



Northern Coordinated Action for Recycling Enterprises

Electronic Waste Collection and More . . .

January 2004

Northern CARE Recycle Collection Committee

Northern CARE Overview

- Since 1994, Northern CARE has worked in cooperation with many organizations - all with the intent of increasing the viability of recycling initiatives and waste reduction in Northern Alberta.

Northern CARE Overview

- **Northern CARE, in cooperation with Northern organizations focuses on:**
 - ✓ Identifying potential economic development opportunities associated with Northern recycling and Waste Management initiatives.
 - ✓ Connecting Varied private and public interests in relation to the coordination of Northern recycling initiatives.
 - ✓ Coordination of regionally based Northern recycling projects. Promotion and education of the benefits of recycling.
 - ✓ Increasing public awareness of Northern Recycling.

Northern Alberta Challenges

- ✓ 60% of the geographical area of Alberta with a small percentage of the total provincial population.
- ✓ Low recyclable material volumes.
- ✓ Increased collection and transportation costs.
- ✓ Most Communities are too small to support a material recovery facility (MRF).
- ✓ Industrial waste vs. northern population is larger on a per capita basis meaning large amounts of waste generation is not supported by the local tax base.

The Solution: Northern CARE

- Northern CARE stands for:

**"Northern Coordinated Action for
Recycling Enterprises"**
- Through a coordinated effort, Northern CARE, in partnership with recycling entities can develop long term solutions for recycling in Northern Alberta.

Northern CARE Benefits

- **By working together, we can:**
 - ✓ Reduce Costs.
 - ✓ Coordinate recycling efforts to avoid duplication.
 - ✓ Take advantage of economies of scale associated with the collection of recyclable waste materials - greater amounts can be collected when we work together.
 - ✓ Share expertise and resources.
 - ✓ Be a strong voice for Northern communities at the provincial level.
 - ✓ Create a solid foundation for the long term viability of Northern Alberta recycling programs.
 - ✓ Implement the 5Rs into all recycling programs.

Challenges/Opportunities: eWaste Recycling

- **What is eWaste?**
 - End of life or surplus electronics which make up the fastest growing type of waste in Canadian landfill sites.
- **Why recycle eWaste?**
 - eWaste contains toxic material such as lead and mercury.
 - Does not biodegrade.
 - Recyclable.

Challenges/Opportunities: Provincial eWaste Recycling Program

- **What products are eligible under the program?**
 - CPUs, PC speakers, cords, keyboards, laptops, mice, scanners, printers, printer combo units, laptops, monitors, TVs.
- **When does the program come into effect?**
 - Albertans began recycling their electronics free of charge beginning October 1, 2004.
 - Albertans will begin paying a fee for recycling at the point of purchase in February 2005.

Challenges/Opportunities: Provincial eWaste Recycling Program

- **How does the program work?**
 - Provincially approved collection points (municipalities) are paid per tonne (\$50) for collection of eWaste.
 - Provincially approved eWaste processors are paid per tonne for the amount of eWaste they process.
 - Approved eWaste processors are also paid per tonne to transport eWaste around the province for processing.
 - In the Northern Alberta region between \$150 – \$200 per tonne is available for transport dependent on location.

Challenges/Opportunities: Provincial eWaste Recycling Program

- **Program drawbacks:**
 - Required product counts at the collection AND processing points add cost to overall program administration.
 - Limited volumes of eWaste in smaller/remote communities make transportation prohibitive.
 - Fee levels were developed using a provincial average that may not take unique Northern Alberta circumstances into account.
 - All program players (collectors, transporters and processors) are bound by the constraints of the program in order to access program funds.

The Solution: Northern eCARE Recycling

- **Northern CARE and Maxus Technology have developed a unique “Made in the North” program that:**
 - Provides environmentally friendly recycling of eWaste for Northern Alberta residents.
 - Provides a long-term eWaste recycling solution that Northern Albertans can count on.
 - Provides revenue opportunities for Northern communities and Northern CARE, strengthening our communities.
 - Provides employment for Northern Albertans.

Who is Maxus Technology?

- Alberta based eWaste recycling and Asset Recovery firm – in business since 1994. Publicly traded on the NASDAQ exchange (MXUS).
- Winner of the RBC Small Business of the Year Award 2003.
- Offices in 4 countries and clients on every continent.
- Holder of advanced proprietary eWaste processing technology that reduces costs and increases recovery of base materials.
- Alberta Environment chose a Maxus facility to announce their “Get the Lead Out” program in 2002.
- Lorne Taylor attended the grand opening of the Rimbey Recycling facility in 2003 to mark the progressive work being done by Maxus – long before a financial incentive was in place.

The Solution: What is Northern eCARE?

- **Northern CARE would act primarily as an administrative body working out the logistics of planning efficient pickup and handling of eWaste in Northern Alberta.**
 - The strength of this program is simplicity for members – Northern CARE handles the details.
 - Control of waste stream remains in the North.
 - Provides concise and accurate measurement of eWaste generation, helping Northern Alberta build a case for increased collection and transport fees.
 - Provides a unified and strong voice for Northern communities.
 - Increased adherence to the 5R principles at the community level.

The Solution: Northern eCARE Recycling

- Consolidation points (Athabasca, Cold Lake, Grande Prairie) would act to maximize transportation efficiencies by consolidating eWaste loads from multiple communities into single loads for transport to Maxus in Rimbey, AB.
- Fees for transport and processing are paid by the province to the processor, Maxus.
- Maxus has agreed to forward the per tonne transport fee to Northern CARE and swallow the costs of transport from the consolidation points in exchange for the administrative and consolidation work performed by Northern CARE.
- This allows Northern CARE to generate funds and either financially reward communities that actively collect eWaste or at the minimum, provide eWaste collection services at no cost to the community.

Why Northern CARE is uniquely positioned to implement a regional eWaste recycling program:

- Northern CARE is a representative of the communities and members of the North and will always act in the best interests of the program.
 - Maxus has negotiated in good faith with open and honest sharing of ideas.
 - Maxus is working in true partnership with the North and is here for the long-term.
 - Northern CARE is an equal with Maxus in this venture putting the North in control of their eWaste recycling activities.
- Individually, Northern communities have strengths that make their various waste reduction initiatives successful.
 - Together with Northern CARE, these strengths are augmented, resulting in better service for residents and a stronger voice provincially.

Transportation Issues in Recycling

- An about to be released study on transportation Issues sponsored by Alberta Environment, Alberta Economic Development, ABCRC, Alberta Dairy Council, ARMA, the Recycling Council of Alberta and Northern CARE has recommended initiatives like the Northern eCARE Recycling Program as an effective method to handle waste in Alberta's North.

Transportation Issues in Recycling

The study recommends the following:

- ✓ The need to examine the feasibility of a dedicated resource (transport coordinator) to manage transportation of all materials.
- ✓ The need to determine the impact of moving away from the existing community focused approach to a more regionalized approach which sees materials centralized prior to shipping to market.
- ✓ Other initiatives included working with private fleet operators and common carriers to achieve transportation economies when moving recyclables from rural collection points to processing facilities.
- ✓ **The Northern CARE/Maxus Technology partnership is progressive in it's handling of eWaste with room for expansion into other waste streams.**

Northern eCARE Recycling: Progressive Solutions

- The Maxus proposal to Northern CARE is the first of its kind to specifically address the needs of Northern Alberta Communities with respect to eWaste.
- The proposal meets the recommendations of the Transport Study – before the study is even released.
- The proposal is endorsed in principle by ARMA and was endorsed by the former Environment Minister Dr. Lorne Taylor – a strong Maxus supporter.

Northern eCARE Recycling: Benefits to Members

- ✓ Sustainability – a proven eWaste processor with a proven regional advocacy body working in partnership to meet the needs of the North.
- ✓ Most administrative duties are left to Northern CARE and Maxus instead of with smaller communities, thus lowering/eliminating costs.
- ✓ Member Communities can receive, through Northern CARE, the same services being offered by other programs but with less work, because the consolidation hubs will sort and prepare the equipment.

PROGRAM DETAILS: Northern eCARE Levels of Service

- All members have different needs, from low volume un-manned sites to manned high volume sites.
- Service Levels have been designed to fit the needs of any size member.
- eCARE Service Levels Available:
 - No.1 Hands Free - Low Volume or High Volume Sites
 - No.2 Hands On - Low Volume Sites
 - No.3 Hands On - High Volume Sites
 - No.4 Annual Round-Ups

PROGRAM DETAILS: Northern eCARE Levels of Service

No. 1 HANDS FREE - Low, Medium and High Volume Sites

- **Member Responsibility:**
 - ✓ Provides area for collection.
 - ✓ Installs signage, provided free of charge by ARMA
 - ✓ Calls Northern CARE for pick-ups.
 - ✓ Transfers or Designates ARMA Collection Fee (\$50.00/t) to Northern CARE for Hands Free Services.
- **Northern CARE Responsibility:**
 - ✓ Prepares paperwork and count for member.
 - ✓ Coordinates and pays for transport costs to consolidation points.
 - ✓ Pays consolidation points \$50.00/t for storage, palletizing and handling.
 - ✓ Pays consolidation points for baling and further processing.
 - ✓ Collects \$50.00/t from member. (ARMA Collection Fee)
 - ✓ Collects \$150.00-\$200.00/t from Maxus Technology for Transport Costs, Handling and Admin.
 - ✓ Assists Member with obtaining the most suitable collection device based on community volume.

PROGRAM DETAILS: Northern eCARE Levels of Service

No. 2 HANDS ON - Low Volume Sites

- **Member Responsibility:**
 - ✓ Provides area for collection.
 - ✓ Installs signage, provided free of charge by ARMA
 - ✓ Prepares paperwork and count.
 - ✓ Properly palletizes and prepares eWaste for shipping.
 - ✓ Collects \$50.00/t from ARMA.
 - ✓ Calls Northern CARE for pick-ups.
 - ✓ Receives Member Bonus of \$25.00/t
- **Northern CARE Responsibility:**
 - ✓ Coordinates and pays for transport costs to consolidation points.
 - ✓ Pays consolidation points \$25.00/t for storage and handling.
 - ✓ Collects \$150.00-\$200.00/t from Maxus Technology for Transport Costs, Handling and Admin.
 - ✓ Assists Member with obtaining the most suitable collection device based on community volume.

PROGRAM DETAILS: Northern eCARE Levels of Service

No. 3 HANDS ON - High Volume Sites

- **Member Responsibility:**
 - ✓ Provides area for collection.
 - ✓ Installs signage, provided free of charge by ARMA.
 - ✓ Prepares paperwork and Count.
 - ✓ Properly palletizes and prepares eWaste for shipping.
 - ✓ Properly loads full vans for direct shipment to MAXUS.
 - ✓ Collects \$50.00/t from ARMA.
 - ✓ Calls Northern CARE for pick-ups.
 - ✓ Receives Member Bonus of \$50.00/t
 - ✓ Must be an approved site by Northern CARE and Maxus Technology.
- **Northern CARE Responsibility:**
 - ✓ Pays Member \$50.00/t Bonus.
 - ✓ Collects \$150.00-\$200.00/t from Maxus Technology for Transport Costs, Handling and Admin.
 - ✓ Assists Member with obtaining the most suitable collection device based on community volume.

PROGRAM DETAILS: Northern eCARE Levels of Service

No. 4 Annual East to West Roundups

- **Member Responsibility:**
 - ✓ Provides area for collection.
 - ✓ Provides volunteers or paid staff for event
 - ✓ Places signs for event provided free of charge by ARMA
 - ✓ Coordinates local advertising with Northern CARE
- **Northern CARE Responsibility:**
 - ✓ Coordinates advertising with member, ARMA, Maxus and local media.
 - ✓ Provides personnel for event to prepare paperwork, count and prepare for shipping.
 - ✓ Coordinates and pays for transport costs to consolidation points.
 - ✓ Pays consolidation points \$25.00/t - \$50.00/t for storage and handling.
 - ✓ Collects \$150.00-\$200.00/t from Maxus Technology for Transport Costs, Handling and Admin.

MAXUS TECHNOLOGY PROGRAM RESPONSIBILITIES

- **MAXUS Responsibility:**
 - ✓ Pays \$150.00 - \$200.00/t (dependant on zone) to Northern CARE for transport costs, handling and administration.
 - ✓ Pays for Full Van Load shipments from approved Consolidation Points or Collection Sites.
 - ✓ Completes final paperwork for ARMA.
 - ✓ Assistance with training materials.
 - ✓ Assistance with marketing and communication.
 - ✓ Provides pallets and stretch wrap for palletizing.
 - ✓ Provides accurate and concise measurement of weights and product recycled.
 - ✓ Annual certificates of recycling to member communities.

PROGRAM DETAILS: Revenue Breakdown

- **Revenue details of proposed program are as follows:**
 - ✓ **Maxus is offering \$150.00 - \$200.00 per tonne** transportation fees (dependant on which zone the equipment came from) directly to Northern CARE who will act as the program coordinator and transport manager in the North. The above funding would be used for Northern CARE administrative costs, transport costs of electronics to consolidation hubs and for further re-processing at consolidation hubs for maximizing load efficiencies.
 - ✓ In addition individual **communities would receive their standard \$50.00 per tonne collection fee from ARMA.**
 - ✓ **Community option to receive more revenue based on the amount of work they are willing/able to do.**
 - ✓ **Maxus will collect, at their cost,** consolidated material from each hub or re-processing center for shipment to Rimbey.

PROGRAM DETAILS: Eligible vs. Non-Eligible Equipment

- As a provincially approved eWaste processor, Maxus must respect the limited product line covered under the provincial program.
 - ✓ Maxus recognizes there will be contamination in the form of non-eligible products and will accept contamination levels up to 10% from members/Northern CARE.
 - ✓ Maxus will work with Northern CARE to advocate to ARMA expansion of product type coverage under the provincial program.
 - ✓ Maxus will work with Northern CARE and communities and industry who wish to collect eWaste beyond the current product line.
 - ✓ Maxus can process all types of eWaste.

PROGRAM DETAILS: Methods of Transport

- Northern CARE administration will coordinate the pick-up and transporting of eWaste from communities to the consolidation points by seeking out local trucking opportunities, and or member resources.
- When required and economically feasible Northern CARE may rent or hire a truck and driver for the pick-ups.
- In some cases individual communities may opt to haul their eWaste to collection points and would be paid by Northern CARE to do so.

PROGRAM DETAILS: Methods of Transport

- Members may wish to use their own assets and manpower to transport eWaste to consolidation points and if so would be paid by Northern CARE to do so.
- The following is a list of fees payable (pending consultation with Northern CARE) by equipment type for the transportation of eWaste to approved consolidation points.

- 3/4 to 1 Ton Truck and Driver	\$0.60/km
- 3/4 to 1Ton Truck, Trailer and Driver	\$0.88/km
- Gravel Truck and Driver	\$1.10/km
- Gravel Truck, Trailer and Driver	\$1.38/km
- Front Loader Truck and Driver	\$1.10/km
- Front Loader, Trailer and Driver	\$1.38/km
- Roll Off Truck, Container and Driver	\$1.10/km
- Roll Off Truck, Trailer and Driver	\$1.38/km
- Highway Tractor Trailer and Driver	\$1.38/km

AND MORE TO COME Northern CARE Programs in the works

- Upon the success of this eCARE program many more materials can be added to the list for pick-up, and further processing at consolidation points. Materials such as:
 - ✓ **mCARE:** Milk Jugs, Cartons and Other Plastics
 - ✓ **pCARE:** Office Paper, Newspaper and Cardboard
 - ✓ **fICARE:** Florescent Bulbs
 - ✓ **wCARE:** Wireless equipment (cell phones, pagers, PDAs, etc)
- Northern CARE also offers assistance setting up recycling collection programs for Ni-cd Batteries and Ink Jet/Toner Cartridges.

In Conclusion

- This program and partnership with Maxus is smart and sustainable.
- It will give Northern CARE the ability to begin a sustainable program for the collection of eWaste in Northern Alberta and will also give Northern CARE the ability to expand the program for other material collection.
- The program will give Northern communities a strong voice at the provincial level.
- Information Resources:
 - ✓ Northern CARE Website
 - ✓ Transportation Issues in Recycling
 - ✓ Maxus Technology - Northern eCARE Recycling Proposal