

2019 UK Solar Academy 2: Renewable Heat for Heat Networks



Organised and funded by:



In collaboration with:



Speakers from:



December 14, 2019 (Version 1.0)
Dr Richard Hall, UK Alternate ExCo

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About the event

In March 2019, the IEA Solar Heating and Cooling TCP UK National Team organised our first Solar Academy (on-site training) on Solar Heat Networks: Policy, Planning, Design and Performance (Hall, 2019). This was in response to the introduction of the HM Government Heat Networks Investment Project (HNIP) (HM Government, 2019), which is a £320 million of capital funding program which aims to (1) increase the number of heat networks being built in the UK; (2) deliver carbon savings; and (3) help create the conditions necessary for a sustainable heat network market to develop. The demand to attend our first Solar Academy far outstripped our room capacity and thus we teamed up with Triple Point Heat Networks (the official delivery partner for HNIP) to organise a follow up event (Triple Point Heat Networks, 2019) to bring the outputs of the IEA Solar Heating and Cooling TCP Task 55 to a wider audience.

The details of the Solar Academy event were as follows:

- Title: Renewable Heat for Heat Networks Conference
- Date and Time: 4th December 2019, 08:45 – 13:30 GMT
- Location: Broadway House, London
- IEA SHC TCP Task 55 Experts: Grant Feasey (AES Solar), Magdalena Kowalska (PlanEnergi), Christian Holter (SOLID Solar Energy Systems), Renaldi Renaldi (Oxford University)

As well as teaming up with Triple Point Heat Networks, we also brought in experts from the IEA Heat Pumping Technologies TCP (Roger Hitchin), the IEA District Heating TCP (Dr Anton Ianakiev and Robin Wiltshire) and the Danish Embassy (Jacob Byskov Kristensen) to support the event. We also used the event to launch the new Task 55 Investor Brochure (Putz and Epp, 2019).

Response

The response to the event was extremely positive, with 120 people signing up to attend (maximum capacity of the venue) within a few weeks of announcing the event. The attendance on the day was also very good, as was verbal feedback from attendees.

The following pages contain the event agenda, the attendees list by company and photos from the event.

References

Hall, R. (2019) *UK Solar Academy On-site Training on Solar Heat Networks Report*. IEA SHC Task 55. IEA Solar Heating and Cooling TCP. Available at: <http://task55.iea-shc.org/publications>.

HM Government (2019) *Apply for Heat Networks Investment Project (HNIP) funding*, GOV.UK. Available at: <https://www.gov.uk/government/publications/apply-for-heat-networks-investment-project-hnip-funding> (Accessed: 9 October 2019).

Putz, S. and Epp, B. (2019) *Solar Heat for Cities - Large Scale Solar District Heating (Investor Brochure)*. IEA Solar Heating and Cooling TCP. Available at: <http://task55.iea-shc.org/publications> (Accessed: 14 December 2019).

Triple Point Heat Networks (2019) *Renewable Heat for Heat Networks Conference*, Eventbrite. Available at: <https://www.eventbrite.co.uk/e/76045182187?aff=efbneb> (Accessed: 14 December 2019).

Renewable Heat for Heat Networks Conference

Date: 4th December 2019

Time: 8:30 registration, 09:00 – 13:00 conference, 13:30 – 14:30
networking lunch and funding surgery

Venue: Broadway House, Tothill Street, London

Time	Session	Speaker
8:30 – 9:00	Registration	
9:00 – 9:05	Housekeeping	James Higgins (TP Heat Networks)
9:05 – 9:20	Introduction to HNIP	Ken Hunnisett (TP Heat Networks)
9:20 – 09:50	Solar Heating and Cooling for Heat Networks	Dr Richard Hall (IEA Solar Heating and Cooling Technology Collaboration Programme and the Solar Trade Association)
		Grant Feasey (AES Solar)
		Magdalena Kowalska (PlanEnergi)
		Christian Holter (SOLID Solar Energy Systems)
		Renaldi Renaldi (Oxford University)
9:50 – 10:10	Heat Pumps and Heat Networks	Roger Hitchin (IEA Heat Pump Technology Collaboration Programme)
10:10-10:30	Integration of innovative technologies	Dr Anton Ianakiev (Professor in Sustainable Energy Systems, Nottingham Trent University)
10:30 – 10:50	Panel Discussion	
10:50 – 11:10	Refreshment break & Networking	
11:10 – 11:25	ESCO Model for Renewable Heat Networks	Christian Holter (SOLID Solar Energy Systems)
11:25 – 11:45	HNIP Heat Decarbonisation Assessment Overview	Dr Andrew Cripps (TP Heat Networks)
11:45 – 12:05	District Heating Technology	Robin Wiltshire (IEA District Heating Technology Collaboration Programme)
12:05 – 12:25	Lessons learned from Denmark - a multifaceted approach	Jacob Byskov Kristensen (Danish Embassy)
12:25 – 12:45	Panel Discussion	
12:45 – 13:00	Closing remarks	TP Heat Networks
13:00 – 14:00	Lunch & Networking	
13:30 – 14:30	Funding surgery (HNIP & District Heating and Cooling TCP)	Business Development Managers (TP Heat Networks) & Robin Wiltshire (District Heating and Cooling TCP)

Attendee List by Company

Acuris	Enerza Solutions Ltd	Mitsubishi Corporation
ADE	ENGIE	Naked Energy Ltd
Adur & Worthing Councils	Equitix Ltd	Nascent Alternative Energy Ltd and Tenopt Ltd
AECOM	Evinox Energy Limited	Natural Power
Altecnic Ltd	Foresight Group	Nottingham Trent University
Amberside	Forestry Commission	Orchard Partners London Ltd
Ameresco	FuelCell Energy inc	Peabody
Amey Investments	FVB District Energy UK Ltd	Pinnacle Power
Ancala Partners LLP	Galliard Homes	Powerpipe Systems AB
Arup	GLIL Infrastructure LLP	QMPF LLP
BAE Systems	Gravis	Ramboll
BEIS	Greater South East Energy Hub	REHAU
Bosch Thermotechnology	Guru Systems	Ricardo
Brent Council	Heat Customer Protection Ltd t/a Heat Trust	Royal Borough Kensington and Chelsea
Brighton & Hove City Council	Helix Agencies	Royal Danish Embassy
Buildings Research Establishment	Hermetica Black Ltd	Solar Trade Association
Carbon Descent	Holistic Economy	Southern Housing Group
Carbon Smart	IHS Markit	Sustainable Energy Association
Carbon Trust	Infrastructure and Projects Authority	Sustainable Energy Ltd
Centrica Business Solutions	Intatec Ltd (Heat Interface Units)	The Guinness Partnership
City of London	International Energy Agency	The University of Sheffield
Colchester Amphora Energy Ltd	Inventa Partners Ltd	TP - Heat Networks IM
Colloide Engineering Systems Ltd	ion Ventures	Uniper
Compass Lexecon	Kensa Contracting	University of Oxford
Data Dig	Kent County Council	University of Sheffield
DESMI A/S	KPMG LLP	Vaillant Group
E.ON Energy	L&Q	Veolia
East Devon District Council	LB Hackney	Vital Energi
Ecuity	LB Hounslow	Walker Sime
Energy for London	Logstor UK Ltd	Welsh Government
Energy Transitions Limited	London Borough of Camden	WSP
Enertek International Ltd	London South Bank University	YGHP Ltd
Enerteq	Minibems	YURO AFRIASIA DMC

Event Photo Gallery

Introduction to the Renewable Heat for Heat Networks conference by James Higgins from Ecuity on behalf of Triple Point Heat Networks.



Ken Hunnisett from Triple Point Investment introducing the Heat Networks Investment Programme (HNIP).



Richard Hall from the IEA Solar Heating and Cooling TCP introducing the session on Solar Heating and Cooling for Heat Networks.



Grant Feasey, Senior Design Engineer at AES Solar and IEA Solar Heating and Cooling TCP Task 55 National Expert, demystifying solar heat.



Magdalena Kowalska, Mechanical Engineer from the Danish consultancy PlanEnergi, outlining the reasons why solar heat networks have been successful in Denmark.



So why?

1. National politics

- High taxation on fossil fuels
- Electricity alternative D/E plant options
- Development of solar in an area dominated by fossil fuels
- Long time tradition for both strategic energy planning and widespread use of large scale solar DH
- High quality solar collectors
- High quality DH systems
- Transition to solar DH started in the 1970s and 1980s

2. Technical conditions

- Low temperature DH (70-80 °C / 40-50 °C)
- High (unmatched) performance of the solar collector fields
- Long lifetime

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Christian Holter from SOLID Solar Energy Systems GmbH, explaining the energy transformation of the heat sector in Austria.



Status of Big Solar today

SOLID

- Several Projects in operation in small Danish/Chinese cities < 10.000 inh.
- Several projects under development in cities 30- 300.000 inh. in multiple countries
- Development ongoing to adapt storages to regional geology and improve investment/cost ratio

Renaldi Renaldi, Research Associate in Sustainable Cooling at the University of Oxford, explaining the solar heat system at Drake Landing Solar Community.



Christian Holter from SOLID Solar Energy Systems GmbH, explaining the key hurdles to investing in solar heat.



IEA Solar Heating and Cooling TCP experts taking questions from the audience.



Jacob Byskov Kristensen from the Danish Embassy explaining the future of heat networks in Denmark.











Networking sessions during the tea and lunch breaks provided an opportunity for attendees to meet and discuss their ideas.













