

UniverCity Sustainable Energy Project



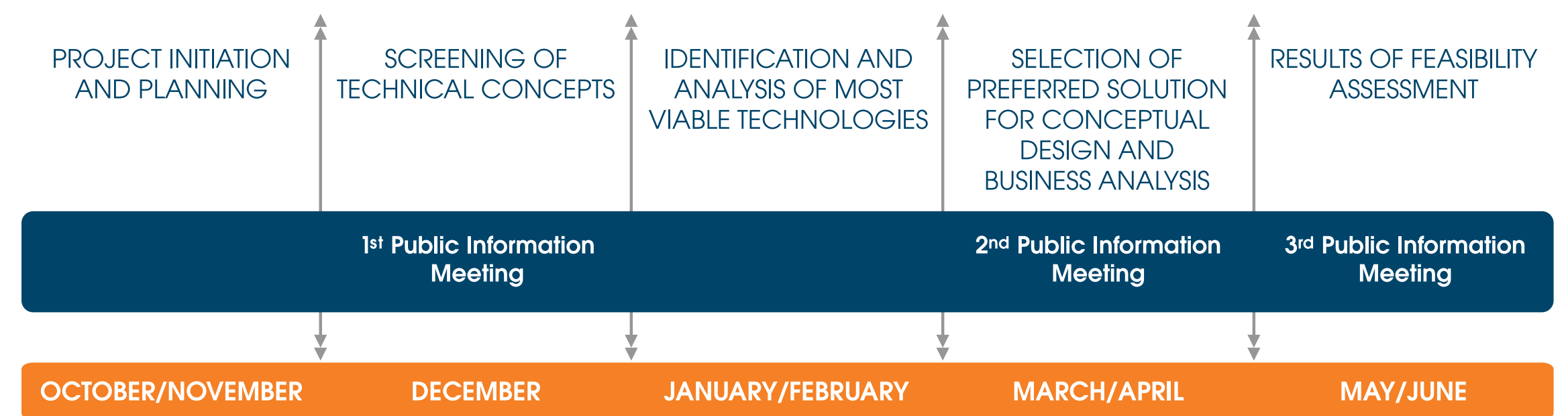
Welcome

Thank you for coming. This open house will review the results of the recently completed Technology Assessment for the proposed Sustainable Energy Project at UniverCity.

Your Feedback

We hope you will review the material presented and provide us with your thoughts by completing a feedback form. Your input is important to us and along with technical and financial information will be considered as we move to the next phase of the feasibility study.

Project Timeline



What is the UniverCity Sustainable Energy Project



As part of its commitment to sustainable development, the Simon Fraser Community Trust (the Trust) is investigating options for a sustainable energy system to provide heat and domestic hot water to new UniverCity developments. Sustainable energy systems significantly reduce greenhouse gas emissions over traditional energy systems, while also providing long-term cost and security benefits to UniverCity residents.

Phase One of the UniverCity Sustainable Energy Project is a feasibility study which seeks to identify the optimal sustainable energy technologies and systems for this purpose and explore associated delivery and billing models.

The goal of Phase One will be to identify a sustainable energy system that will allow for significant reductions in greenhouse gas emissions while also providing long-term benefits to UniverCity residents.

SFU Community Trust Partnership with CORIX



CORIX is a key player in the Dockside Green Development on Vancouver Island, the first community in North America to earn Leadership in Energy and Environment Design's (LEED) Platinum status - the highest green standard achievable.

The UniverCity Sustainable Energy Project will be undertaken by SFU Community Trust in partnership with CORIX. CORIX was chosen based on their established expertise and track record in successful community partnerships in energy and utility systems.

CORIX is a BC based community utility infrastructure provider with extensive experience in the design, construction, and operation of innovative sustainable and district energy systems. CORIX has over 1,300 employees across North America, and has experience with 100 utility systems in more than 60 communities. In BC alone, CORIX has successfully installed and operates sustainable energy systems at Sun Rivers in Kamloops, The Rise in Vernon, and Dockside Green in Victoria.

If a decision is made following the feasibility study to proceed with the UniverCity Sustainable Energy Project, CORIX will be responsible for the design, construction, and operation of the system, with oversight by the SFU Community Trust and the BC Utilities Commission (BCUC). The BCUC regulates all energy utilities in BC, and approves rate structures and customer billing models to ensure transparency and acceptable terms.

UniverCity Sustainable Energy Project - Community Benefits



The UniverCity Sustainable Energy Project seeks to provide numerous benefits to the community, including:

Reliability – community residents will have reliable heat and hot water 7 days a week, 12 months of the year. Exposure to weather related power outages will be reduced in comparison to traditional electricity-based systems.

Comfort – community residents will have greater comfort in units with space heating provided by radiant sources, rather than traditional perimeter electric baseboards.

Energy Efficiency – the Sustainable Energy system will take advantage of better technology and centralized operation resulting in improved energy efficiency.

Risk Reduction – the use of more efficient technologies, possibly based on alternative fuels, reduces residents' exposure to changes in gas and electricity prices. A new, shared system also reduces the risks to individual buildings and the use of new technologies allows quicker adoption of future technological advancements.

Reduced Carbon Footprint – UniverCity's Sustainable Energy System will decrease residents' carbon footprint through greater energy efficiency, use of alternative technologies and energy, and reduction of pressure on B.C.'s increasingly constrained traditionally produced electricity supplies.

Customer Service — customers of the utility will have 24/7 direct access to dedicated maintenance and service teams, leading to a higher level of service.

UniverCity Sustainable Energy Project - Environmental Considerations

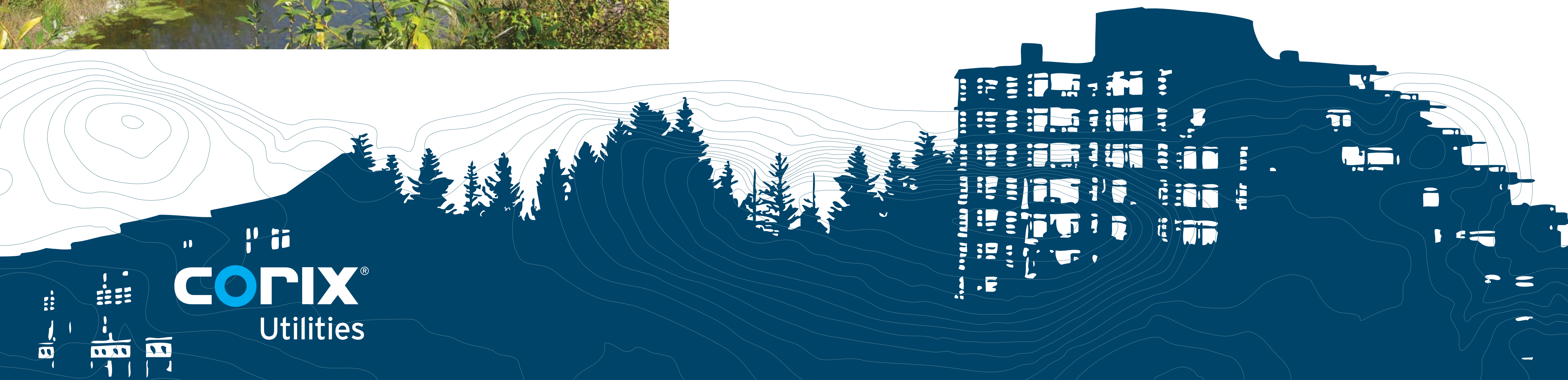


Environmental Benefits

The primary environmental benefit is a greatly reduced carbon footprint than that of traditional energy systems. In addition, the UniverCity Sustainable Energy System will reduce the load on the regional energy system, which is already at capacity. The new UniverCity buildings connected to the Sustainable Energy System will be more energy efficient and will have lower emissions, helping UniverCity move toward a long-term goal of carbon neutrality. By reducing demand on regional utilities, the UniverCity Sustainable Energy System can help defer off-site projects in sensitive eco-systems.

Community and Environmental Impacts

One of the goals of the UniverCity Sustainable Energy Project will be to select a system that delivers maximum benefits to the community and the environment while minimizing impacts. The Trust is committed to a program of community and stakeholder communication and consultation about the proposed Project, and will be gathering input through stakeholder meetings, open houses, and web based feedback.



Sustainable Energy Project - Project Goals and Evaluation Criteria

UniverCity Sustainable Energy Project Goals

Project Goals	Project Strategies
Environmental Improvements	Support carbon neutrality targets for Burnaby Mountain by selecting and implementing alternative energy sources for UniverCity.
Provision of the best suitable alternative energy supply	Complete an assessment of proven alternative energy sources and select the most advantageous solution for the development while maximizing benefit transfer to the UniverCity community.
Reliability and Competitive Service	Develop a utility model that provides customers with reliable energy supply, superior service, competitive prices to traditional delivery, and meets regulatory oversight and approvals.
Smooth Implementation Process	Prepare an efficient Sustainable Energy Project implementation plan with minimum impact on the existing community.
Mutually Beneficial Partnership	Create a partnership with an experienced energy utility partner, and transfer all utility related risks and responsibilities to a regulated third party.
Public Information	Consult with members of the community and other stakeholders during the Feasibility phase, gathering feedback on proposed technologies.

Phase One Evaluation Criteria

Benefits to the community	Benefits to the end-user	Viability of Sustainable Energy Project
<ul style="list-style-type: none"> • Green House Gas Reduction • Use of Alternative Energy Sources • Location and Land Use • Long Term Durability and Reliability 	<ul style="list-style-type: none"> • Competitive Rates • Reliability • Modularity and Flexibility 	<ul style="list-style-type: none"> • Fuel Availability, Supply and Delivery • Appropriate Return on Investment • Regulatory Approvals

UniverCity Sustainable Energy Project - Technology Screening

SFU Community Trust and Corix completed the screening of different, proven alternative energy technologies for the sustainable energy system based on the criteria identified for the project.

The following technologies were evaluated:

- High efficiency natural gas boilers
- Sewer heat recovery and ground source heat pumps
- Biomass
- Waste heat recovery from proposed SFU Data Centre
- Combined heat and power (CHP) based on natural gas and biogas
- Solar and wind applications

(early in the screening process these two technologies proved not to be suitable energy sources for implementation at UniverCity due to lack of sufficient solar and wind energy required to support these applications and the associated relative high cost of implementation.)

From the five suitable technologies, the top two preferred options were Biomass and Waste Heat Recovery from SFU Data Centre. All the technologies were rated against the project evaluation criteria.

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Preferred Technologies Option A - Biomass

The two preferred options that best meet all project criteria and provide the most benefits to the community are Biomass and Waste Heat Recovery from Data Centre.

Option A - Biomass

Biomass is a renewable energy source that can be used as fuel to produce heat and electricity. Using biomass for energy delivers unique environmental dividends as well as useful energy. Some examples of Biomass include wood waste, sewage, animal and plant matter.

CORIX and SFU Community Trust evaluated wood waste as the most suitable biomass energy source for the UniverCity Sustainable Energy Project.

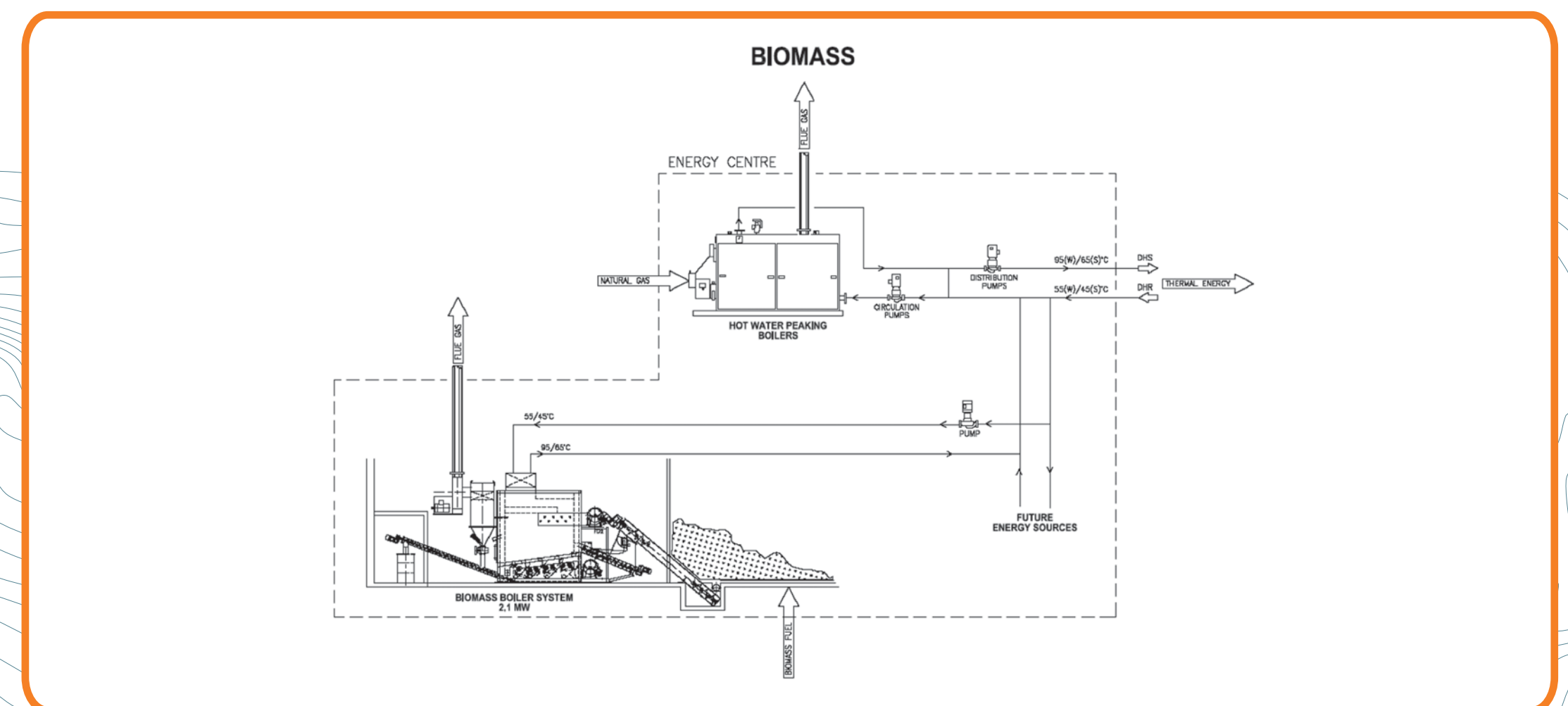
Our biomass concept would use a locally available, renewable resource that is priced significantly below other fuel alternatives. The use of biomass for energy results in decreasing carbon dioxide emissions compared to fossil fuel applications and reduces the impact to global climate change.

Technologies available for converting biomass fuel to energy are diverse, but generally combustion and gasification are the two most common technologies. If biomass is supportable, both technologies will be studied in detail in the technical and business analysis phase.



Dockside Green is a unique, sustainable community currently under development in Victoria and is North America's first community to target a Leadership in Energy and Environmental Design (LEED) Platinum status. The district energy system will be fuelled by locally-sourced wood waste to provide hydronic (water) energy to heat homes and domestic hot water.

Biomass Process Flow



Preferred Technologies Option B - Waste Heat Recovery from Data Centre

The two preferred options that best meet all project criteria and provides the most benefits to the community are Biomass and Waste Heat Recovery from Data Centre.

Option B - Waste Heat Recovery from Data Centre

Data Centres produce a large amount of heat that is usually vented to the atmosphere. The concept of the waste heat recovery is to capture heat produced by computers/servers and transfer this energy through heat pumps to other users. This low grade energy can be implemented in a low temperature district energy system.

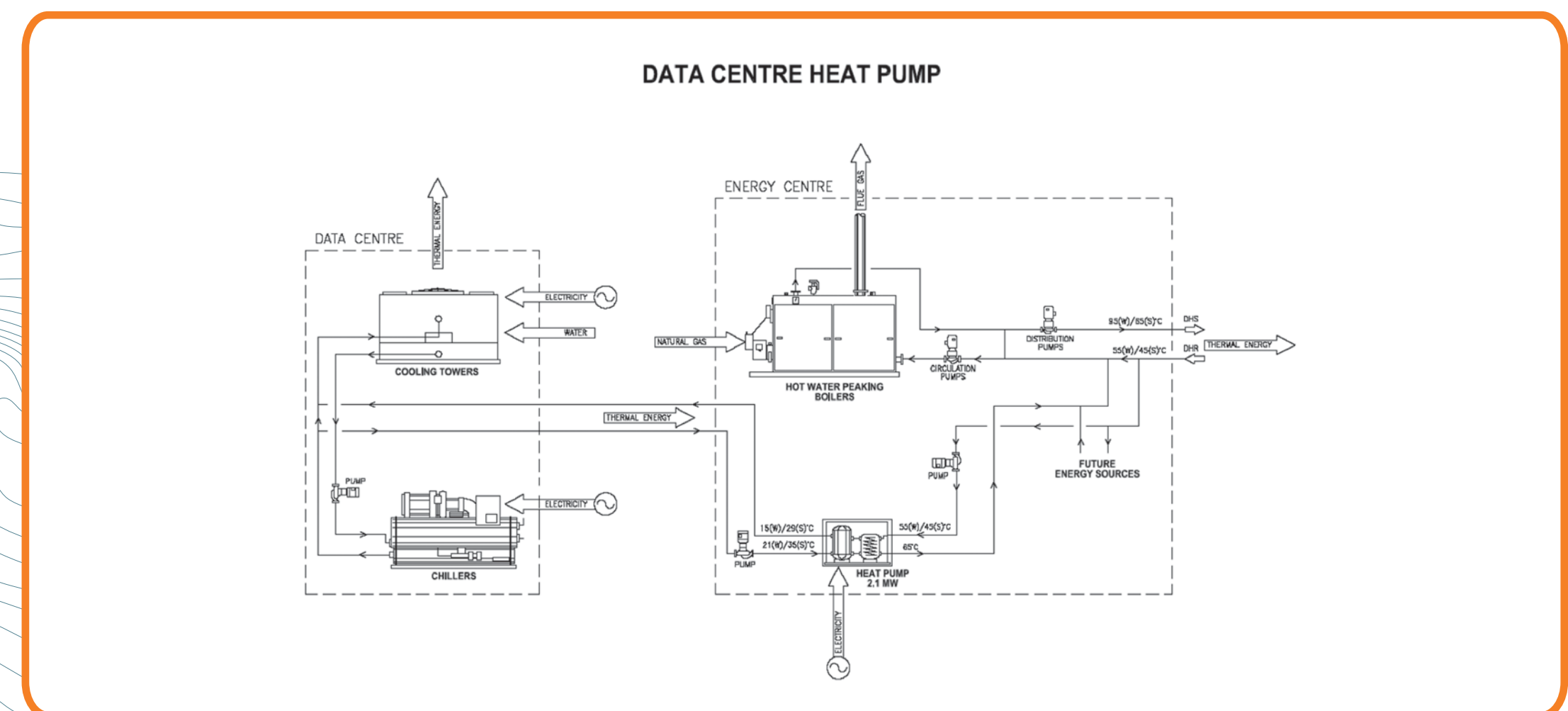
By capturing this energy, the Data Centre benefits from reduced operations and maintenance requirements as well as less capital required for chillers to provide cooling of the centre. Waste heat could be recovered from water-based as well as air-based cooling systems. Water-based cooling systems are more efficient waste heat recovery systems.

If the SFU Data Centre is developed to full capacity, it will be able to provide all of the energy requirements for Phases 3 and 4 of the UniverCity development. If this option is selected, the use of waste-heat recovery chillers - heat pumps providing simultaneously heating and cooling - will be evaluated in detail.

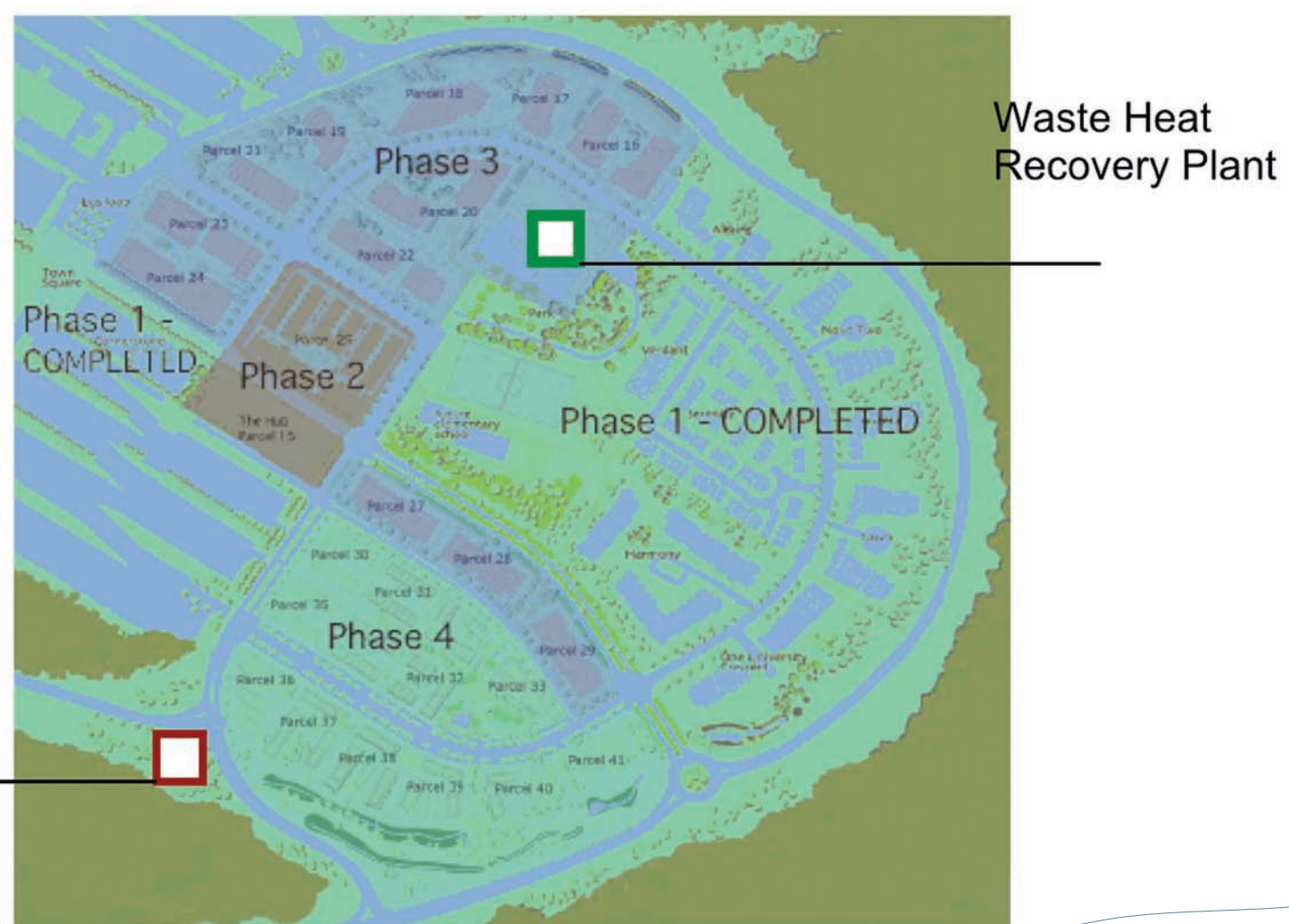


Examples of other district energy systems in Hamilton, Sudbury and Strathcona, located next to schools, parks, and other community infrastructure.

Heat recovery process flow



Preferred Technologies Community and Environmental Impacts



Possible Locations

Community and Environmental Impacts	Biomass	Waste Heat Recovery from Data Centre
Green House Gas	2,400 tons Green House Gas reduction	2,300 tons Green House Gas reduction
Aesthetics	Central energy plant located outside the community	Central energy plant located within the community
Noise	Low	Low
Emissions	More stringent regulations in Metro Vancouver for use of biomass technologies	Low
Construction	Low	High (central location)
Operations/Fuel supply	Fuel supply - truck delivery	Fuel available on site
Alternate Energy Implementation Schedule	Schedule controlled by a Utility	Schedule not under control of the Utility – a third party development risk
COMMUNITY BENEFITS		
Reduced carbon footprint	●	●
Reliability	●	●
Competitive stable rates	●	●
Use of alternative energy sources	●	●
Flexibility to incorporate data centre waste heat in later stage when available	●	●

We Appreciate Your Feedback



Thank you for taking the time to review the information regarding the Technology Assessment phase of the UniverCity Sustainable Energy Project.

We appreciate your assistance by completing a feedback form. These forms are available here this evening, or on our website.

Community feedback will be considered as decisions are made during a detailed technical and business analysis phase of the preferred technology(s). The results of the detailed analysis and steps for implementation of the Sustainable Energy Project at UniverCity will be presented to the public at the 3rd Public Information Meeting in May/June.

Should you wish to review this information and any updates as they become available, please visit our website at www.UniverCity.com.

In order for your comments to be included in this consultation phase, please provide us with your comments by completing a feedback form by April 3, 2009.