



**SUSTAINABLE CITIES DELEGATION TO
DENMARK AND SWEDEN
Sept. 09 to Sept 14, 2018
DRAFT Itinerary**

Sunday, Sept. 09, Copenhagen, Denmark

For general and cultural information, go to:

<http://www.aok.dk/english> and <http://www.visitdenmark.com/denmark/tourist-frontpage>

Check into Hotel in Copenhagen hotel TBD

5:00 pm - Meet in the hotel lobby for introductions

6:30 pm - Leave the hotel lobby for the welcome dinner at TBD

7:00 pm - Welcome dinner at TBD

Monday, Sept. 10, Copenhagen, Denmark

9:00 am to 12:00 pm - Bike Tour of Copenhagen with Copenhagenize

Highlights of the tour include an introduction to Copenhagen's bike culture and infrastructure, bicycle parking, bike bridges, bike paths, elevated cycle lanes and innovative bike projects, including suburban-urban commuting. This is a great opportunity to experience the city.

12:00 pm to 1:30 pm - Lunch at Refshaleøen

Refshaleøen island is an old industrial area that was once home to one of the world's largest shipyards, B&W. Now, Refshaleøen is home to cozy restaurants, cool bars, creative office spaces, activity centers, and music festivals. Only about a 15-minute-bike ride away from the city centre, this place is like a peaceful, undiscovered island in the middle of bustling Copenhagen.

2:00 pm to 3:30 pm - Tour of Amager Bakke, CHP, Waste to Energy Plant and Recreational Facility

Amager Bakke (Amager Hill) also known as Amager Slope or Copenhill, is a combined heat and power waste-to-energy plant. It opened in 2017 and partially replaced the nearby old incineration plant. It has a 279 ft tall sloped roof that doubles as year-round artificial ski slope, hiking slope and climbing wall. It is designed to change between operating modes, producing 0-63 MW electricity and 157-247 MW district heating, depending on the local heat demand and power price. It produces more clean water than it uses. Because of filtration and other technologies, sulphur emission is expected to be reduced by 99.5% and NOx by about 90%, and it is claimed to be the cleanest incineration plant in the world. A special feature of this facility will be that the chimney is intended to not emit its exhaust continuously, but instead in the form of "smoke" rings consisting of water vapor rather than actual smoke.

4:00 pm - Back at the hotel; Explore Copenhagen on your own.

Tuesday, Sept. 11, Copenhagen/Samsø Island, Denmark and Växjö, Sweden

9:00 am - Leave the hotel

9:30 am to 10:30 am Meet with the Copenhagen Solutions Lab

Copenhagen Solutions Lab, which is part of the Technical and Environmental Administration of Copenhagen Municipality, identifies and coordinates smart city needs in the municipality's departments and matches them with existing knowledge and available market solutions. In this way, Copenhagen Solutions Lab acts as a bridge between external partners and Copenhagen Municipality's smart city initiatives. Through collaborations with the research community and the market, from the small and innovative actors to the large corporations, Copenhagen Municipality accesses the innovation power that is needed to create new and effective urban solutions. Smart city themes are: 1) People and Flows; 2) Digital Services; 3) Data Driven Operation and Supervision; 4) Environment and Climate and 5) Lighting and Urban Life.

In addition, Copenhagen Solutions Lab, is working with business to use the city itself as a living laboratory where new solutions are created, tested and demonstrated. This process provides important knowledge about which solutions can be scaled to larger areas of the city and benefit all of Copenhagen. Additionally, the city laboratories deliver an important foundation of knowledge about investments in new technology.

11:00 am to 12:00 pm - Go and learn about the swimming area at Islands Brygge

One of the trendiest spots is the public outdoor swimming facility in the Islands Brygge area where Copenhageners come to relax during the summer. Yet only 15 years ago this would have been impossible because the water was polluted to the extent that it posed a health risk. As a result of a long-term effort by Copenhagen municipality, people swim in the water in the centre of the city.

12:30 pm to 2:30 pm (lunch included) - Meet Cobe at the Silo Project in Nordhavn

The Silo Project is part of a master plan undertaken by the architecture firm COBE that is intended to revitalize Nordhavn, the city's industrial waterfront district. The former grain silo, the largest of the area's industrial buildings, contains 38 apartments, a restaurant and an events space. Lunch will be at Restaurant Silo. (See before, during and after photos below.)

3:00 pm - Pick up your overnight bag from the hotel.

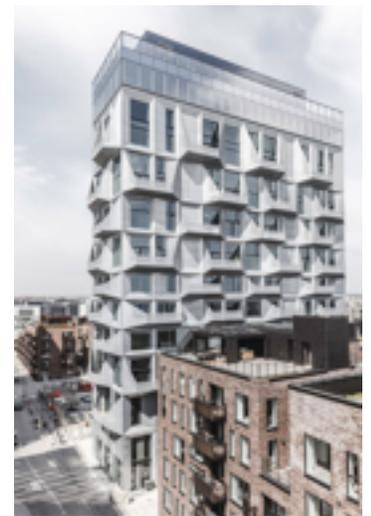
Group 1 catches the train to Samsø Island in Denmark; Leave hotel at 4:00 for 4:43 train.

(Train is about 1.5 hours)

Dinner together in Samsø

Group 2 catches the train to Växjö in Sweden; Leave hotel at 4:00. (Train is about 2.5 hours.)

Dinner together in Växjö



Wednesday, Sept. 12, Samsø Island/Kalundborg, Denmark- Group 1

9:00 am to 3:00 pm (includes lunch) - Leave the lobby for the Energy Academy

In 2007 Samsø Island, Denmark, became a carbon-negative island producing more renewable energy than it consumes. This 10-year effort, led by Søren Hermansen, maximized community engagement and economic rejuvenation. Before this effort, Samsø faced many problems; its farming and fishing industries were in decline, fuel costs were rising and its young people were leaving and not returning. Through the island's renewable energy efforts, Samsø was able to reinvent itself, bring jobs and energy tourism to the island and become a world leader in community energy strategies.

In this workshop participants will see first hand how the transformation created opportunities for both individuals and businesses. We will explore how the successes of Samsø can be translated to a different context given social, economic and political differences.

Following the workshop a tour of the island will include the following:

- Visit to the straw-based district heating plant in Ballen/Brundby
- Visit to a wind turbine owned by local farmer
- Visit to the Solar PV (photo voltaic) and electrical cars owned by Samsø municipality
- Visit to Mårup local district heating plant based on 75 % woodchips and 25 % solar thermal collectors

For in depth background information, download the 10 year status report at their website: <http://energiakademiet.dk/en/vedvarende-energi-o/>

3:30 pm - Free time to explore this beautiful island on your own

Time TBD - Take the ferry to Kalundborg

Check into the hotel in Kalundborg

7:00 pm - Working dinner with both groups to debrief each other on what was learned

Wednesday, Sept. 12, Växjö, Sweden/Kalundborg, Denmark - Group 2

9:00 am to 2:00 pm - Presentations and Tours (includes lunch)

- **Strategic environmental work.** This seminar by the Municipality of Växjö includes the background, current work and plans for the future.
- **The modern wooden city.** Introduction to Växjö's wood building strategy and its implementation. Also discussed will be the cooperation between the city, various companies and the university. The visit will include both strategic and practical aspects, and tours of some of the existing high-rise wooden buildings such as Linnologen's 8-story residences and construction sites, including Trummens Strand, which when completed will have 150 apartments and a pre-school.
- **BoKlok housing by IKEA+Skanska.** BoKlok consists of pre-fabricated modules for single family and multi-family wooden homes that are more affordable than traditional housing.
- **Wastewater treatment and biogas production at Sundet.** Seminar and study visit at the wastewater treatment plant in which biogas is produced in a thermal hydrolysis and co-digestion process from wastewater sludge and food waste and upgraded to vehicle fuel.
- **Seminar and study visit at VEAB, Sandviksverket, Combined Heat and Power Plant (CHP),** which uses forestry biomass as the fuel source.
- **Lake restoration.** Seminar and study visit about restoration of eutrophicated lakes through sludge dredging, vegetation restoration, fish reduction, stormwater treatment, and inactivation of phosphorus in lake sediment.

Time TBD - Take the train to Kalundborg

Check into the hotel in Kalundborg

7:00 pm - Working dinner with both groups to debrief each other on what was learned.

Thursday, Sept. 13, Kalundborg and Copenhagen, Denmark

9:00 am - Leave the lobby to walk to the Industrial Symbiosis Institute

9:45 am to 11:45 pm - Presentation of industrial symbiosis and bus tour of the various entities that comprise the Kalundborg Industrial Park.

Kalundborg Eco-Industrial Park is an industrial symbiosis network located in Kalundborg, Denmark, in which companies in the region collaborate to use each other's by-products and otherwise share resources. The Kalundborg Eco-Industrial Park today includes nine private and public enterprises, some of which are some of the largest enterprises in Denmark. The enterprises are:

- Novo Nordisk - Danish company and largest producer of insulin in the world
- Novozymes - Danish company and largest enzyme producer in the world
- Gyproc - French producer of gypsum board
- Kalundborg Municipality
- Dong Energy - owner of Asnaes Power Station, the largest power plant in Denmark
- RGS 90 - Danish soil remediation and recovery company
- Statoil - Norwegian company which owns Denmark's largest oil refinery
- Kara/Novoren - Danish waste treatment company
- Kalundborg Forsyning A/S - water and heat supplier, as well as waste disposer for Kalundborg citizens

11:45 am - Walk back to town

12:15 pm to time TBD (depends on train schedule) - Lunch in Kalundborg

Time TBD - Train to Copenhagen (1.5 hours)

Time TBD - Check into hotel in Copenhagen

7:00 - Leave lobby to go to farewell dinner

Friday, Sept. 14, Copenhagen, Denmark

9:00 am to 12:00 pm - Meet with Realdania on WATER PLUS projects that combine stormwater management strategies with new public space and recreational opportunities. WATER PLUS sets a new agenda for climate adaptation in urban areas by focusing on how we can create new public spaces that not only retain rainfall in the event of cloudbursts, but also act as active outdoor spaces for city residents.

2 simple i-SUSTAIN RULES

- We always try to leave on time. In other words, we won't wait for you if you are late. We will have addresses on the final itinerary, so that you can meet us at the destination if you are late.
- Wine, beer, coffee and tea are provided at every group dinner. If you prefer something else like a different wine or a cocktail, please let the wait staff know that you will be paying for these items yourself.