

LAC LA BICHE COUNTY
PUBLIC WORKS COMMITTEE

DATE: April 15, 2014
TIME: 10:00 a.m.
PLACE: Council Chambers
County Centre

AGENDA

1. CALL TO ORDER
2. ADOPTION OF AGENDA
3. ADOPTION OF MINUTES
 - 3.1 February 18, 2014 Public Works Committee Meeting;
 - 3.2 February 18, 2014 Monthly Strategic Session;
 - 3.3 February 24, 2014 Strategic Session – Water & Sewer Hook-ups and Offsite Levies.
4. UNFINISHED BUSINESS
5. URGENT MATTERS
6. DELEGATIONS
 - 6.1 10:30 a.m. Delegation – Alberta Wood Waste Recycling Association – Re: Bioenergy Presentation.
7. DISPOSITION OF DELEGATIONS
 - 7.1 Delegation – Alberta Wood Waste Recycling Association – Re: Bioenergy Presentation.
8. TRANSPORTATION SERVICES
 - 8.1 Manager's Report (hand-out);
 - 8.2 Briefing – Boat Launch Study;
 - 8.3 Briefing – In Kind Costs – On the Pond Hockey Tournament;
 - 8.4 Briefing – In Kind Costs – Winter Festival of Speed;
 - 8.5 Briefing – Grader Beats;

- 8.6 Briefing – Railway Avenue Paving;
- 8.7 Briefing – Road Maintenance.
- 9. UTILITIES
 - 9.1 Manager’s Report (hand-out);
 - 9.2 Briefing – Water and Sewer Rates;
 - 9.3 Briefing – Utility Service Fees;
 - 9.4 Discussion – Odishaw Development (addition to agenda).
- 10. SOLID WASTE AND RESOURCE RECOVERY MANAGEMENT
 - 10.1 Manager’s Report (hand-out);
 - 10.2 Briefing – Duplex Proposals and Solid Waste and Resource Recovery Management Bylaws;
 - 10.3 Roadside Clean Up (addition to agenda).
- 11. INFRASTRUCTURE PERTINENT TO PUBLIC WORKS
- 12. COUNCIL ITEMS *(if necessary)*
- 13. IN CAMERA SESSION
 - 13.1 Personnel Matter (section 17 FOIP) (addition to agenda).
- 14. ADJOURNMENT

**LAC LA BICHE COUNTY
PUBLIC WORKS COMMITTEE MEETING
COUNTY CENTRE, LAC LA BICHE**

April 15, 2014 – 10:00 a.m.

Minutes of the Lac La Biche County Public Works Committee Meeting held on April 15, 2014 at 10:00 a.m.

CALL TO ORDER Mayor Langevin called the meeting to order at 10:02 a.m.

PRESENT	Aurel Langevin	Mayor
	Robert Richard	Councillor / Deputy Mayor
	Wanda Austin	Councillor
	Richard Olson	Councillor
	David Phillips	Councillor
	MJ Siebold	Councillor
	Tim Thompson	Councillor
	Hajar (Jerry) Haymour	Councillor (entered at 11:14 a.m.)
	John Nowak	Councillor

STAFF IN ATTENDANCE	Jeff Lawrence	Interim Chief Administrative Officer/ General Manager, Operations
	Shadia Amblie	Manager, Communications
	Melanie McConnell	Manager, Legislative Services
	Joanne Onciul	Legislative Services Coordinator

ADOPTION OF AGENDA

PW.14.021 Motion by Councillor Austin to approve the April 15, 2014 Public Works Committee Meeting agenda as amended:

- Addition of Item 9.4 Discussion – Odishaw Development;
- Move Item 6.1 Delegation – Alberta Wood Waste Recycling Association to after Item 2.0 – Adoption of Agenda;
- Addition of Item 10.3 Roadside Clean Up.

CARRIED UNANIMOUSLY

Deputy Mayor Richard assumed the Chair.

DELGATIONS

- 6.1 Delegation – Alberta Wood Waste Recycling Association – Re: Bioenergy Presentation.

Jim Donaldson, Chairman for Alberta Wood Waste Recycling Association, provided a PowerPoint presentation regarding closed loop wood waste recycling initiatives, as attached to and forming part of these minutes.

Toso Bozic, Agroforestry/Bioenergy Specialist, of Alberta Agriculture and Rural Development provided a PowerPoint presentation regarding small community bioenergy projects, as attached to and forming part of these minutes.

Deputy Mayor Richard thanked the presenters for their presentation.

RECESS

Deputy Mayor Richard called a recess at 11:45 a.m.

RECONVENE

Deputy Mayor Richard reconvened the meeting at 11:53 a.m. with all those Members of Council previously listed in attendance.

ADOPTION OF MINUTES

- 3.1 February 18, 2014 – Public Works Committee Meeting;

PW.14.022 Motion by Councillor Mayor Langevin to adopt the February 18, 2014 Public Works Committee Meeting minutes as circulated.

CARRIED UNANIMOUSLY

- 3.2 February 18, 2014 – Monthly Strategic Session;

PW.14.023 Motion by Councillor Nowak to adopt the February 18, 2014 Monthly Strategic Session minutes as circulated.

CARRIED UNANIMOUSLY

- 3.3 February 24, 2014 – Strategic Session – Water & Sewer Hook-ups and Offsite Levies.

PW.14.024 Motion by Councillor Siebold to adopt the February 24, 2014 Strategic Session – Water & Sewer Hook-ups and Offsite Levies minutes as circulated.

CARRIED UNANIMOUSLY

DISPOSITION OF DELEGATIONS

7.1 Delegation – Alberta Wood Waste Recycling Association – Re: Bioenergy Presentation.

PW.14.025 Motion by Councillor Nowak to direct Administration to provide any information with respect to Lac La Biche County energy consumption rates to Mr. Bozic, and further to send a letter of thank you to Mr. Bozic and Mr. Donaldson for their presentations.

CARRIED UNANIMOUSLY

RECESS

Deputy Mayor Richard called a recess at 12:06 p.m.

RECONVENE

Deputy Mayor Richard reconvened the meeting at 1:00 p.m. with all those Members of Council previously listed in attendance.

TRANSPORTATION SERVICES

8.1 Manager's Report (hand-out);

Jeff Lawrence, Interim Chief Administrative Officer, General Manager, Operations provided an update on Transportation Services, Parks and Open Spaces Capital Projects.

Brian Shapka, Manager, Transportation Services, Parks & Open Spaces continued with the update on Transportation Services, Parks and Open Spaces Capital Projects and further provided highlights of the departments' activities.

PW.14.026 Motion by Mayor Langevin to accept the Transportation Services, Parks & Open Spaces Manager's Report as information.

CARRIED UNANIMOUSLY

8.2 Briefing – Boat Launch Study;

PW.14.027 Motion by Councillor Olson to accept the Briefing – Boat Launch Study as information.

CARRIED UNANIMOUSLY

TRANSPORTATION SERVICES

8.3 Briefing – In Kind Costs – On the Pond Hockey Tournament;

PW.14.028 Motion by Councillor Haymour to accept the Briefing – In Kind Costs – On the Pond Hockey Tournament as information.

CARRIED UNANIMOUSLY

8.4 Briefing – In Kind Costs – Winter Festival of Speed;

PW.14.029 Motion by Councillor Phillips to accept the Briefing – In Kind Costs – Winter Festival of Speed as information.

CARRIED UNANIMOUSLY

PW.14.030 Motion by Mayor Langevin that Administration brings forward amendments to the Sponsorship Policy to provide feedback to organizations on in-kind value of services provided by the County for their event.

CARRIED UNANIMOUSLY

8.5 Briefing – Grader Beats;

PW.14.031 Motion by Councillor Olson to accept the Briefing – Grader Beats as information.

CARRIED UNANIMOUSLY

8.6 Briefing – Railway Avenue Paving;

PW.14.032 Motion by Councillor Haymour to direct Administration to research paving requirements for new and upgraded developments.

CARRIED UNANIMOUSLY

PW.14.033 Motion by Councillor Siebold to accept the Briefing – Railway Avenue Paving as information.

CARRIED UNANIMOUSLY

8.7 Briefing – Road Maintenance.

Discussion ensued regarding Road Maintenance priorities.

RECESS Deputy Mayor Richard called a recess at 2:03 p.m.

RECONVENE Deputy Mayor Richard reconvened the meeting at 2:15 p.m. with all those Members of Council previously listed in attendance, with the exception of Mayor Langevin and Councillor Thompson.

Councillor Thompson did not return to the meeting.

TRANSPORTATION SERVICES

8.7 Briefing – Road Maintenance (continued).

PW.14.034 Motion by Councillor Austin to accept the Briefing – Road Maintenance as information.

CARRIED UNANIMOUSLY

SOLID WASTE AND RESOURCE RECOVERY MANAGEMENT

10.1 Manager’s Report (hand-out);

Barry Kolenosky, Manager, Resource Recovery Environmental & Agricultural Services provided highlights of the Resource Recovery, Environment & Agriculture department’s activities.

PW.14.035 Motion by Councillor Phillips to accept the Resource Recovery Environmental & Agricultural Services Manager’s Report as information.

CARRIED UNANIMOUSLY

10.2 Briefing – Duplex Proposals and Solid Waste and Resource Recovery Management Bylaws;

PW.14.036 Motion by Councillor Siebold that Administration check with other municipalities on how they handle narrow lot subdivision waste disposal/curbside pick-up and bring the same forward along with the Waste and Resource Recovery Management Bylaw and Land Use Bylaw to our next Policy and Priorities Committee meeting.

CARRIED UNANIMOUSLY

10.2 Briefing – Duplex Proposals and Solid Waste and Resource Recovery Management Bylaws (continued);

PW.14.037 Motion by Councillor Haymour to accept the Briefing – Duplex Proposals and Solid Waste and Resource Recovery Management Bylaws as information.

CARRIED UNANIMOUSLY

10.3 Roadside Clean Up (addition to agenda).

Discussion ensued regarding community clean up initiatives in Lac La Biche County.

PW.14.038 Motion by Councillor Nowak that Administration researches the requirements for towing and salvage yards in the County and to bring forward the same to the next available Policy and Priorities Committee meeting for discussion.

CARRIED UNANIMOUSLY

PW.14.039 Motion by Councillor Austin to direct Administration to contact CN about a right-of-way clean up along the railway.

CARRIED UNANIMOUSLY

RECESS

Deputy Mayor Richard called a recess at 2:58 p.m.

RECONVENE

Deputy Mayor Richard reconvened the meeting at 3:06 p.m. with all those Members of Council previously listed in attendance, including Mayor Langevin.

UTILITIES

9.1 Manager's Report (hand-out);

Gary Siebold, Manager, Utilities provided an update of the Utility Department's Capital Projects and further provided highlights of the department's activities.

PW.14.040 Motion by Councillor Olson to accept the Utilities Manager's Report as information.

CARRIED UNANIMOUSLY

9.2 Briefing – Water and Sewer Rates;

Discussion ensued regarding water and sewer rates.

PW.14.041 Motion by Councillor Austin to extend the Public Works Committee meeting to the end of the agenda.

CARRIED UNANIMOUSLY

RECESS

Deputy Mayor Richard called a recess at 4:10 p.m.

RECONVENE

Deputy Mayor Richard reconvened the meeting at 4:27 p.m. with all those Members of Council previously listed in attendance, with the exception of Councillor Siebold.

UTILITIES

9.2 Briefing – Water and Sewer Rates (continued);

PW.14.042 Motion by Mayor Langevin to direct Administration to bring forward an amendment to the sewage bylaw to sustain the residential dumping fees for rural residential at \$20.50 per household.

CARRIED UNANIMOUSLY

Councillor Siebold returned to Council Chambers at 4:30 p.m.

9.3 Briefing – Utility Service Fees.

Councillor Haymour left Council Chambers at 4:31 p.m.

PW.14.043 Motion by Councillor Olson to accept the Briefing – Water and Sewer Rates as information.

CARRIED UNANIMOUSLY

Councillor Haymour returned to Council Chambers at 4:33 p.m.

Discussion ensued regarding Utility Service Fees.

Councillor Phillips left Council Chambers at 4:57 p.m.

Councillor Phillips returned to Council Chambers at 4:59 p.m.

9.3 Briefing – Utility Service Fees (continued).

PW.14.044 Motion by Councillor Olson to bring forward amendments to the Utility Service Fees Bylaws to reflect Administration's recommendations within the briefing presented, and further, that amendments be brought forward to the next Council Meeting.

IN FAVOUR

**Mayor Langevin
Councillor Austin
Councillor Richard
Councillor Olson
Councillor Phillips
Councillor Siebold
Councillor Thompson**

OPPOSED

**Councillor Haymour
Councillor Nowak**

CARRIED

PW.14.045 Motion by Councillor Siebold to change the gas rate to match Natural Gas Co-op.

CARRIED UNANIMOUSLY

9.4 Odishaw Development (addition to agenda).

PW.14.046 Motion by Mayor Langevin to defer item 9.4 to the next regular meeting.

CARRIED UNANIMOUSLY

PW.14.047 Motion by Mayor Langevin to add item 13.1 – Personnel Matter (section 17 FOIP) to the agenda.

CARRIED UNANIMOUSLY

PW.14.048 Motion by Councillor Phillips to go in camera at 5:10 p.m.

CARRIED UNANIMOUSLY

IN CAMERA SESSION

PW.14.049 Motion by Councillor Phillips to go in camera at 5:10 p.m.

CARRIED UNANIMOUSLY

13.1 Personnel Matter (section 17 FOIP).

RETURN TO REGULAR MEETING

PW.14.050 Motion by Councillor Nowak to proceed with the meeting out of camera at 5:47 p.m.

CARRIED UNANIMOUSLY

BUSINESS ARISING OUT OF “IN CAMERA SESSION”

13.1 Personnel Matter (section 17 FOIP).

No action required.

ADJOURNMENT

PW.14.051 Motion by Mayor Langevin to adjourn the Public Works Committee Meeting of April 15, 2014 at 5:47 p.m.

CARRIED UNANIMOUSLY

Robert Richard, Deputy Mayor

**Jeff Lawrence, B. Comm, MPA
Interim Chief Administrative Officer**



**ALBERTA WOOD WASTE
RECYCLING ASSOCIATION**
PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES

Recycling of Wood waste!

*“Our legacy to assist future generations to benefit from
our forward actions in creating and implementing sustainability
through the recycling of Wood waste”*

Presenter: Jim Donaldson, Chairman
Alberta Wood Waste Recycling Association [AWWRA]

- REDUCING THE CARBON FOOTPRINT -

R 4: - Rethink - Reduce - Reuse - Recycle Wood Waste

| --- www.awwra.ca --- |



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Lac La Biche County Representatives

Good morning stakeholder(s).

The Alberta Waste Wood Recycling Association [AWWRA] is providing a power point presentation on the topic of how to implement a cost efficient, environmentally sound closed loop Wood waste recycling initiative.

“Today's Wood waste ” –

“Tomorrow's Resources | Integrating Energy AND Environmental”



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**ALBERTA WOOD WASTE
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**PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES**

Background

Alberta Waste Wood Recycling Association [AWWRA] - is a non-profit organization promoting closed loop Wood waste recycling practises for the stakeholder(s) in order to achieve Sustainability by recycling Wood waste.

Established in 2012 the Alberta Wood Waste Recycling Association [AWWRA] was created for the purpose to fulfill the environmental, social and economic need to provide the Wood waste stakeholder(s); - with the essential business “knowledge and resource information” to enable the Wood waste stakeholder(s) to successfully implement their own environmentally sound closed loop Wood waste recycling program.

“As established recycling Wood waste is creating a self-sufficiency economy”



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**ALBERTA WOOD WASTE
RECYCLING ASSOCIATION**

**PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES**

Mission

Alberta Waste Wood Recycling Association [AWWRA] - encourages and promotes voluntary Wood waste recycling stewardship in order to achieve Sustainability by recycling Wood waste.

Responsibilities

The [AWWRA] recognizes the importance of environmental protection and enhancement, and is committed to providing leadership in closed Loop Wood waste recycling initiatives.

The Alberta Wood Waste Recycling Association [AWWRA] facilitates the development of relationships between communities and key stakeholders through its membership. Providing a forum for the exchange of information between members and the populace of Alberta, Canada.

“Wood Waste recycling - using local resources to meet local needs”



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Environmental Guidelines

The Alberta Waste Wood Recycling Association [AWWRA] recognizes the importance of environmental protection and enhancement, and is committed to providing leadership in closed loop Wood waste recycling initiatives’.

The Alberta Waste Wood Recycling Association is compliant with the requirements set by companies that are active with the LEED CANADA program.

Our Recycling Initiatives are based on the Criteria;

Adapted & Implemented by the Canada Green Building Council - (CaGBC)

Leadership in Energy and Environmental Design (LEED)



“Connect. Engage. Recycle Wood Waste”



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RECYCLING RESOURCES**

Stakeholder(s)
Business relationship(s)

The Alberta Waste Wood Recycling Association [AWWRA] works closely with all levels of; -

Government, recycling facilitators, equipment manufacturers, product suppliers, Wood waste generators and the stakeholder(s) in providing the respective AWWRA “educational Wood waste recycling resource information”.

The AWWRA assists our members and partnerships in creating viable, economically sound closed loop Wood waste recycling initiatives through their – services, equipment and or products

“Renewable Wood waste recycling – using local resources to meet local needs”



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**ALBERTA WOOD WASTE
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**PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES**

Decree

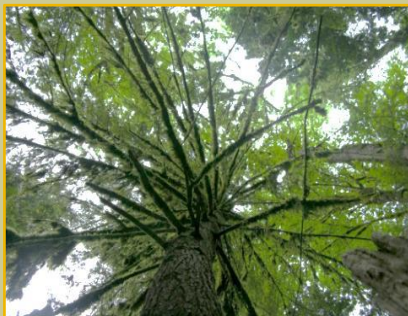
The Alberta Waste Wood Recycling Association [AWWRA] will take the initiative to act as an advocate for responsible Waste diversion of Wood waste materials in the context of environmental protection, recycling through reuse, social acceptability and economic feasibility.

The [AWWRA] will pursue its activities... while developing harmonious relationships with our membership and the public at large.

Philosophy

At Alberta Waste Wood Recycling Association [AWWRA], we deliver our educational closed loop recycling initiatives with the philosophy of facilitating partnerships for sustainability through environmentally sound, closed loop Wood waste recycling practises.

“Clear Thinking; creating sustainable waste reduction programs for a waste-free future”



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PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES

Endorsement

The Alberta Wood Waste Recycling Association [AWWRA] assists our members and partnerships in creating viable, economically sound closed loop Wood waste recycling initiatives through their – services, equipment and or products.

The AWWRA promotes its memberships business services to the Wood waste stakeholder(s) through the use of our corporate media resource platforms; –

- ✓ Social mediums
- ✓ Networks
- ✓ Forums
- ✓ Virtual communities
- ✓ Business tenders
- ✓ Events and the AWWRA membership database



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PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES

Providing - Environmental - Sustainability - Solutions

Our Commitment to the Environment

Sustainability leadership is more than a just slogan ...

It means working with likeminded people, caring for our environment -

Together sustainability will be achieved through our combined Environmental Responsibility Initiatives -

- **Alberta Waste Wood Recycling Association [AWWRA]** - Jim Donaldson, Chairman

“Recycling Wood waste is being conscientious of our environment”

“Choosing to recycle Wood waste is making an intelligent choice, an essential choice”



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PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES

Alberta Waste Wood Recycling Association [AWWRA]

No more Landfilling or burning of Wood - It's a recyclable resource -

Why recycle Wood waste?

- ✓ It's cost efficient
- ✓ Extends the Life of the Landfill(s)
- ✓ Improve the Ecology
- ✓ Environmental Stewardship
- ✓ It's The Right Thing To Do
- ✓ Lead by example - Sustainability Leadership

“Sustainability awareness makes the time right to expand the existing recycling program”



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The Alberta Waste Wood Recycling Association [AWWRA]

Reusable Wood Waste



“Wood waste recycling - creating local economy”

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RECYCLING RESOURCES

The Alberta Waste Wood Recycling Association [AWWRA]

Reusable Wood Waste



“Wood waste recycling - using local resources to meet local needs”

Wood Waste Recycling



**ALBERTA WOOD WASTE
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PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES

The Alberta Waste Wood Recycling Association [AWWRA]

Reusable Wood Waste



“Wood waste recycling”

Wood Waste Recycling



**ALBERTA WOOD WASTE
RECYCLING ASSOCIATION**

**PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES**

Stop Landfilling or burning of Wood waste - It's a renewable resource -



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**PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES**

“Using Wood waste Now”

Current - Reuse programs of Wood waste through various strategic applications –

Range from & include;

Wood Waste Reuse Processes - Landscaping / Compost / Mulch ground cover / Erosion and sediment control / Geo-synthetic filter socks / Paths or provisional roads / Drilling hazmat waste absorbent / Landfill daily cover / Wood pellets

Waste to Energy

Biomass energy project development / Sustainable bio-energy systems / Biomass conversion to energy / Biomass Initiatives’ / Wood Waste to Energy - Biomass Initiatives’

Converting Waste into Renewable - Resources!



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Waste to Energy

Biomass Feed-stocks - *some of the most common (and/or most promising) biomass feedstock's are:*

Wood waste:

Forestry materials – Logging residues, forest thinning

Treated Wood waste – Creosote Wood waste - Railway Tie | Utility Poles

Agricultural Wood residues – Corn stover, wheat straw, rice straw, orchard pruning's

Animal by-products – Tallow, fish oil, manure

Bio char – Bio char is a solid material obtained from the carbonisation of biomass.

Peat moss – cultivated Alberta Sphagnum Peat Moss

Grains and starch crops – sugar cane, corn, wheat, sugar beets, industrial sweet potatoes

Food waste – waste produce, food processing waste

Energy crops – Switch grass, miscanthus, hybrid poplar, willow, algae

Urban and suburban wastes – municipal solid wastes (MSW), lawn wastes, wastewater treatment sludge, urban wood wastes, disaster debris, trap grease, yellow grease, waste cooking oil



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PROMOTING CLOSED LOOP WOOD WASTE RECYCLING RESOURCES

Partners in resource development



ALBERTA WOOD WASTE RECYCLING ASSOCIATION

PROMOTING CLOSED LOOP WOOD WASTE RECYCLING RESOURCES

“PARTNERS IN RESOURCE DEVELOPMENT”

“RECYCLE WOOD WASTE FOR REUSE”

The Alberta Waste Wood Recycling Association [AWWRA] provides the Wood waste stakeholder(s); With the exact business information needed to implement their cost efficient, time sensitive; Environmentally sound closed loop Wood waste recycling program.

JOIN US AT WWW.AWWRA.CA

REDUCING THE CARBON FOOTPRINT

R4: - Rethink Reduce Reuse Recycle - Wood Waste

www.awwra.ca

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RECYCLING ASSOCIATION**

**PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES**

Reforestation

The Alberta Waste Wood Recycling Association [AWWRA] promotes Reforestation through the natural or intentional restocking of existing Alberta forests and woodlands that have been depleted, usually through deforestation.

The Alberta Waste Wood Recycling Association through sustainable Forest Management policies encourage companies and individuals that harvest Alberta's public forests to regenerate them to reflect the original natural diversity.

Voluntary Stewardship - The Alberta Waste Wood Recycling Association [AWWRA] – promotes strategic environmentally sound closed loop Wood waste Reforestation through education and implementation!

“Recycling Wood waste today & for the future generations”



Wood Waste Recycling



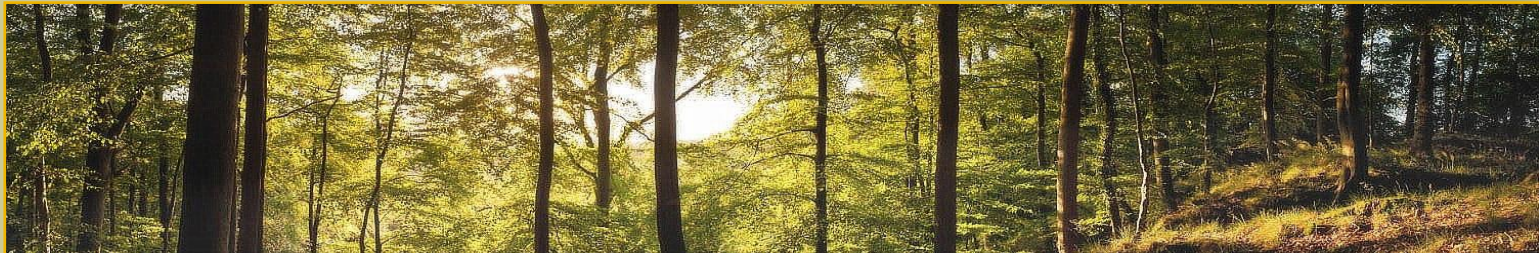
**ALBERTA WOOD WASTE
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**PROMOTING CLOSED LOOP WOOD WASTE
RECYCLING RESOURCES**

“SHARING the environmental KNOWLEDGE – “Recycling WOODWASTE as a renewable RESOURCE”

Associates, on behalf of the Alberta Waste Wood Recycling Association [AWWRA], thank you for your industry support, we look forward to forming a business relationship with the Lac La Biche County in achieving Sustainability through the recycling of Wood waste.

Regards,

Jim Donaldson, Chairman
Alberta Waste Wood Recycling Association [AWWRA]



Proud Partner
of the AWWRA

Join us at
www.awwra.ca



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RECYCLING RESOURCES

For more information about the Alberta Waste Wood Recycling Association [AWWRA] - contact:

2014 [AWWRA] – Board Executives’

Jim Donaldson, Chairman –
Linda McDonald, Vice Chairman –
Robert Smith, Landfill | Recycling Facilities Liaison –
Janet Altmiks, Secretary –
Clarence Gadowski, Treasurer –

“Building on our legacy as a leader in sustainability of recycling Wood waste”

Contact Number: (780) 239-5445

REDUCING THE CARBON FOOTPRINT

R4: Rethink Reduce Reuse Recycle - WOOD WASTE

--- www.awwra.ca ---



Wood Waste Recycling

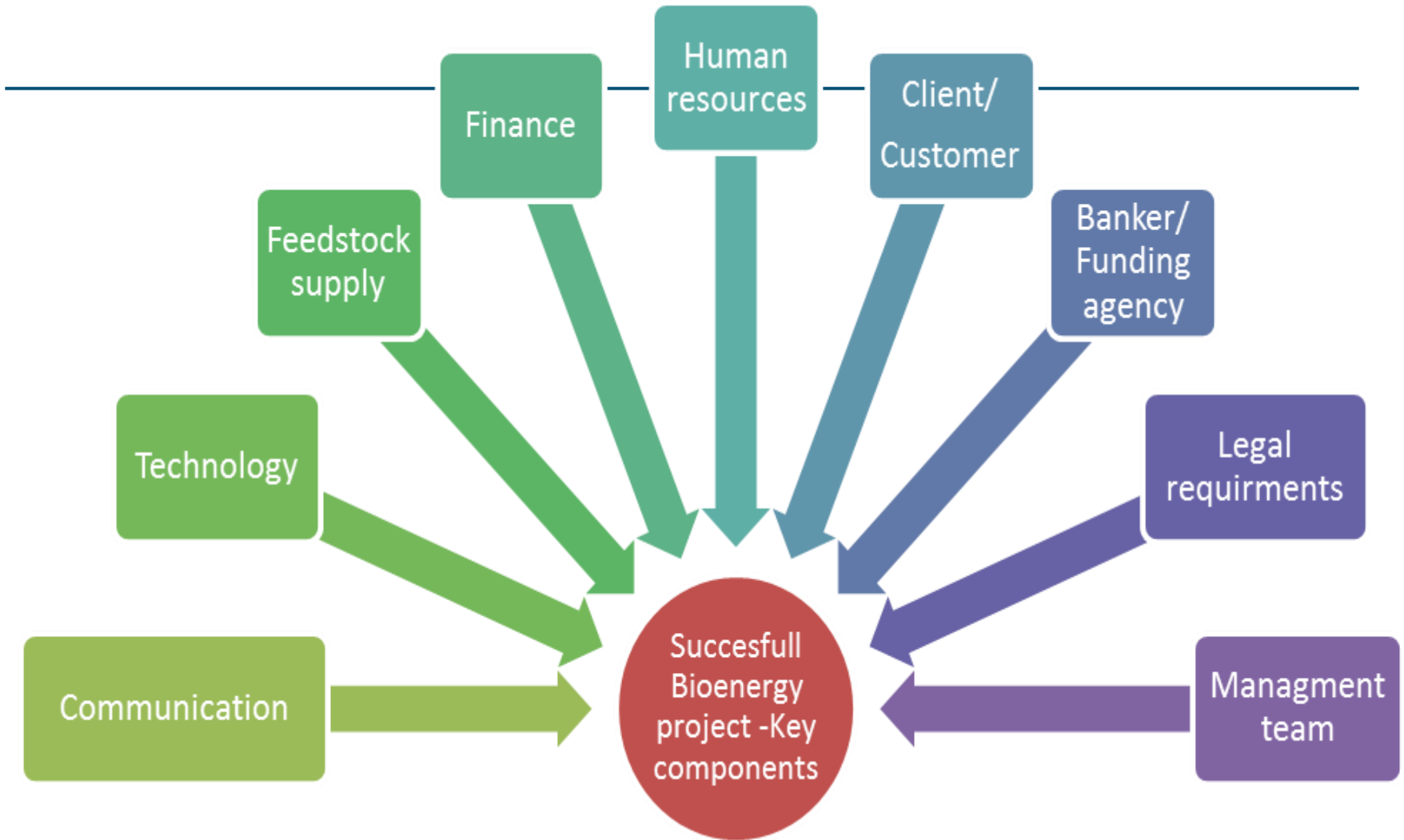
Opportunity for small community bioenergy projects

Toso Bozic

Bioenergy/Agroforestry Specialist

Alberta Agriculture and Rural
Development

Key components of Bioenergy project



Energy conversion

- 1 KW = 3,412 BTU
- 1 GJ = 946,817 BTU or approximately 1 million BTU
- 1 GJ = 277 KW
- Average heat use in Alberta 160 GJ/year
- Furnace size is 80-100,000 BTU or 30 KW size unit

Comparison of Fuel Efficiency

Fossil Fuel

Dodds Coal

Natural Gas

Fuel Oil

Energy Content

17.8 GJ/Tonne

38.0 GJ/m³

40.8 GJ/Tonne

Renewable Fuel

Wheat

Wheat Straw

Barley Straw

Canola Oil

Poplar

Municipal Waste (as received)

Energy Content

17.1 GT/Tonne

16.5 GJ/Tonne

16.2 GJ/Tonne

40.6 GJ/Tonne

18.2 GJ/Tonne

11.0 GJ/Tonne

Technology



Tree nursery –Pineland Manitoba





Fink Enderby District Energy 2012 Making It Happen



8 Currently in 2013



ROYAL INN – 15kW
Size: 10,000 sq/ft
-Domestic Hot Water
-Space Heating (later)



Fink District Customer's

ENFAB – 90kW
Size: 8000 sq/ft
-Space Heat: Wall Unit Heaters



CEDAR SOLUTIONS – 60kW
Size: 7000 sq/ft
Space Heating - Unit Heaters



FINK
MACHINE INC.

Alberta

Bio-Burner heating facility at Agroforestry Development Centre



In total 1500 m² greenhouse, office & lab space heated through biomass

Madsen Cabinet Maker - Edmonton...



Camrose County

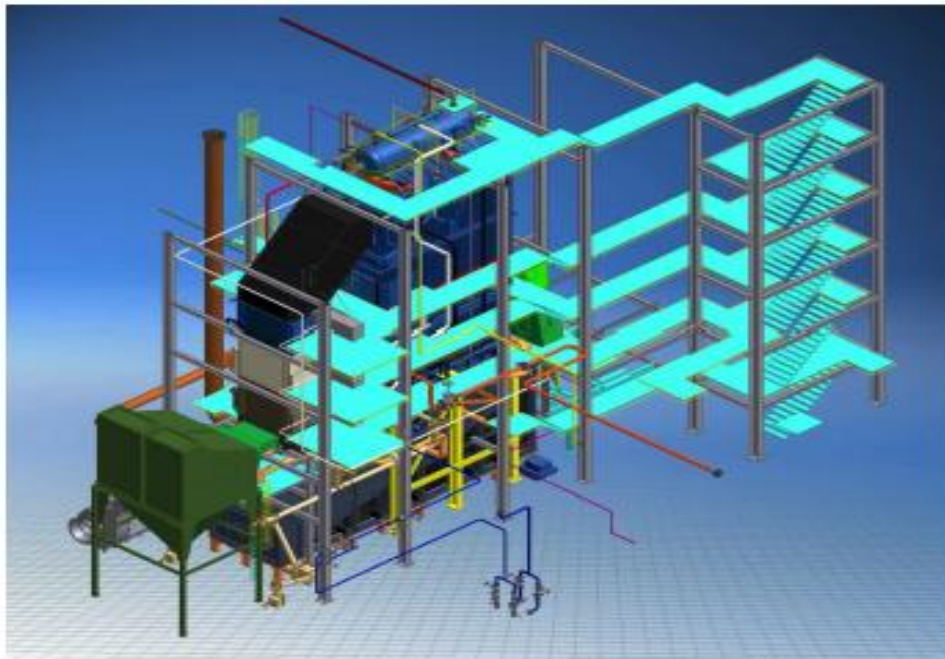


Strathcona County DHS



Combine Heat & Power – Vanderwell Contractors Ltd

Combined Heat & Power (CHP) Slave Lake, AB



18:22:41

www.kalwabiogenics.com

German Landfill -Lambion



German Community Run Landfill Bioenergy project



German Landfill project details

▶ TECHNOLOGY

Hot steam boiler with 3.150 kW
Moving grate furnace with 3.600 kW
Turbine 2-step Siemens KKK, inlet 35 bara,
400 °C ~ 500 psi, outlet 0,1 bara ~ 1,5 psi,
electrical output max. 800 kW

▶ OPERATION

One operator approx. 4 hours/day for
refilling fuel bunker and boiler monitoring.
unmanned operation all other time of the
day and night

▶ YEAR OF CONSTRUCTION: 2007

FUEL

Wood chippings from landscape conservation-cut,
energy wood of composting and crown remainder
wood (hog fuel)

ENGINEERING PROPERTY

Average heating value:	2,5 kWh/kg
Dasity:	260 kg/m3
Water content:	20% - 50%
Annual throughput:	11.500 to



Appropriate Technology

- Appropriate technology
 - » Ability to convert local fuel supply into heat/power
 - » Must meet local permitting specifications
- Technology must be proven:
 - » Commercially available
 - » Operates efficiently on available fuel supply
 - » Operates cleanly on available fuel supply
 - » Appropriate for site and local resources

RISKS -Technology

- Mostly European technology some of them not known here; more expensive but more reliable and proven to work
- Ability to handle contamination, various wood chips sizes
- Services – provider must provide training
 - Very few dealers in Alberta for wood biomass technology
 - Can they train local trade people or have subcontract
 - Can be on-line 24 hours control from their side
 - How long it will take to fix it in worse case scenario
 - What guarantees they provide if their system is not functioning
 - History of company services and always ask for references
 - How complex or dumb proof the technology is
 - Safety issues

Future Challenges and Opportunities

- Have permanent European wood boiler dealership open in Alberta
- Have “Alberta Made” a high efficient automated wood boiler
- Doing research and innovation into new technology for small to medium size systems
- Have small to medium size CHP system that are proven
- Have small automated system for farms and small rural residents
- Have a developed support infrastructure for technology provider
- Have technology that are competitive with oil and gas technology
- Have a long term research in this area

Source of wood biomass !!!



Biomass type will greatly affect supply costs

From MWD to sawdust and bark to branches and tops to roundwood to small trees to



\$/t

-\$/t



\$\$/t



\$\$\$ /t



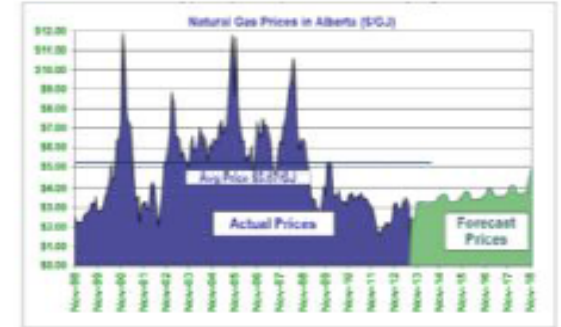
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Wood supply

- Even through there is plenty of wood available for small project –from private woodlot to landfill waste but the key is **WHO CONTROLS WOOD SUPPLY**
- **Myth – free wood** – such a thing does not exist
- **Feedstock supply is KEY** in bioenergy project: Wood supply chain– harvesting, chipping, transport – for small project almost does not exist
- There is no small woodlot supply contractors
- Quality is an issue : size of particles, moisture, not uniform supply
- Storage and handling –plenty of issues
- Price – variable, unpredictable and all over the place

More challenges

- Access to biomass
 - Biomass resides with forestry licencees on public land
 - Mobilization of woodlot owners to supply biomass on private land
- Biomass estimations
- Competition with natural gas
- Availability of small-scale equipment



Matapedia forest biomass supply flow



Gathering



Forwarding



Conditioning



Chipping



Transport



Delivering

Storage



Things that don't burn



Camrose -Fuel handling



Bale Chipping Process



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

Canada 

Blower for Loading Wood Chips



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

Canada 

Future Challenges and Opportunities in Wood supply

- Woodlot owners and municipal landfills should be investors in bioenergy project not just suppliers
- Wood supply chain – harvesting, chipping, transport – must function well and price competitive
- Develop research on economics of small wood supply chain for bioenergy
- Develop pilot projects that address issues with storage and handling
- Address the issues with quality of feedstock
- FIRE ISSUES
- Price – stable but competitive
- Supply reliable and with good quality and quantity

Legal work

- Can be very vague and cumbersome to obtain all necessary permits
- Insurance is still hard to obtain
- Understand all contracts
- Understand funding requirements
- Understand AB power regulations- Get to the grid –getting easier but still lots of work
- Deal with current energy provider
- Contracts for sale of heat to local business
- Long term contract with farmers for wood supply

Financing

- At beginning very skeptical and not interested
- Long Term payback
- Most of local financial institutions knows very little about financing bioenergy project
- **Many projects are driven by emotions not really by real business scenario**
- **There is NO competition with World market price**
- Locally controlled –supply, and end user
- Heat is less hassle with Regulations –eg. electricity

Financing Future

- Corporate Sustainability is standard for many large companies including banks –so green energy become part of their portfolio
- Project range from \$ 250,000 up to \$ 5 million dollars – easier to get money then for multi million dollars projects
- Many Government Grants are still available
- Foreign investors are very keen in investing in bioenergy projects in Alberta
- Local banks and agricultural financing institutions(AFSC, FCC, etc) are willing to invest and provide loan to project

Human Resources

- Biggest Challenge of All
- Lots of people are interested in renewable energy projects – it is kind of sexy
- Lot of “instant expertise “ in the subject matter
- Lack of interest of research institutions
- Lack of education and pilot projects was impeding progress
- Project manager with skill and knowledge in the bioenergy project is almost impossible to find
- Some pilot project struggle immensely

Human Resources –continued

- Unfortunately many bioenergy projects are given to people that has very little or no knowledge about all aspect of project
- TIME – seems to me everybody doesn't have a time beside their regular work
- Training is still inadequate for operators, suppliers, builders, codes, permits, etc
- Political or Company leaders gets very exited while administration doesn't' care or in some cases will do everything to stop project – more work
- No understanding of legal, financial or technical requirements for project
- Somebody has to fill up application for grant
- No communication between various company Dept

Human Resource- Future Opportunities

- We do have a pilot projects –we must learn from mistakes
- Develop constant education and education materials that future projects can rely and students learn
- Provide training courses to technology suppliers, wood suppliers, financing and human resources –hands on
- Integrate research institutions, universities and collages with pilot projects to address various issues

Possible bioenergy project for landfill – key consideration

- Cost of woodchips \$ 50 per tonne
- 1 tonne at 50 % moisture is 2.23 MW/h or 8.2 GJ/tonne
- 1 tonne at 20 % moisture is 4.1 MW/h or 14.7 GJ/tonne
- Cost of electricity to grid \$ 90 MW per hour
- Cost of GJ of heat \$ 5.25
- Working operating hours 8000 per year
- Moisture of woodchips 20-55 %
- Return on investment at 8 % rate
- Overhead at 25 % of total cost for building
- Maintenance 10 %
- Life of project 25 years
- Carbon credits are BONUS

La LaBiche County current energy consumption

- Total Energy consumption cost is \$ 1.7 million in last year
- In heat county spent between \$250-300,000 per year rest is electricity
- If county pays \$ 1.4 million on daily basis per 365 days you spent \$ 3835 per day for electricity .. And if price of electricity in average is 0.09 cent per Kw or spend around 42 617 Kw = 42.6 MW a day for 24 hours operation
- So 42.6 MW per day x 365 = 15549 MW/h per year
- Average 1 MW facility will produce= 8000 MW per year as rest is due to maintenance
- So you may need 2 MW facility to fulfill all your needs

Opportunities and challenges for landfill bioenergy project

- You already have a wood at your site
- You already have some equipment such as front loader, chipper, storage, etc
- You may get additional wood sources from farmers or woodlot owners
- **Challenges**
 - Technology available and reliable
 - Compete with natural gas
 - People and knowledge
 - Long term wood supply
 - Time and money
 - Support from community

Some tips for landfill bioenergy project

- Secure wood supply – be sure that you know how much you have
- Put appropriate person in charge of project – full time person is best
- Visit already facility that are operating – ask, ask and ask about project
- Involved local bank or investor if you can
- Be careful of sales people
- Develop proper bioenergy project template with specific timelines, and deliveries
- Project must stand alone without any subsidize
- Obtain support from people who has knowledge and experience
- You are in best position to succeed

Summary

- **WE ARE MORE KNOWLEDGABLE AND EXPERIENCED THAN 10 YEARS AGO**

- We do have pilot projects that we can learn
- Technology is available but not as diverse
- Wood supply chain must be strengthen
- Government still provides supports for projects
- We have to have more coordinate approach to issue
- Financial institutions are willing to support projects
- We are away from EU but we can learn from their mistakes
- We have to look into long term investment not just in projects but also **people, research and innovation**
- **Landfills are in best position to establish bioenergy projects**

“ We must understand that our natural resources(water, forest, agriculture, energy is not only an economic value, but also social, religious, spiritual, cultural and environmental value as well and that world of future will demand all above “ *Toso Bozic*

For more information

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