblet Lake.

Clearing of right-of-way for the transmission line from Herblet Lake to Ralls Island had also been completed with line construction including foundations, anchors and tower installations along with conductor stringing continuing over two winter seasons for expected completion by April 2011. All transmission line terminations are expected to be complete in the summer of 2011 with final commissioning taking place in the summer and fall.

Design of the collector lines from the Wuskwatim Generating Station to Wuskwatim Switching Station has been completed. Construction of the collector lines

as well as sectionalization of line K24W (Kelsey to Mystery Lake) will take place in the spring of 2011.

Control buildings at Birchtree and Wuskwatim switching stations have been completed with installation of electrical apparatus at Thompson Birchtree Station, Wuskwatim Switching Station, Herblet Lake Station and Ralls Island Station.

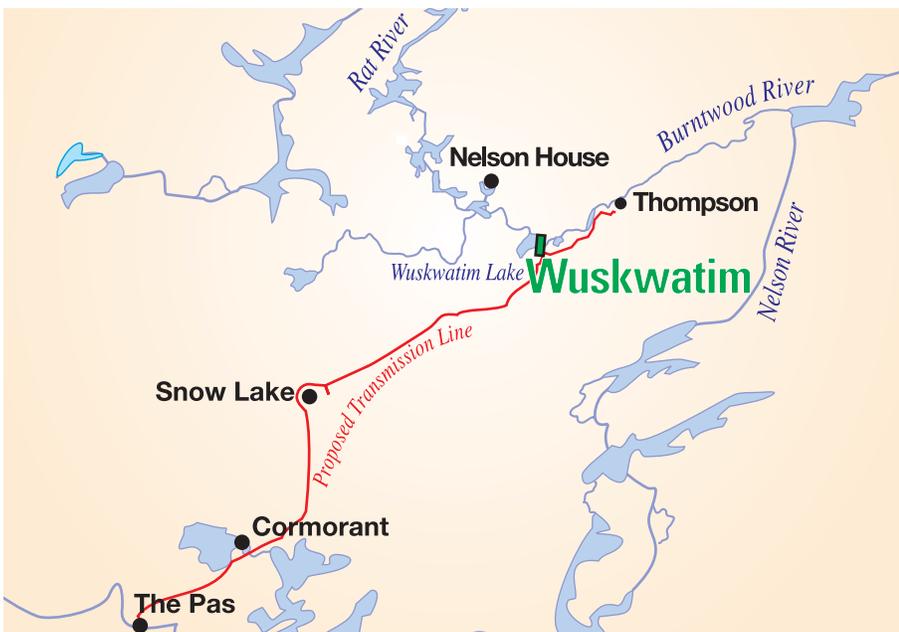
Commissioning of Herblet Lake Station was completed in the fall with commissioning of the Thompson Birchtree Station and Wuskwatim Switching Stations underway at year-end for completion by summer 2011. Commissioning is also underway for Ralls Island and will continue until project completion.

## PROJECT MONITORING

Manitoba Hydro acting as management service provider, with participation in some areas by Nisichawayasihk Cree Nation:

- Conducted analyses of project employment, labour income, purchases and other economic indicators for the fifth year of construction activities

- Completed a second socio-economic survey to determine indirect and induced economic effects on businesses in Thompson and Nelson House
- Conducted archaeological investigations of a quarry, the north and south sides of Wuskwatim Falls, the south side of the Burntwood River between Wuskwatim and Taskinigup Falls, and the dewatered area below Taskinigup Falls
- Conducted total suspended solids and continuous turbidity monitoring in the Burntwood River and Split Lake before, during and after major in-stream construction activities including: removal of the rock plug at the end of the spillway channel; construction and removal of various cofferdams; and diversion of the river through the spillway. Monitoring indicated no significant change in total suspended solids occurred during river diversion
- Conducted water-quality monitoring of various parameters including nutrients at 10 locations upstream and downstream of the station from Wuskwatim Lake to Split Lake
- Conducted benthic invertebrate monitoring to verify that the major construction activities in the Burntwood River did not affect populations
- Conducted a fish salvage of 2 505 fish from the impounded area at the base of Taskinigup Falls, which will be the tailrace once the station is complete
- Conducted baseline evaluation of current locations of beaver dams and muskrat push-ups, upstream, downstream and on Wuskwatim Lake for comparison purposes once the station is in operation and collected tissue samples from beaver, muskrat, otter and mink to determine baseline mercury concentrations





- Conducted spring and fall Ethinewin tours involving NCN Elders and youth in sharing traditional knowledge and wisdom of the Nisichawayasihk people, as part of monitoring the project site and surrounding areas to ensure appropriate protection of aquatic and terrestrial environments, and cultural and heritage sites.

### ABORIGINAL PARTICIPATION

Achievements in Aboriginal participation on the project included:

- Maintaining close to 40 percent of hires as Aboriginal since the start of construction
- Expenditures of over \$21 million during the past year on goods and services from Northern Manitoba Aboriginal businesses totalling almost \$144 million since the project began
- Continuing with culturally appropriate, retention-support programs aimed at keeping Aboriginal workers employed on the project and ensuring sensitivity and respect for local culture is present throughout construction
- Continuing employment of an Employee Liaison Officer to act as an employee representative at site and to assist NCN Citizens and others interested in employment at Wuskwatim
- Continuing to provide a shuttle van service that runs from the site to Thompson and Nelson House to accommodate workers without vehicles

- During 2010-2011 NCN-trained facilitators with NCN Elders conducted 13 cross-cultural-awareness workshops bringing the total number of workshops since start of construction to 92 involving 1324 workers
- Involving Elders and community Citizens in an open house to share results of monitoring programs
- Performing 28 ceremonies and sweats since the start of construction, including eight sweat lodge ceremonies and two pipe ceremonies
- Conducting site ceremonies at key milestones using NCN Spiritual/Traditional Citizens to respect local culture and traditions.

### PROJECT COMMUNICATIONS

Since the project's inception, WPLP has provided on-going project communications including:

- The project website, [www.wuskwatim.ca](http://www.wuskwatim.ca) provides comprehensive project information; the construction progress, schedule and employment statistics are regularly updated as information becomes available; the website's photo gallery is updated several times a year and an annual video summary of project progress is prepared in English and Cree and posted to the website
- Each year WPLP prepares and publishes the Year in Review report as well as the detailed Monitoring Overview report that highlights activities and findings of the environmental and socio-economic monitoring programs;

both reports are distributed to NCN Citizens on and off reserve and Cree audio summaries are available on CD

- The project's Monitoring Advisory Committee schedules an annual open house in Nelson House to provide Citizens with information on the monitoring programs and answer their questions and engage in discussions
- Periodically the Wuskwatim Implementation Office in Nelson House publishes project-related newsletters, which are distributed to NCN Citizens on and off reserve.

### SAFETY

The Accident Frequency Rate at Wuskwatim site is better than the Manitoba average. Safety-related items during the year included:

- Nine lost-time injuries resulting in 1422 days lost – compared to last year, this is a decrease in lost-time injuries but a noticeable increase in days lost due to the severity of the injuries
- Ongoing provision of a comprehensive site-specific safety orientation for all employees.

### TRANSITION TO PROJECT OPERATING PHASE

With the in-service date of Wuskwatim's first unit less than a year away, NCN and Manitoba Hydro are turning their attention to operational issues. Issues being discussed include construction camp infrastructure, potential direct contract opportunities, access management and Wuskwatim generating station employment. Ongoing dialogue will continue throughout the upcoming year.

Additionally, acting upon a commitment in the 2006 PDA, the partners are collaborating to maximize NCN Citizen employment in Manitoba Hydro's ongoing operations.

# Financial Report

## Partnership Assets, Liabilities and Equity (as at March 31)

(in millions of dollars)	2011	2010
<b>Assets</b>		
Construction in progress - generating station	1098	812
Construction in progress - transmission line	265	233
Other assets	7	9
	1370	1054
<b>Liabilities and Equity</b>		
Long-term debt	1058	804
Other liabilities	48	61
Equity	264	189
	1370	1054





### Partners' Capital (as at March 31, 2011)

	Units	%	Capital (in millions of dollars)
General Partner <sup>1</sup>	26.392	0.01	-
Manitoba Hydro	176 797.775	66.99	177
Taskinigahp Power Corporation	87 092.500	33.00	87
	263 916.667	100.00	264

### Financing and Investing Activities (for the year ended March 31)

(in millions of dollars)	2011	2010
<b>Financing Activities</b>		
Proceeds from issue of units of WPLP	75	70
Net proceeds from long-term debt	254	261
Cash provided by financing activities	329	331
<b>Investing Activities</b>		
Construction in progress – generating station	(299)	(280)
Construction in progress – transmission line	(31)	(52)
Other	1	1
Cash used for investing activities	(329)	(331)

<sup>1</sup> The business affairs of WPLP are carried out by a general partner (GP), 5022649 Manitoba Ltd., a wholly-owned Manitoba Hydro subsidiary.







# WUSKWATIM

Power Limited Partnership

[www.wuskwatim.ca](http://www.wuskwatim.ca)

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