

CHAD Event & Workshop

Renewable energy from anaerobic digestion in remote and off-grid applications:

Fairbanks, AK, USA, 4th to 7th MARCH 2024

The following is the proposed schedule for the event. Please note that visitors and attendees should read the accompanying information carefully and ask us if anything is unclear. The program may change depending on local circumstances, including weather and travel conditions.

The program has been developed 'in good faith'. Attendees should be aware that this is a scientific-community event, not a commercial conference and neither the organizers nor the sponsors take any responsibility for problems and issues that are out with their control. For further guidance please see the accompanying information.

Thanks to all our sponsors:
You, our participants and



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This workshop
is supported by: The NATO Science for Peace
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CHAD Event: Renewable energy from anaerobic digestion in remote and off-grid applications: 4th to 7th MARCH 2024

Format: Hybrid (a mix of personal presentations and online video (v))

Venue: National Renewable Energy Lab (NREL)

955 Draanjik Drive, Fairbanks, Alaska 99775 ☎ + 907-615-6261

Pre-registration with NREL is essential prior to the event in order to enter the building¹

Day 0 – March 4th

Travel to venue, casual welcome and meet-up for orientation

Westmark Hotel 813, Noble St, Fairbanks, AK 99701. Time from 19:00. There is no formal event this evening.

Day 1 – March 5th

am Pick-up from Westmark Hotel @ 07:30

08:00 – 08:45 Coffee time / mixer.

09:00 - 09:30 **Plenary Session including venue safety briefing:**
Welcome remarks and considerations in rural Alaska community designs
L.Zender & P. Foster

09:30 – 12:00 **SESSION 1** :Chair – P.Foster

09:30 – 09:45 R.Szmid: Keynote introduction and NATO programme objectives.
09:45 – 10:05 D. Dionisi: Opportunities and challenges for small scale anaerobic digestion
10:05 – 10:25 A.Bywater: Impact of anaerobic digestion on sustainable development goals
Comfort break
10:40 – 11:00 J.Jaimes-Estévez: Design challenges in developing small scale high-rate cold AD
11:00 – 11:20 K. Coffey: Micro scale bioeconomy solutions (v)
11:20 – 11:40 N. Janega: Integration of AD into waste water treatment systems
11:40 – 12:00 Discussion and Questions & Answers

12:00 – 13:00 Lunch

pm

13:00 – 15:00 **SESSION 2:** Workshop groups in break-out rooms.
The role of waste management techniques in human health & hygiene
Sub-topics:

GROUP 1: Regulatory framework for deployment of anaerobic digestion in distributed communities
Chair : M.McCauley Rapporteur: J. Kendall

GROUP 2: Engineering aspects of off-grid anaerobic digestion
Chair: R.Szmid Rapporteur: P.E.Jensen

15:00 – 17:00 Coffee break and networking discussions

17:30 Pick-up by bus for return to town.

18:00 – 20:00 Conference evening reception / buffet dinner:

Venue address: **RAVEN LANDING CENTER, 1222 Cowels Street, Fairbanks.** Return to hotel **NOT** provided.

¹ Registration must have been completed in advance direct with NREL, not with the event organisers.

Day 2 – March 6th

am

Pick-up from Westmark Hotel @ 07:30

08:00 – 08:30 Coffee time / mixer

08:45 - 12:00 **SESSION 3** : Anaerobic digestion future technology
Chair: E.Bronstad

Speakers

08:45 - 08:55 E.Bronstad: Event program & schedule update (Day 2)
08:55 – 09:15 K.Chandran: Opening the 'black-box' of anaerobic carbon conversions (v)
09:15 – 09:40 T.Curtis: Microbial ecology of seeding low temperature reactors
09:40 – 10:00 J. Fowler: Microbiology – Meet the microbes in psychrophilic anaerobic digestion
Comfort break
10:10 – 10:30 E.Lawson: Governing water and wastewater systems in Scotland
10:30 – 11:00 P. Jensen: The status of sanitation in Greenland including anaerobic digestion aspects
11:00 – 11:25 E.J. Vera Mercado: Users' behavioral intention to use low-cost digesters
11:25 – 12:00 Session Questions and Answers

Lunch 12:00 – 13:00

pm

13:00 – 17:15: **SESSION 4:**

Group tasks / review.: Leaders: S.Azmi Wenzler & S.Sebalo

13:00 – 13:45: NREL tour

13:45 – 15:00 AD feedstock: research formulations and ‘synthetic poop’ workshop

15:00 – 15:30: Comfort break and refreshments

15:30 – 16:00 J.Perea: Introduction – Home Biogas 2 application in Alaska

16:00 – 17:00 Plenary session: Expert panel discussion
E.Bronstad, M.McCauley, P.Foster, R.Szmidt,
All other attendees to participate

Conclusions and Outcomes : Rapporteur : J.Kendall

17:00 – 17:15 Closing remarks & vote of thanks; L.Zender & P.Foster

17:30 Pick-up by bus for return to Westmark Hotel

Day 3 – March 7th

Depart to / from Westmark Hotel 10:40 – return approx. 19:15 (subject to road conditions)

Site visit and regional / local tour of relevant research & waste water facilities in the Fairbanks area.
F. Ochanate & S.Sebalo

- NREL : Permafrost research tunnel²
- Environment: Chena hot springs (low-carbon energy and greenhouse)

Catering **not** provided. Details subject to weather conditions and transport arrangements.

² Registration must be completed separately, in advance, not with the event organisers (different from venue access)