



TOWN OF HINTON

Minutes of the Standing Committee Meeting
held May 23, 2017
Committee Room

Present:

Mayor Rob Mackin, Councillors Glen Barrow, Marcel Michaels, Albert Ostashek, Ryan Maguhn, Stuart Taylor, Matthew Young

Also in Attendance:

Mike Schwirtz, Chief Administrative Officer, Denise Parent, Director of Corporate Services, Laura Howarth, Director of Community Services, Wendy Jones, Director of Planning & Development, Gordie Lee, Director of Infrastructure Services, Wendy Anderson, Executive Assistant

Refer to the Standing Committee Meeting Agenda package for [May 23, 2017](#) for detailed background information.

ORDER

Deputy Mayor Barrow called the Standing Committee meeting to order. The time was 4:06 p.m.

ADOPTION OF AGENDA

There was consensus to accept the Standing Committee Meeting Agenda of May 23, 2017 as presented with the addition of:

2. In Camera – Personnel (FOIP)
3. In Camera – Personnel (FOIP)

CITIZENS "MINUTE WITH COUNCIL"

No citizens wished to speak with Council.

DELEGATIONS AND PRESENTATIONS

TM Gunderson and Lisa Mueller provided a follow-up to their previous presentation provided to Council. The PowerPoint is attached to the May 23, 2017 minutes (Attachment #1). Ms. Mueller stated that Epoch Energy is prepared to invest approximately \$1,000,000 into this project.

Mayor Mackin stated that MP Eglinski has been speaking to this project in parliament with very positive comments being received. Grande Prairie Regional College is very keen to be part of this project and are looking at possible trades training opportunities for them.

Citizens that have questions or comments are to contact either Wendy Jones or Mike Schwirtz who will forward to Epoch.

The chair called for a short recess at 6:15 pm and the meeting reconvened at 6:23 p.m.


Initial

Councillor Michaels left the meeting due to work commitments. The time was 6:15 p.m.

There was consensus that Council accept this report for information

There was consensus that Council direct Administration to bring back all future expenditures on the Geothermal project to Regular Council for approval

There was consensus that Council direct Administration to bring back options for process and wording for a potential plebiscite on Geothermal.

DIRECTION DEFEATED

A break was called at 6:47 p.m. and the meeting reconvened at 6:53 p.m.

ACTION AND DISCUSSION ITEMS

1. Comparison of other Community's Subsidized / Free Transit Passes

There was consensus that Council direct Administration to accept this report for information.

2. Automated Traffic Enforcement

There was consensus that Council assign a Councillor to the ATE Oversight Committee.

DIRECTION WITHDRAWN

There was consensus that Council direct the ATE Oversight Committee to develop an ATE policy and bring this back to Standing Committee.

DIRECTION WITHDRAWN

There was consensus that Council direct Administration to bring back a report on ATE to Regular Council.

YOUNG – That the meeting be extended beyond three hours.

CARRIED

3. Council Action Pending MD-1186

There was consensus that Council request that Action MD-1186 be closed and support placing the Town owned land guide on the website immediately.

4. Council Appointed Board Re-Organization

There was consensus that Councillor Barrow be appointed to the Hinton Municipal Library Board to replace Councillor Taylor.


Initial

ADDITIONAL INFORMATION

1. Urgent Matters from Council
2. Chief Administrative Officer Status Report
3. Legislative and Executive Assistant Logistics Information

MOVE IN CAMERA

YOUNG - That the Standing Committee meeting move in camera.

CARRIED

The time was 7:55 p.m.

MAGUHN - That Standing Committee meeting revert to regular session.

CARRIED

The time was 8:02 p.m.

MAGUHN – That Council direct Administration to move In Camera Item #1 to the June 6, 2017 Regular Council Meeting agenda.

CARRIED

MACKIN - That the Standing Committee meeting move in camera.

CARRIED

The time was 8:03 p.m.

MACKIN - That the Standing Committee revert to regular session.

CARRIED

The time was 8:18 p.m.

ADJOURNMENT

YOUNG -That the Standing Committee meeting adjourn.

CARRIED

The time was 8:19 p.m.




Deputy Mayor



Director of Corporate Services


Initial

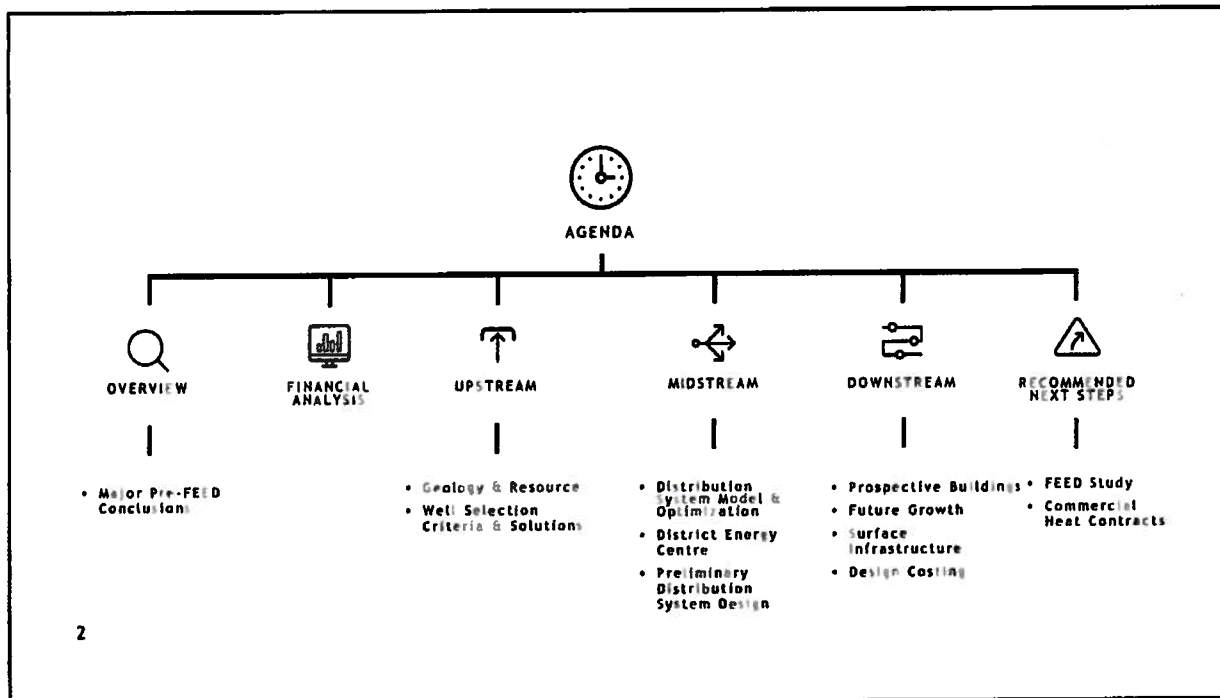


ATTACHMENT 1

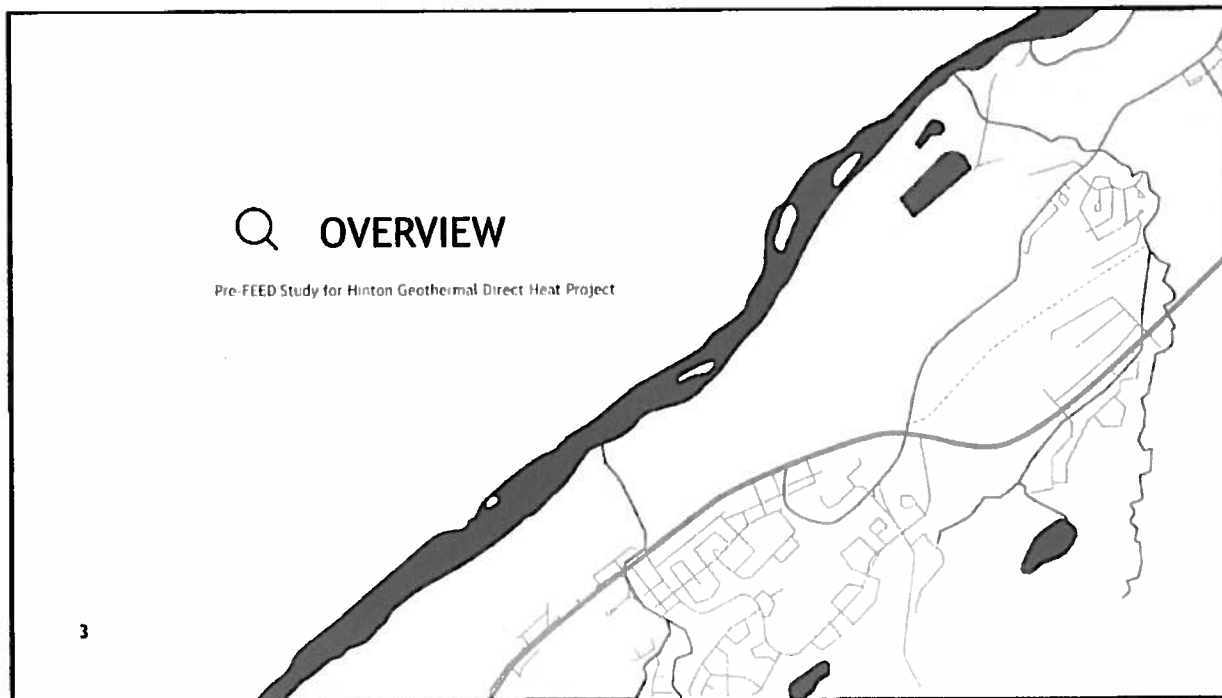


Pre-FEED Report Review

Hinton Geothermal District Energy System

April 2017

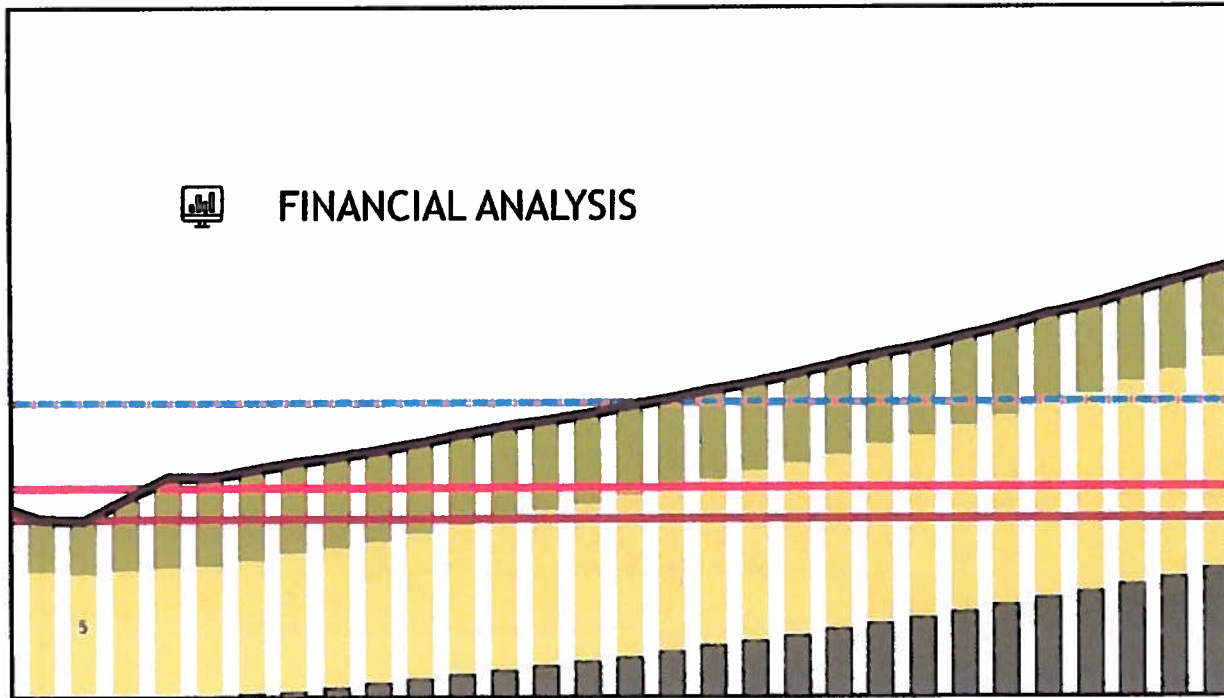





PROJECT SCOPE

- **FINANCIAL ANALYSIS**
 - Pretax unlevered financial analysis for overall project design
- **UPSTREAM: GEOTHERMAL RESOURCE PRODUCTION**
 - Research for geothermal formations/resource potential & reservoir capacity
 - Well & cost analysis for viable geothermal energy production
 - Address regulatory requirements & schedule
- **MIDSTREAM: DISTRICT ENERGY SYSTEM**
 - Design & cost estimate of HGDE & distribution system
 - Identify risks/opportunities with facility options & locations
- **DOWNSTREAM: CUSTOMER ENERGY SERVICES**
 - Identify viability & interconnection requirements for prospective customers
 - Identify thermal load & load profile: Design & Cost Analysis
 - Energy efficiency and GHG calculations

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FINANCIAL SUMMARY



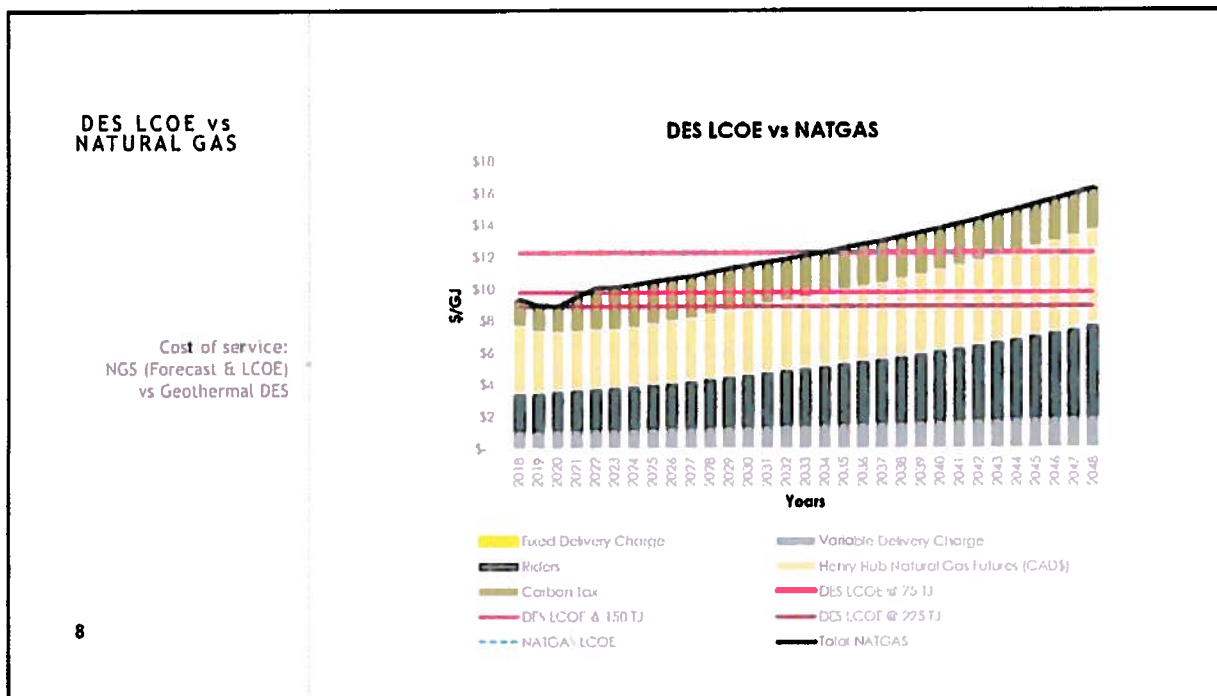
- **16 year payback**
- **5% IRR at 75,000GJ. Scales to -10% IRR at 150,000-225,000 GJ customer heat load**
- **Levelized cost of service for DES -equivalent to current NGS supply**
 - DES supply output of 75,000 GJ/year
 - Competitive lower cost of supply with scaled load
- **DES Capital Cost (Level 5 cost estimate)**
 - Upstream well connection: \$1.4MM
 - DEC/Midstream Distribution System: \$8.1MM
 - Downstream retrofit: \$0.8MM
 - TOTAL: \$10.2MM
 - Small incremental capital intensity with scaled heat load
- **3,795 tonnes CO₂e/year reduction**

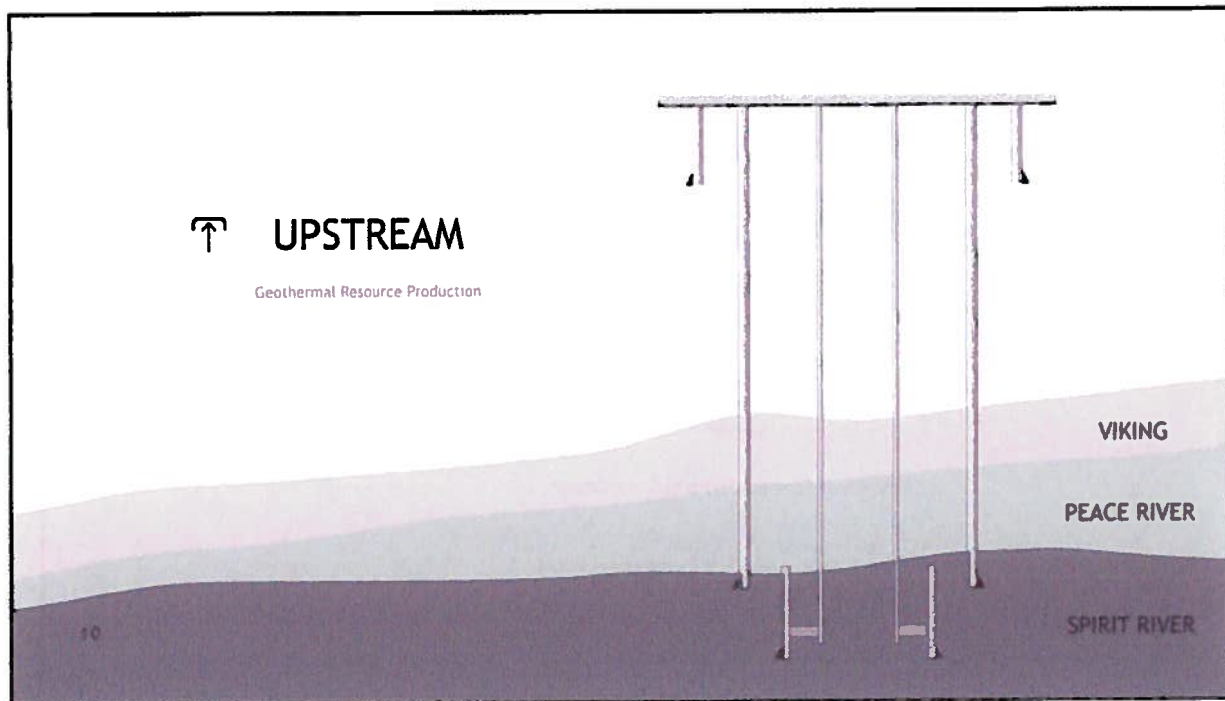
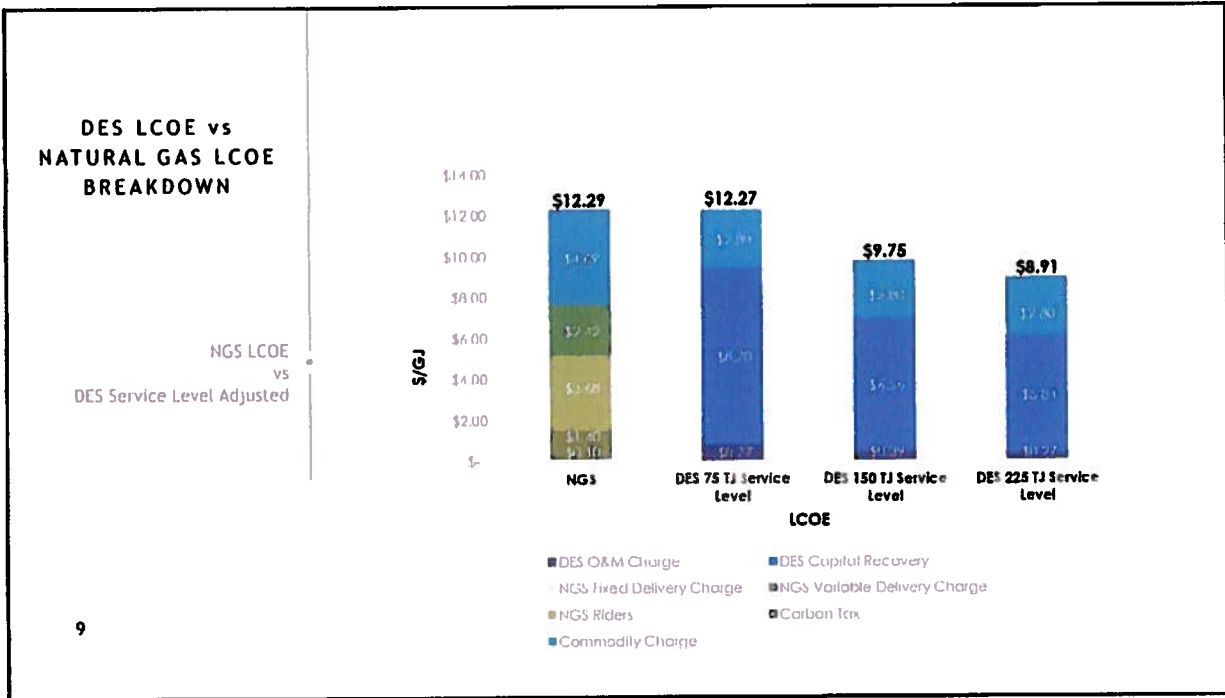
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WHAT THIS MEANS

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- **Competitive with existing natural gas service**
 - Compelling heat price advantage at scale achieved in the longer term (150 225GJ)
- **Delivers significant GHG emission reductions**
- **Amortizes capital similarly to other comparable infrastructure projects**
- **Insulates customers from commodity market**
 - Commodity variance
 - Escalation in transmission, distribution & administrative costs
- **Improves energy & financial efficiency of status quo**
- **Aligns with community green growth & job creation strategies**
- **Establishes Hinton as a leader of Albertan innovation & renewable energy**







UPSTREAM SUMMARY

- **Extensive local geothermal resource**
 - Verified by oil & gas data, and independent U of A geothermal reservoir study
- **Suitable geological formation targets for heat supply identified**
- **Suitable wells penetrating target formations identified**
 - 14 potential well/well pairs
 - Repurposing necessary to extract resource & meet DES heat requirements
 - All identified wells have necessary access via existing oilfield surface infrastructure
- **AER engaged & in dialogue regarding potential regulatory concerns**
- **Well/well pair to be connected to DEC: -\$1.4MM, 4-10 month process**

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VIABLE GEOLOGICAL FORMATIONS

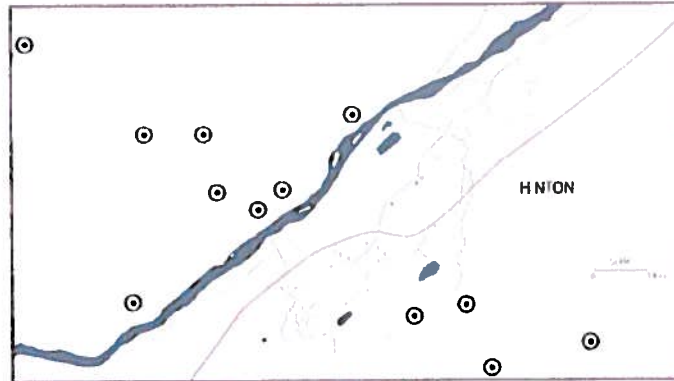
- **Viking**
 - Thickness: ~25m
 - Formation top: -3,375m TVD
 - Estimated reservoir temperature: 115.5C
- **Peace River**
 - Thickness: ~15-40m
 - Formation top: -3,450m TVD
 - Estimated reservoir temperature: 118C
- **Spirit River Formation/Fault Structure**
 - Thickness: ~300m
 - Formation top: -3,500m TVD
 - Estimated reservoir temperature: 119.6C

*There is no hydrocarbon production from these zones

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PROSPECTIVE WELLS

Location of potential DES heat source wells



Well Selection Criteria

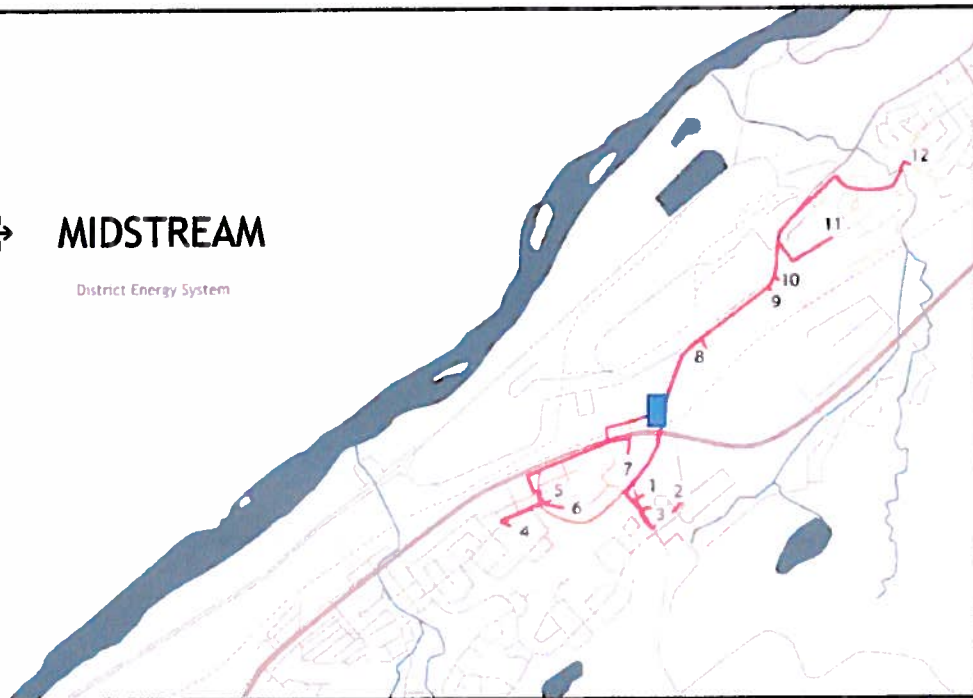
- Depth of the well
- Wellbore diameter
- Wellbore configuration
- Proximity to DEC
- Proximity to other wells & Infrastructure
- Current hydrocarbon production status
- Current well status
- Well entry obstacle

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MIDSTREAM

District Energy System



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MIDSTREAM SUMMARY

Total cost estimate: \$8.1MM

- Construction/installation: \$3.7MM
- Transmission Lines: \$2.7MM
- Connection equipment, etc.: \$1.7MM

Timeline: 4-5 months

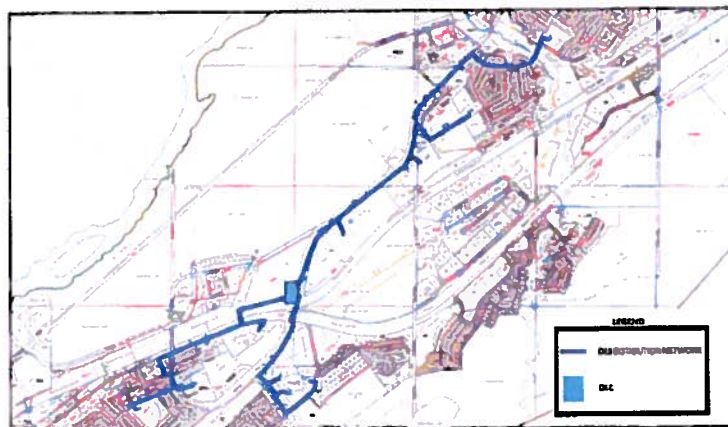
System attributes

- 2.4 MWth
- 22kg/s
- 85C maximum temperature
- 3 loops (Zone 1, 2 & 3)
- 12 buildings
- All zones have additional capacity to add heat load with lower capital intensity

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DES SYSTEM DESIGN

Town of Hinton proposed
DES layout



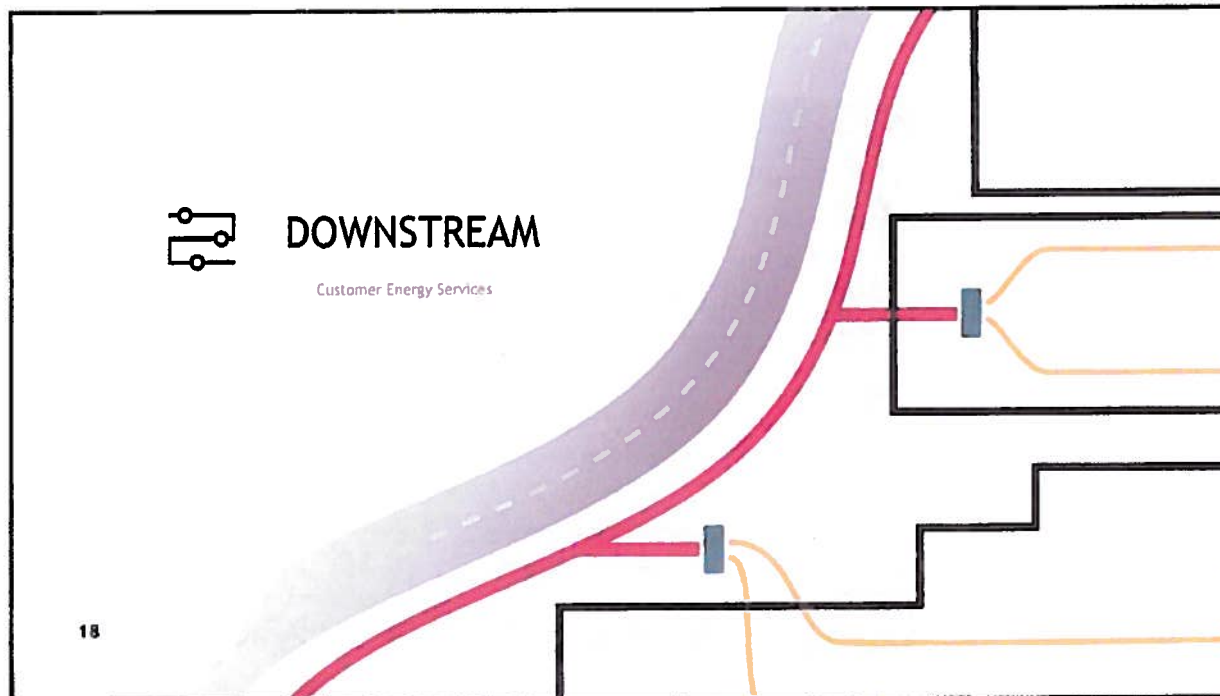
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COSTS

Estimated System Cost

Pipe Material (PVC Plastic)	
Zone 1	\$ 162,000.00
Zone 2	\$ 342,000.00
Zone 3	\$ 480,000.00
Pipeline Construction	
Zone 1 (1,732m)	\$ 606,700.00
Zone 2 (2,844m)	\$ 1,345,400.00
Zone 3 (4,962m)	\$ 1,736,700.00
Interface Units (Materials)	
District Energy Centre (Materials & Construction)	\$ 750,000.00
Transmission Line (4,000m)	
Pipe Materials	\$ 690,000.00
Pipe Construction	\$ 2,000,000.00
Total	\$ 8,112,300.00

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DOWNSTREAM SUMMARY

- **Evaluated feasibility of 12 prospective buildings**
 - Quality of in-place heating systems
 - Existing infrastructure
- **Identified potential retrofit improvements & associated costs**
- **12 building retrofits: \$0.8MM**
- **57.7 TJ/year for current 12 buildings**
 - 20% more heat load possible
- **Timeline: 9.5 months**
- **20-100% additional out-of-scope heat load identified**

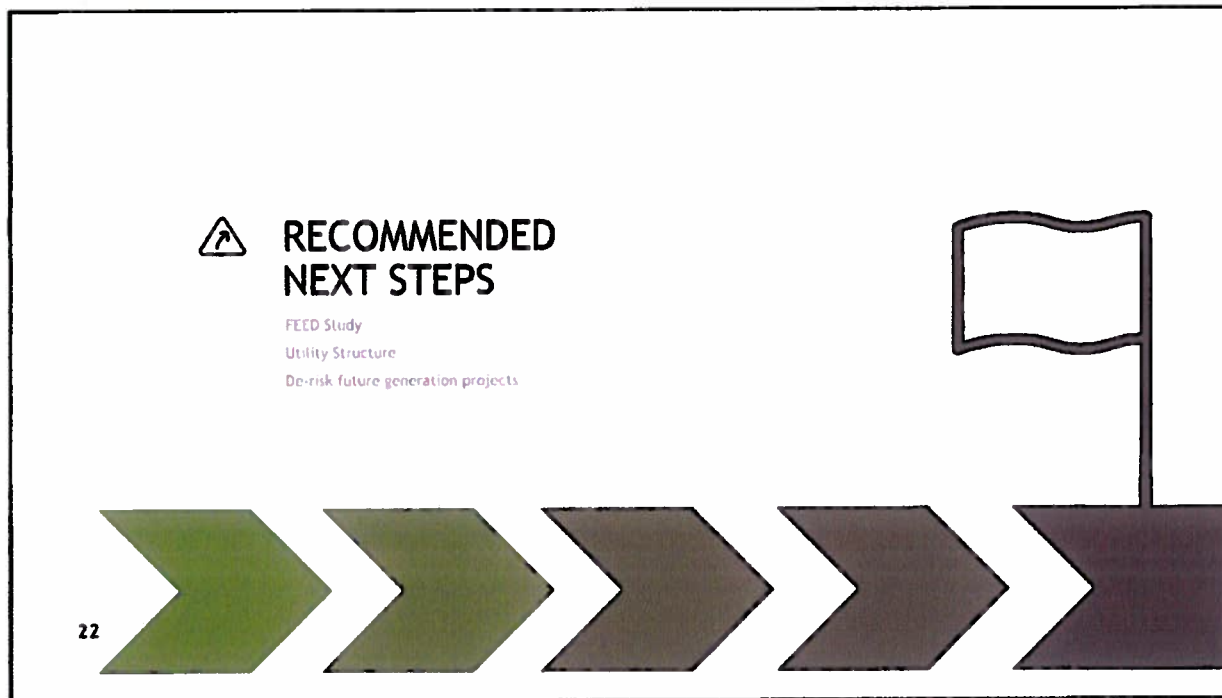
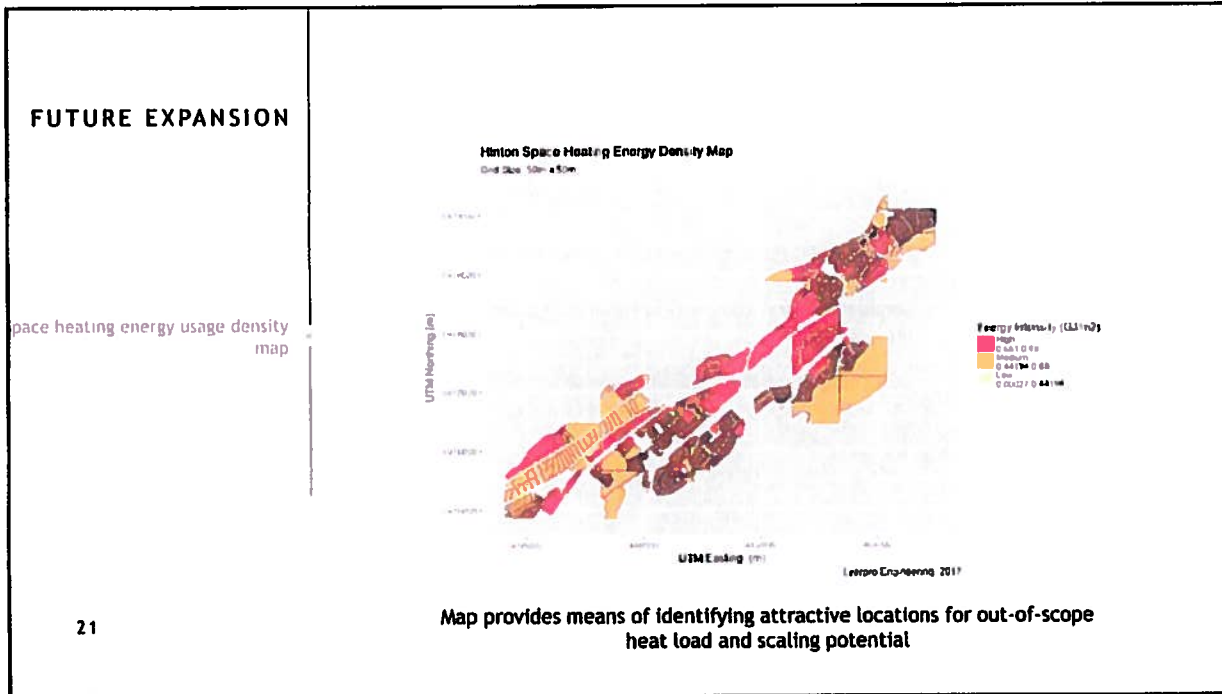
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COSTS

Estimated DES Building Conversion Costs

Zone	Building Number	Building Name	Interface Units (\$)	Installation (\$)	Total (\$)
1	1	Hinton Government Centre	25,000	30,000	55,000
	2	Protective Services Building - RCMP	12,000	30,000	42,000
	3	Emergency Services Building	25,000	30,000	55,000
2	4	École Mountain View School	25,000	30,000	55,000
	5	Seniors Centre	25,000	30,000	55,000
	6	Hinton Hospital	60,000	30,000	90,000
	7	Hinton Training Centre	60,000	30,000	90,000
3	8	Friendship Centre/ Community Hall	25,000	30,000	55,000
	9	The Guild	25,000	30,000	55,000
	10	Dr. Duncan Murray Recreation Centre	60,000	30,000	90,000
	11	Harry Collinge High School	35,000	30,000	65,000
	12	Crescent Valley School	25,000	30,000	55,000
Total			402,000	360,000	762,000

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RECOMMENDED NEXT STEPS SUMMARY



- Finalize FEED Funding, Full FEED study (4-6 months to complete); Private Funding
- Commercial heat contracts to optimize system design & Improve project economic returns
- Continued collaborative dialogue with the AER to progress policy & regulatory certainty

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QUESTIONS?



Hinton Geothermal Project

LISA MUELLER
403-816-0675
LISA@EPOCHENERGY.CA

TM GUNDERSON
403-998-0312
TM@EPOCHENERGY.CA

ROB MACKIN
780-740-5606
RMACKIN@HINTON.CA

MIKE SCHWIRTZ
780-865-6003
MSCHWIRTZ@HINTON.CA



WWW.HINTON.CA
WWW.EPOCHENERGY.CA

