



District Heating: A Technical Approach

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Eden Campus Energy Centre

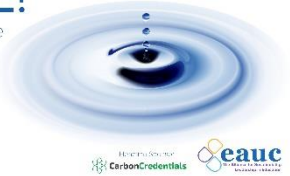


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District Heating Network



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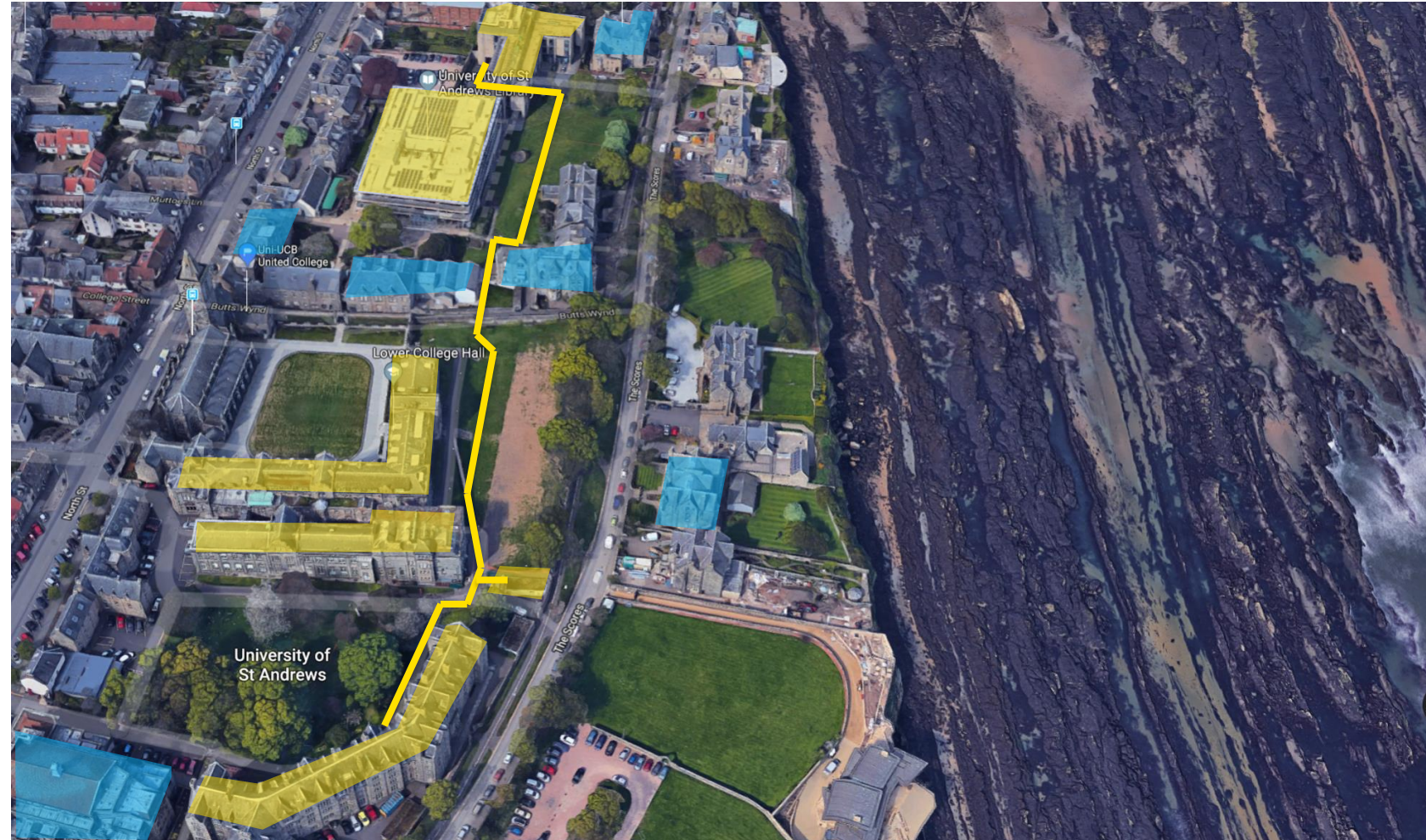
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Old Town District Heating

- Nodal district heating scheme
- Energy source: CHP and modular boilers
- Links 5 buildings in Phase 1
- Potentially scalable to an addition 10 buildings



Heat as a Service



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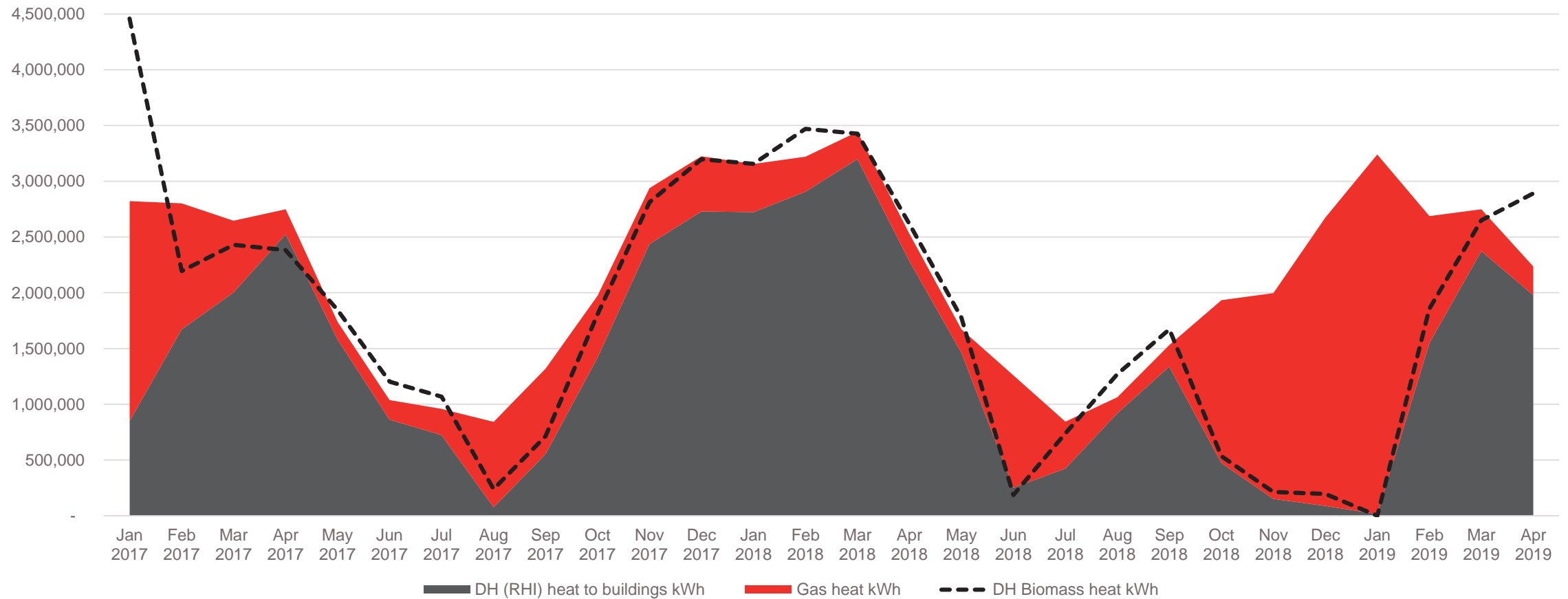
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Biomass Heat Profile, kWh



Two-port Control Valves

Building	Design Flow	Design Return	Actual Flow	Actual Return	Design Dt	Existing DT	Improvement	New Dt
	°C	°C	°C	°C	°C	°C	°C	°C
BMS Annexe(BSRC)	76	65	80	75	11	5	3	8
Purdie	76	65	73	71	11	2	2	4
Physics	72	65	76	74	7	3	3	6
David Russell Apartments	70	40	70	63	30	7	3	10
Gateway	76	65	70	67	11	3	2	5
MSB	85	65	80	75	20	5	2	7
Agnes Blackadder	73	64	80	72	9	8	5	13
Mathematics	68	61	80	73	7	7	2	9
Irvine	80	70	77	71	10	6	2	8

Improve the efficiency of the campus heat distribution network, by enabling receiving buildings to operate as a variable volume system;

- Install 2-port PICV control valves on the associated distribution circuits to allow a variable flow system to be operated
- Upgrade selected secondary side pumps from fixed speed to variable speed pressure-controlled units,
- Enable capability of existing and upgraded Grundfos pumps as heat meters

A day in the life, MW

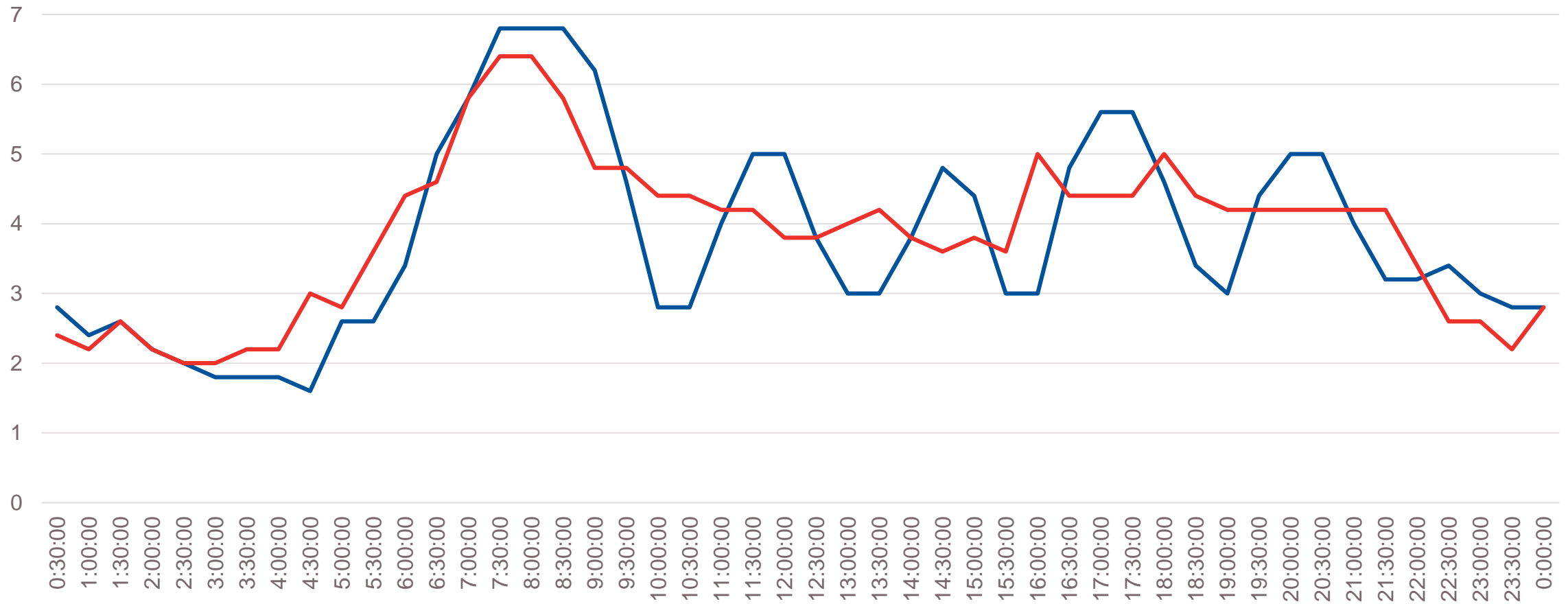


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Workshop



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