



# **OUTSOURCING CAMPUS UTILITIES: STARTING SMALL AND CONTRACTING WELL**

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# MEGA DEALS.....

RESHAPE  
STRATEGIES

## Regents vote to outsource utilities

By Nanette Light  
The Norman Transcript Jul 28, 2010



University of Oklahoma Physical Plant employees no longer will wear OU hats when on the job at the school's Norman campus.

The OU Board of Regents approved a 50-year contract to outsource a portion of the school's energy operations to a privately based Corix Utilities Inc. during a special meeting Tuesday.

"It seemed like the right thing to do," said OU President David Boren after the meeting. "The school's core business is not the utilities."

## Ohio State trustees approve unprecedented \$1B energy deal

Apr. 7, 2017, 1:23pm EDT

Ohio State University trustees approved a groundbreaking deal to privatize the school's energy operations for more than \$1 billion.

Trustees and administrators this week praised the 50-year deal with French energy giant Engie, which resulted in the largest one-time payment Ohio State has ever received.

"It's safe to say that this is a historic project in the life of our institution," Board of Trustees Chairman Alex Shumate said Thursday at a committee meeting that delved into specifics of the partnership.

COLUMBUS  
BUSINESS FIRST



The French energy giant Engie will oversee Ohio State's energy operations for decades.

# ... BUT TOO MUCH FOR MANY INSTITUTIONS TO DIGEST

# MEGA DEALS.....



## Promised Benefits

- Large monetization of existing assets
- Avoidance of all incremental capital spend on non-core functions
- Significant transfer of risks
- Major upgrades / new technology and expertise
- Operational efficiencies

## Potential Challenges

- Lengthy and costly negotiation and execution
- Complex contracts and big risks
- Difficult to unwind / evolve
- Cultural integration
- Realizing operational savings on customer side
- Ongoing incentives for partner performance
- Big surprises

# STARTING SMALL....



## Examples

- *Service contracts*
- Partial privatizations of existing assets
- Partnerships on incremental assets

## Common Issues

- Selecting appropriate / workable boundaries
- Selecting partner(s)
- Structuring arrangements
- Negotiating good contracts

# BENEFITS OF INCREMENTALISM



- Gain experience with partner and with contract negotiation / design
- Room for multiple partners and deal structures  
... but may lose economies of scale and add to administration costs
- Buy-in from decision makers and staff to do first deal and to expand scope of partnerships over time
- Greater ability to support staff transition and realize customer-side operational savings

# GOOD CONTRACT DESIGN



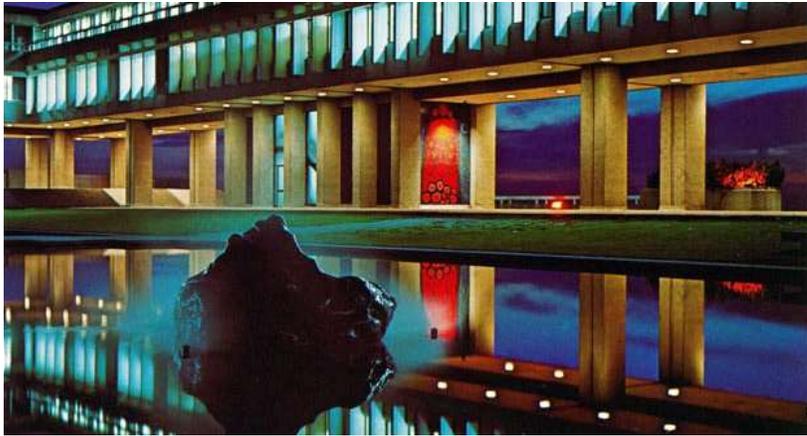
- Clear delineation of development responsibilities, ownership, operations and risks
- Clear definition of service(s)
- Clear and meaningful risk allocation / transfer
  - Construction risk
  - Performance risk (e.g., efficiency, availability, environmental performance)
- Off-ramps in development
- Exit / buy-back options
- Coordination of communications / operations
- Shared services (optional)
- Opportunities to evolve and expand scope

An aerial photograph of Burnaby Mountain, showing a dense residential and commercial development. The buildings are clustered together, with a mix of multi-story apartment buildings and lower-rise structures. The area is surrounded by lush green forests. In the background, a large body of water (Burnaby Lake) is visible, along with distant mountains under a cloudy sky. The text is overlaid on the top half of the image.

# **BURNABY MOUNTAIN LOW-CARBON DISTRICT ENERGY SYSTEM**

**A PARTNERSHIP BETWEEN  
SIMON FRASER UNIVERSITY  
& CORIX UTILITIES**

# TIMELINE



<b>1965</b>	<ul style="list-style-type: none"><li>• Simon Fraser University Opens</li></ul>
<b>1996</b>	<ul style="list-style-type: none"><li>• City of Burnaby approves Official Community Plan and Zoning Bylaw Amendments to develop a mixed-use neighbourhood adjacent to campus on SFU-owned lands (UniverCity)</li></ul>
<b>2008 - 2010</b>	<ul style="list-style-type: none"><li>• Screening study of district energy for neighbourhood (Phases 3 and 4 of development)</li><li>• Selection of Corix as utility partner</li><li>• Detailed feasibility study</li><li>• Definitive agreements between Corix and SFU Properties Trust</li></ul>
<b>2011</b>	<ul style="list-style-type: none"><li>• Corix commences district energy service to UniverCity</li></ul>
<b>2016 - 2017</b>	<ul style="list-style-type: none"><li>• Completion and approval of definitive agreements for shared energy centre serving UniverCity and SFU Campus</li></ul>
<b>2019</b>	<ul style="list-style-type: none"><li>• Expected commissioning of shared energy centre</li></ul>

# CAMPUS PARTNERSHIP



- Corix builds, owns and operates a shared energy centre for UniverCity (full service) and SFU campus (baseload green energy only)
- Green energy provided by biomass (thermal oil system – ability to add CHP)
- SFU retains ownership and operation of campus distribution and existing gas-fired boiler plant (peaking and back-up)
- Corix will also own and operate interconnections from shared plant to SFU campus and UniverCity network
- Shared plant located on SFU campus (lease)
- Long-term energy supply agreement with exit options
- SFU used capital grants to buy down Corix' rates to SFU
- Shared plant regulated by BC Utilities Commission

# CAMPUS BENEFITS



## Benefits of Technical Solution

- ~85% reduction in GHG emissions from heating (achieve campus commitments, financial benefits)
- Extension to life of existing boiler plant
- Teaching / research opportunities

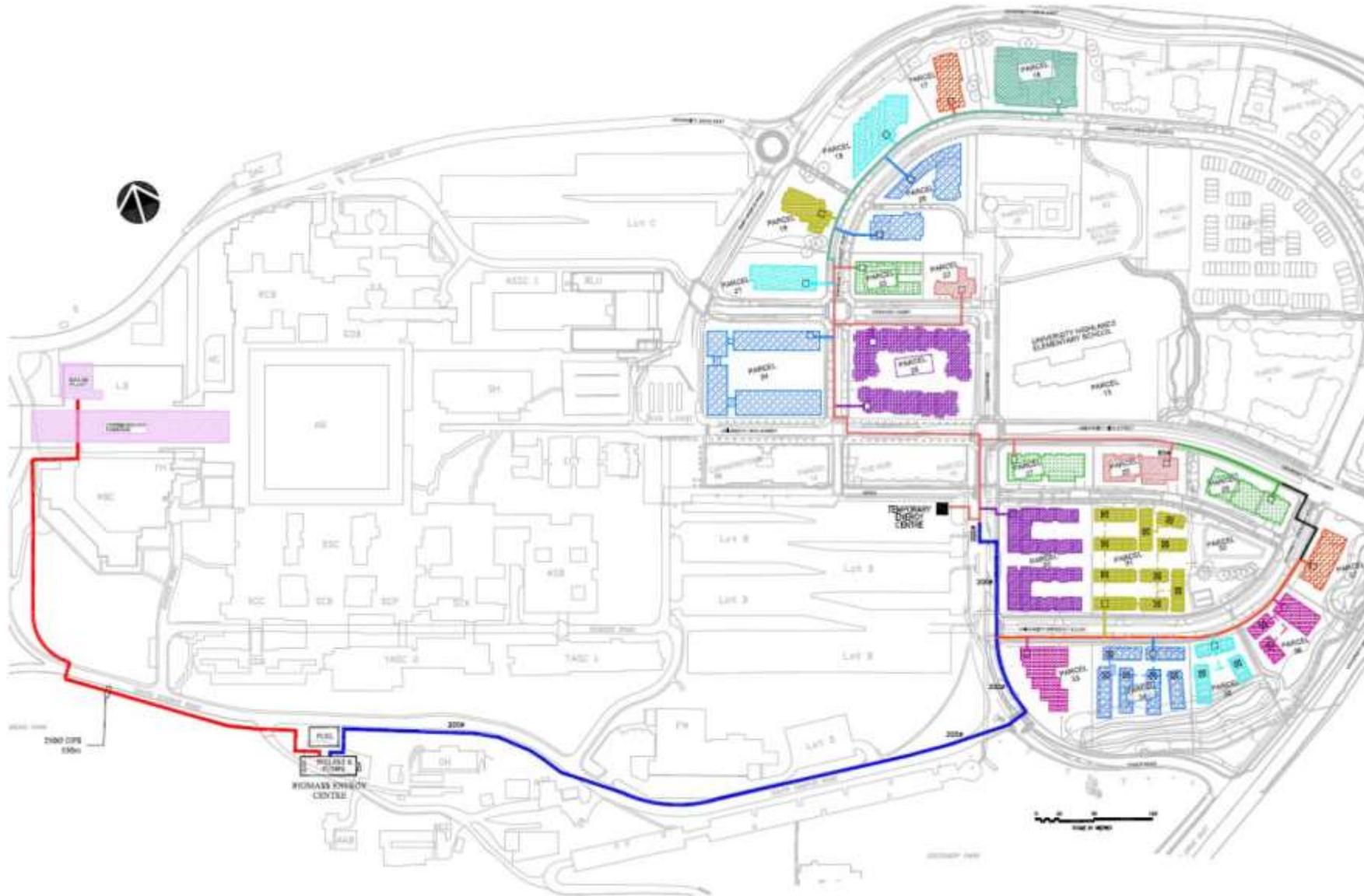
## Benefits of Partnership to Deliver Technical Solution

- Economies of scale and integration from shared plant
- Access to external grants (conditioned on partnership)
- Some risk transfer
- Avoidance of capital lease (no SFU capital requirement)
- Incremental lease revenues from energy centre site

# TECHNICAL DETAILS

	UniverCity (Build Out)	SFU Campus (Existing)	Total
<b>Annual Energy Loads</b>	25,300 MWh	51,800 MWh	77,100 MWh
<b>Diversified Peaks</b>	9.2 MW	26 MW	35 MW
<b>Use of Shared Energy Plant</b>	Full Service (Low-carbon baseload + gas-fired peaking and back-up)	Baseload only (Low-carbon energy)	
<b>Shared Biomass Plant Capacity</b>	3.5 MW	10 MW	13.5 MW
<b>Annual Energy from Biomass</b>	19,500 MWh	43,800 MWh	63,300 MWh
<b>Gas-Fired Capacity</b>	9 MW (Co-located in shared energy centre but allocated entirely to UniverCity)	SFU Retains Existing Gas-Fired Boiler Plant for Peaking and Back-up	9 MW

# SYSTEM OVERVIEW (CORIX INFRASTRUCTURE)



Total installation costs of ~\$33 million (net of grants) at build out

About half of system cost allocated to baseload service for SFU campus.

# SHARED ENERGY CENTRE – CONCEPT DESIGN



# SOME KEY CONTRACT TERMS



- Conditions precedent and off-ramps prior to construction
  - Receipt of approvals / permits
  - Fuel supply agreement
- Minimum technical specifications and design input
- Clear delineation / definition of service
  - Energy delivered to existing boiler plant
  - Operating temperature requirements
- Risk transfer
  - Construction costs
  - Plant availability
  - Plant performance
- Thirty year term with early termination provisions / buy-back options
- Three part rate design (capacity payment, availability payment and consumption charge)

# Thank-You!

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