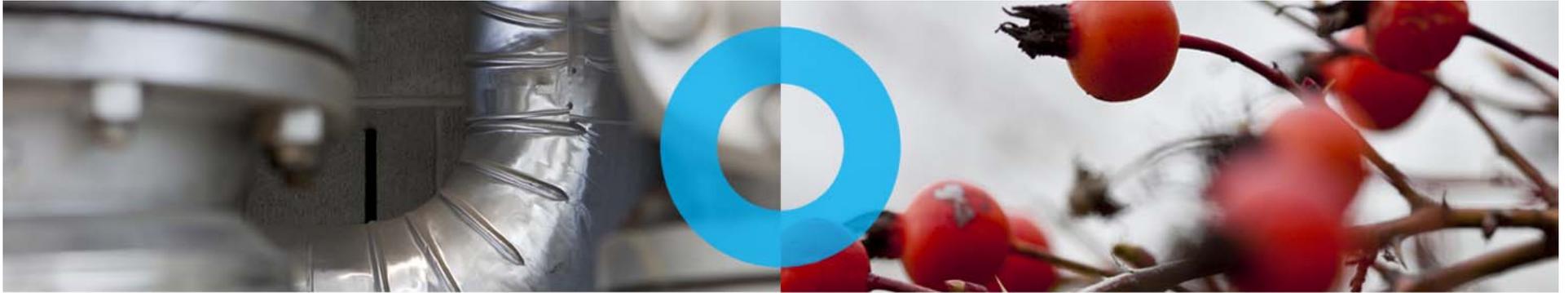




IDEA 2018

109th Annual Conference, Vancouver, BC





Technical Tour A

UBC NDES at Wesbrook Village

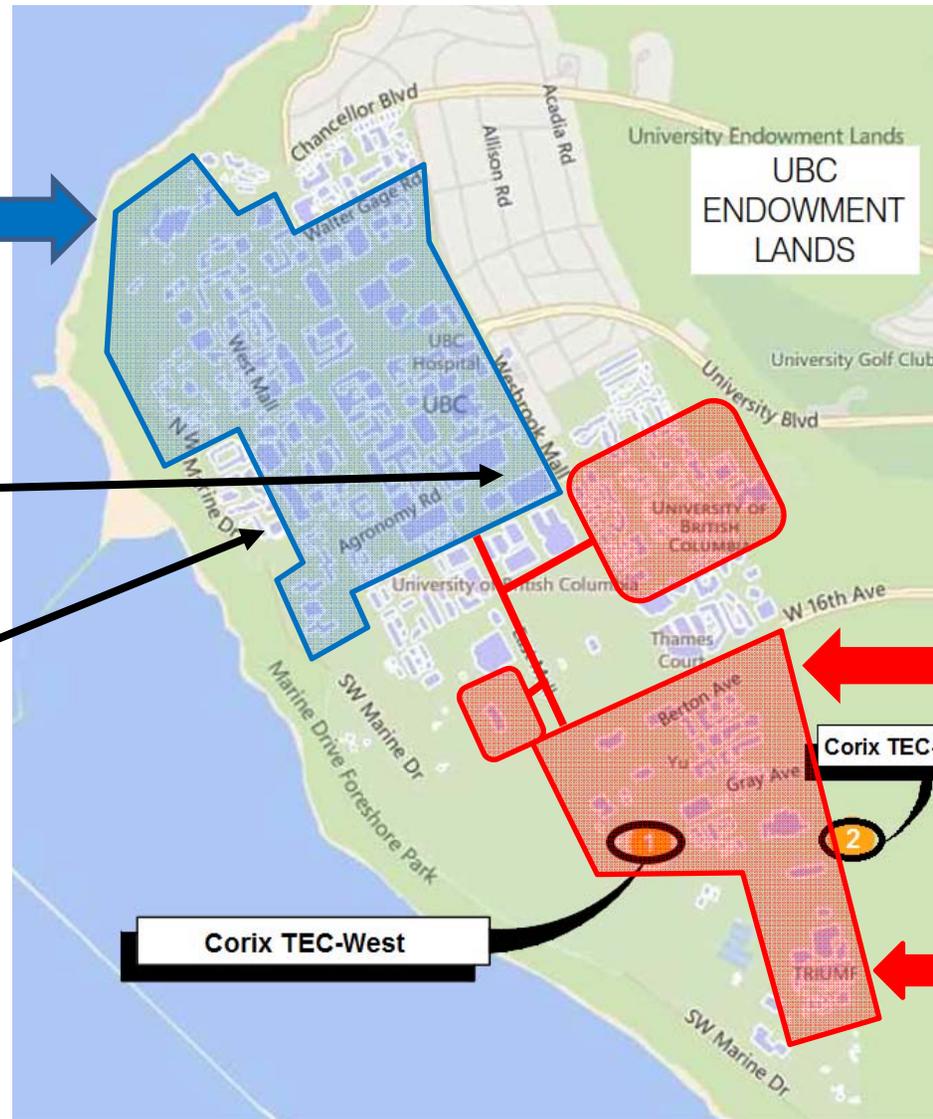


District Energy Systems at UBC

UBC Academic DES
at UBC North Campus

CEC:
Campus Energy Centre

BRDF:
Biomass Research
Demonstration Facility



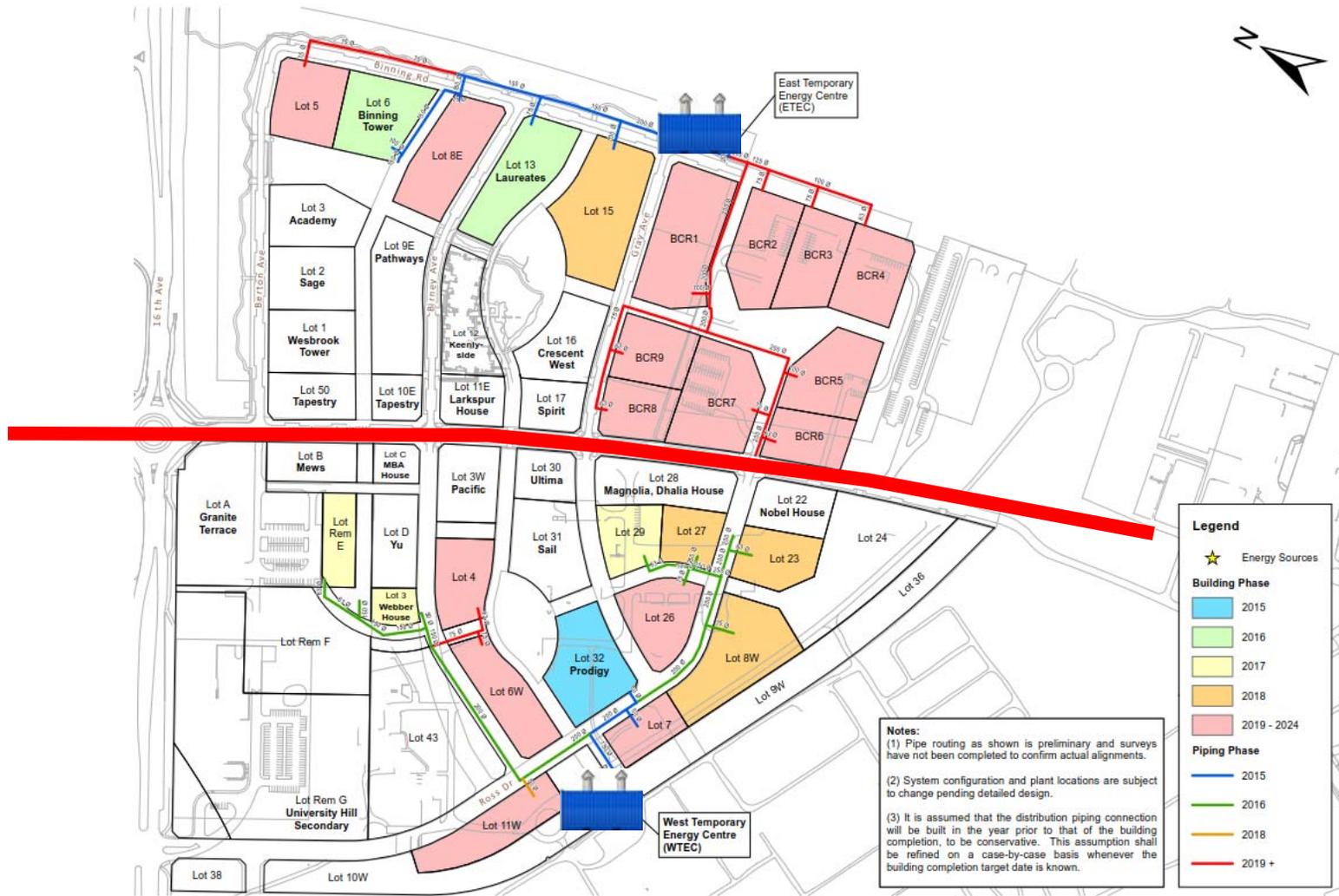
Corix NDES
at UBC
Wesbrook Village

Potential 10MW
Waste Heat
Recovery

- Neighbourhood District Energy System (NDES):
 - Services the growing greenfield community of Wesbrook Village
 - Will connect with other energy sources
 - Potential to connect to UBC's Academic DES
 - South of UBC campus
- NDES at full build-out
 - 25 buildings + expansion opportunities
 - 8 km (5 miles) underground piping
 - 30 MW peaking plants (3000 BHP)
 - 10 MW (34 million BTU/h) waste heat recovery







- Temporary Energy Centres (TECs)
 - Mobile natural gas boiler plant
 - Unmanned / Remote monitored
 - Boilers sized for current demand (small to start)
 - Ideal at start of green field or satellite development
 - Portable & quick install (generators & propane tanks)
 - Upsize or connect multiple TECs



- TEC-West installed 2015 (serviced 1 building)
- 6.5 MW (650 BHP)
 - 1 x 500 kW (50 BHP) condensing boiler
 - 2 x 3 MW (300 BHP) non-condensing boilers
- 6” supply line to a 8” distribution main
- Currently services 6 medium rise buildings



- TEC-East installed 2016 (serviced 1 high-rise)
- 8 MW (800 BHP)
 - 2 x 4 MW (400 BHP) non-condensing boilers
- 8" distribution main
- Currently services 2 tower/townhouse developments





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Slide 10



Pre-Packaged Energy Transfer Stations

- Reduce construction and management costs
- Reduces engineering costs
- Defer capital investment
- Reduce time on site
- Load-bearing frame
- Consistent product



