The world is generating more waste than ever. The unexpected advent of the COVID-19 pandemic accelerated online shopping and e-Commerce, but also the waste accumulation from personal protective equipment (e.g. masks), food leftovers and packaging disposal.

We are well informed on how poorly managed waste is detrimental to the nature and environment. Some of these waste can be recycled, but bulk of them ends up in landfills, which takes up land space, hence a sustainable solution is required.

Countries are considering waste-to-energy (WTE) technologies, to solve the waste management issue, and helps to reduce carbon footprint and greenhouse gases (GHG). Less waste disposal to landfills means less methane and other GHGs, and energy from waste also reduces the dependence on fossil fuels which translate to further GHGs reduction.

And in climate change leading region, waste management and environmental organizations in Europe, are taking a step further with carbon capture and storage (CCS) to achieve, eventually, net-negative emission.

Using CCS in the waste-to-energy industry presents a particular opportunity for bioenergy with carbon capture and storage (BECCS); one of the few abatement technologies that can be carbon negative. BECCS involves the utilisation of biomass as an energy source and the capture and permanent storage of the CO2 produced. ~ Global CCS Institute

Developing a waste to energy facility requires a sane combination of regulation, technology, waste capacity (and types), financing and social support. What more will be required for the CCS abatement technologies to be installed in a WtE facility?

Join us at 09:30hrs CEST on 8 July 2021, as the panel of commercial experts will walk you through this value chain to decabonize waste to net-negative clean energy with WtE + CCS!

Email huiyan@cmtsp.com.sq if you require more information and/or wish to register.



Virtual Networking Interactions



Live O&A with Speakers

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# Upcycling Waste to Energy & Beyond DECARBONIZING

# **ENERGY FROM WASTE & CCS**

8 JULY 2021, 09:30 CEST (GMT +2)

Towards Decarbonisation:



### 8 JULY 2021, THURSDAY

- 08:30 Pre-Networking (Participants are strongly encouraged to Log on to get acquainted with CMT MEET Platform)
- 09:30 CMT & Moderator's Welcome

#### 09:40 Waste, Energy & Oceans

 Integration of WtE to mitigate environmental, social and financial burdens to nations Stephen Peters, Senior Energy Specialist (Waste to Energy), Energy Advisory Group ENE, SDCC

Asian Development Bank (ADB) Headquarters

#### 10:05 Fortum Oslo Varme's CCS Project - A Blueprint for **Cities to Achieve Negative Emissions while Dealing** with Non-Recyclable Waste

- Part of the Norwegian full-scale CCS value chain "Lonaship"
- Future circular economy with CO2 handling on end-solution
- The potential of BECCS in the Waste-to-Energy sector Jannicke Gerner Bjerkas, Director CCS

#### Fortum Oslo Varme AS

#### 10:30 EfW in Australia – Key Considerations & Challenges to Getting an Project Off the Ground

- Projects to date (large v small)
- Economic challenges (landfill charges & rubbish supply)
- Legal challenges (risk allocation)
- Funding sources (bank market & CEFC)
- Pipeline of opportunities Peter Doyle, Partner,
- Gilbert + Tobin

Alexander Danne, Partner, Gilbert + Tobin

#### 10:55 Waste Gasification to Energy - Recovering Renewable Energy & Resources to Achieve Zero Waste to Landfill in the Circular Economy

- Proven & Disruptive Technology
- Critical Infrastructure Asset
- Attractive Business Model
- Craig Eyes, Director

#### **Recovered Energy Australia**

11:20 15-Minutes Networking Interval

#### 11:35 ARC's Role in Decarbonization

- Consumption & waste production is a climate problem
- The climate potential of the waste sector a part of the solution
- The Carbon Capture plans in ARC
- Jacob H. Simonsen, CEO
- ARC Amager Ressourcecenter

#### 12:00 "From Soup to Nuts" – Transitioning the Energy from Waste Industry

- Decarbonisation opportunities throughout the Energy from Waste Process
- Carbon Capture and Storage Can EfWs become "Waste Decarbonisation Facilities"
- Negative emissions transforming EfWs from "a necessary evil" to "a necessary good"

Paul Davies, Group Strategy & Business Development Director Viridor Ltd.

#### 12:25 Carbon Capture Utilization & Storage Considerations in Waste to Energy Projects of Asia

- ADB's work & current status of CCUS in Asia
- Key considerations while designing a CCUS project: Comparing with the WtE
- How CCUS may be accelerated in Asia's WtE projects Darshak Mehta, Consultant

#### Asian Development Bank (ADB) Headquarters

#### 12:50 Why Carbon Capture & Storage (CCS) is Not the Panacea to the Incinerators Carbon Challenge

- CCS is not the right solution to reduce emissions from incinerators
- CSS increases the cost of incineration
- Not all (far from it) incinerators will have a realistic potential to do CSS

Janek Vahk, Climate Change & Energy <u>Coordinator</u> Zero Waste Europe

13:15 Final Discussion Closing Remarks. End of Watch Live.