



**MINUTES
DISTRICT OF PORT HARDY
COMMITTEE OF THE WHOLE MEETING
FRIDAY JULY 6, 2018
COUNCIL CHAMBERS, MUNICIPAL HALL
7360 COLUMBIA STREET**

PRESENT: Mayor Hank Bood, Councillors Pat Corbett-Labatt, Dennis Dugas, and Leighton Wishart

ALSO PRESENT: Allison McCarrick, CAO; Glen Catarata, Recreation Facility Attendant; Leslie Driemel, Recording Secretary

REGRETS: Councillors Rick Marcotte, John Tidbury and Fred Robertson; Abbas Farahbakhsh, Director of Operational Services; Heather Nelson-Smith, Director of Corporate Services Lynda Sowerby, Director of Financial Services;

MEDIA: None **MEMBERS OF THE PUBLIC:** None

COW 2018-029
APPROVAL OF
AGENDA AS
PRESENTED

A. CALL TO ORDER

Mayor Bood called the meeting to order at 2:00 pm.

B. APPROVAL OF AGENDA

Moved/Seconded/Carried

THAT the agenda for the Committee of the Whole meeting of July 6, 2018 be accepted as presented.

C. DELEGATION

1. Rob Martin and Ryan Moore, representatives of CIMCO Refrigeration re: PowerPoint presentation on advantages and disadvantages of Ammonia vs Freon as a refrigerant as well as CIMCO products.

Mayor Bood commented that it is a priority of Council to upgrade the District's recreational facilities. Issues of interest are a heat reclamation feature for the arena that will tie in to the new multiplex building and the aging chiller at the arena.

Mr. Martin and Mr. Moore's presentation and discussion with Council included:

- Review of CIMCO company and their experience in refrigeration.
- Purpose of visit to educate on options available for an arena refrigeration system.
- Considerations include: safety, efficiency, environment, cost, longevity, scalability.

Safety:

- Main hazards of systems, past incidents, rarity of incidents considering number of ice surfaces in North America.
- With proper design and maintenance refrigeration facilities are safe.
- Review of typical arena systems, improved reduction in charge tanks, plate and frame heat exchangers.
- Monitoring and control systems.
- Control hazards through proper ventilation, detection, isolation points and preventative maintenance.

Efficiency:

- Efficiency factors include: selecting correct refrigerant for application and conditions; use heat reclaim when possible; monitor energy consumption; implement new technologies where possible.

Environmental

- Regulatory considerations may change over time, can only implement to standards of the day.
- Refrigerant choices and each of their environmental impacts.

Longevity:

- Reliability of compressor types including hermetic, open reciprocation and open screw.

Scalability:

- Planning for expansion of ice surfaces including pumps, compressor and condenser sizes and capacities.

Moving Forward

Option 1: Replacement

Advantages: Brand new plant, complete warranty, take advantage of new technologies.

Disadvantages: Costs, may require building changes.

- Option 1a: Replacement; lowest cost, commercial grade, adapted for rink conditions, synthetic refrigerant.
- Option 1b: Synthetic refrigerant; industrial grade, engineered for rink conditions, low charge.
- Option 1c: NH3 Refrigerant; industrial grade, engineered for rink conditions low charge, smart connected.
- Option 1d: Any Refrigerant; industrial grade, engineered for rink conditions low charge, inherent heat reclaim.
- Option 1e: CO2 Refrigerant; industrial grade, engineered for rink conditions direct floor, available heat reclaim.

Option 2: Retrofit

Advantages: reduced costs, take advantage of existing equipment, can take advantage of a lot of new technology, can do piece by piece.

Disadvantages: not everything is new, partial warranty.

- Option 2a: reduced costs, take advantage of existing equipment, can take advantage of a lot of new tech, can do piece by piece “Smart Rink Connect”
- Option 2b: make use of existing infrastructure, add additional features, take advantage of new technologies, reduce charge, potential for heat reclamation.

Option 3: Do Nothing

Advantages: no cost

Disadvantages: don't address any of the concerns, no improvement to the plant, no improvement to safety, many other unknown factors.

Discussion with Council included:

- How to determine life of chiller.
- Operator certification requirements of the different refrigerant systems.
- Meshing controls on old equipment and new technology.
- Meshing heat reclamation between arena and multiplex systems.
- Improved monitoring with new equipment.
- New systems require less refrigerants – reduction in costs and risk.

Council members thanked Mr. Martin and Mr. Moore for their informative presentation.

D. ADJOURNMENT

MOVED

THAT the Committee of the Whole adjourn.

Time: 3:40 pm

CORRECT

APPROVED

Original signed by:

DIRECTOR
OF CORPORATE SERVICES

MAYOR

COW 2018-030
ADJOURNMENT