

REPORT TO: THE EXECUTIVE MAYOR AND MEMBERS OF THE MAYORAL COMMITTEE
AND ENERGY AND CLIMATE CHANGE PORTFOLIO COMMITTEE

LC 24500

1. ITEM NUMBER MC 26/03/20

2. SUBJECT

FEEDBACK ON THE INTERNATIONAL TRIP UNDERTAKEN FROM 8TH TO 15TH
OCTOBER 2019 TO ATTEND THE C40 MAYORAL SUMMIT IN COPENHAGEN
AND VISIT THE GREENLAB SKIVE SITE IN DENMARK

ONDERWERP

TERUGVOERING OOR DIE INTERNASIONALE REIS VAN 8 TOT
13 OKTOBER 2019 VIR DIE BYWONING VAN DIE C40
BURGEMEESTERSBERAAD IN KOPENHAGEN EN BESOEK AAN DIE
GREENLAB SKIVE-TERREIN IN DENEMARKE

ISIHLOKO

INGXELO EMALUNGA NEHAMBO KUMAZWE APHESHEYA EQHUTYWE
UKUSUSELA NGOWE-8 UKUYA KOWE-15 KWEYEDWARHA 2019 NGENJONGO
YOKUZIMASA INDIBANO YOOSODOLPHU I- C40 ESE- COPENHAGEN
NONDWENDWELO KWISIZA I- GREENLAB SKIVE ESISE- DENMARK

L2936

3. EVENT SUMMARY

EVENT DETAILS	
CONFERENCE/SEMINAR	C40 MAYORAL SUMMIT HOSTED BY CITY OF COPENHAGEN AND REPRESENTED BY MAYORAL COMMITTEE MEMBER PHINDILE MAXITI AND EXECUTIVE DIRECTOR KADRI NASSIEP
OTHER	Councillor Maxiti represented the Executive Mayor of Cape Town at the C40 Mayoral Summit while Mr Nassiep attended as a speaker and delegate. Mr Nassiep also visited the GreenLab site in Skive, Denmark which is an example of how a circular economy is developed within the context of an industrial park. It is an example of what can be achieved on the Athlone Power Station site, if repurposed for this type of activity.
DATE	C40 Mayoral Summit from 9th to 12th October 2019 Visit to GreenLab Skive on 14th October 2019
VENUE	Tivoli Congress Centre (Copenhagen) and GreenLab (Skive)
TOTAL COST TO THE CITY	R41 361.00 approx.
CITY	Copenhagen and Skive
COUNTRY	DENMARK

JAH
12/13

ATTENDEE DETAILS	
NAME AND SURNAME	DESIGNATION
Phindile Maxiti	MAYORAL COMMITTEE MEMBER (ENERGY & CLIMATE CHANGE)
Kadri Nassiep	EXECUTIVE DIRECTOR (ENERGY & CLIMATE CHANGE)
PROVIDE SUMMARY OF HOST ORGANISATION / CITY	
<p><i>The C40 Cities Climate Leadership Group (C40) is a group of 94 cities around the world that represents one twelfth of the world's population and one quarter of the global economy. Created and led by cities, C40 is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens.</i></p> <p><i>It is effectively a covenant of mayors from leading cities around the world – who share a common vision of a sustainable future for cities. Cape Town is a member of C40 and has taken on several pledges and adopted targets in support of a wider goal of reducing the increase in global temperature to below 1.5°C, in line with the aspirations of the Paris Accord.</i></p> <p><i>Copenhagen is the host city for the 2019 C40 Mayoral Summit – and is home to about 1.27m inhabitants. Copenhagen, as the capital of the environmentally progressive kingdom of Denmark, has pledged to be carbon neutral by 2025, the most ambitious target yet set by a city. Denmark is also home to the GreenLab site, located in the small town of Skive. GreenLab is the first industrial park of its kind, providing both renewable energy and waste resources to its industrial tenants. It is a global example of what can be done to develop a circular economy with waste as a value-adding commodity.</i></p>	

4. OBJECTIVE

- Attend the C40 Mayoral Summit in Copenhagen on behalf of the Executive Mayor of Cape Town (Councillor Phindile Maxiti, Mr. Kadri Nassiep). The Summit would provide an opportunity to assess progress made by leading cities in combating climate change while still maintaining a focus on sustainable development of their local economies. The meetings would also provide an opportunity for Cape Town to assess whether current pledges were realistically achievable while giving the City of Cape Town an opportunity to consider new targets, pledges or associations as part of its commitment to being a responsible city.
- Attend African Delegates meeting on the margins of the C40 Mayoral Summit (Councillor Phindile Maxiti, Mr. Kadri Nassiep). There are 12 cities from Africa that are members of C40, with Freetown being the last to join (membership ratified at the Summit). The meeting of African delegates would provide an opportunity for sharing of experiences and best practice.
- Attend Exploratory Green Ports Meeting for port cities in C40 (Councillor Phindile Maxiti, Mr. Kadri Nassiep)
- Site visit to the Amager Bakke Waste to Energy Plant (Councillor Phindile Maxiti)
- Attend the introductory Carbon Neutral Cities Alliance Meeting (Mr. Kadri Nassiep)
- Site visit to the GreenLab facility in Skive, Denmark (Mr. Kadri Nassiep)

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5. OUTCOMES

The Africa Delegates meeting afforded an opportunity for delegates from African cities to share experiences regarding C40 activities and to champion initiatives that would benefit the continent. This was also an opportunity to endorse Freetown's application for membership to the C40. Durban was also formally acknowledged for producing its climate change action plan – the first of the African cities to produce one for C40. Durban had been chosen as one of two pilot cities from around the world and received the necessary technical support to produce its action plan. The other member cities will produce their plans during 2020 – with City of Cape Town set to produce its plan by June 2020.

Freetown's membership of the C40 covenant of Mayors was formally ratified at the C40 Mayoral Summit. This was also an opportunity for the incoming chair of the C40, Mayor Eric Garcetti of Los Angeles to spell out his vision for C40 and the future.

On the margins of the Summit, the City of Cape Town was invited to the first port cities meeting. There will follow up discussions for those cities who are keen to participate in measures to green their ports. This is not a priority for the City as the ports are under national, not local government control.

The City was invited to a meeting to discuss membership of the Carbon Neutral Cities Alliance – a network designed to support cities who wish to take up ambitious carbon neutral targets, such as 100% carbon neutral by 2050. The City of Cape Town will have to discuss the pros and cons of membership within City structures, prior to any decision being taken in this regard.

The visit to GreenLab Skive yielded significant value in that there is a willingness for the GreenLab staff to work with the City of Cape Town in assessing the suitability of selected sites for replication of the GreenLab model. This site features the best example of how the circular economy can be introduced by keeping energy prices low, utilising municipal and industrial waste on site and creating job opportunities. Since the World Bank is keen on replicating this model in other countries, the City of Cape Town will engage the Bank to determine if they will support the team from Denmark to visit Cape Town and assess the viability of selected sites, including the Athlone Power Station site.

- ☐ - Partnership Agreement
- ☐ - Membership Agreement
- ☐ - Grants Agreement
- ☐ - Memorandum of Understanding
- ☐ - Statement of Intent
- ☒ - Other

6. ACTIONS REQUIRED

6.1 A report is produced for submission to both the Energy and Climate Change Portfolio Committee as well as Mayco and Council.

6.2 Follow up meetings or discussions with Carbon Neutral Cities Alliance and GreenLab are required

6.3 A presentation for wider dissemination is also being produced

7. IMPLICATIONS

7.1	Constitutional and Policy Implications	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>
7.2	Environmental implications	No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>
7.3	Financial Implications	No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>
7.4	Legal Implications	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>
7.5	Staff Implications	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>
7.6	Risk Implications	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>

8. RECOMMENDATIONS:

RECOMMENDED that:

- a) IT BE NOTED that Cllr Maxiti and Mr. Nassiep attended and participated in the C40 Mayoral Summit in Copenhagen from 9th to 12th October 2019 and Mr. Nassiep attended the GreenLab Skive site visit on 14th October 2019.
- b) The report be referred to the Energy and Climate Change Portfolio Committee for noting.

AANBEVEEL dat:

- a) DAARVAN KENNIS GENEEM WORD dat rdl. Maxiti en mnr. Nassiep die C40 Burgemeestersberaad in Kopenhagen van 9 tot 12 Oktober 2019 bygewoon het en mnr. Nassiep die Greenlab Skive-terrein op 14 Oktober 2019 besoek het
- b) Die verslag na die portefeuljekomitee oor Energie en Klimaatsverandering verwys word vir kennisname.

KUNDULULWE ukuba:

- a) MAKUQATSHELWE Ingxelo Emalunga Nehambo Kumazwe Aphesheya Eqhutywe Ukususela Ngowe-8 Ukuya Kowe-15 Kweyedwarha 2019 Ngenjongo Yokuzimasa Indibano Yoosodolphu I- C40 Ese- Copenhagen Nondwendwelo Kwisiza I- Greenlab Skive Esise- Denmark
- b) Ingxelo le mayigqithiselwe kwiKomiti engezaMandla oMbane neZibaso kunye nokuTshintsha kweMozulu ukuze iqwalaselwe.

9. GENERAL DISCUSSION

A presentation is attached as Annexure A of this report.

It covers the background to the trip as well as the salient points regarding each engagement. In specific cases, the technical details particular to a site or project have been included, for reference purposes.

The visit to GreenLab Skive presents an opportunity to repurpose the old Athlone Power Station and turn it into an industrial park, supplied with cleaner energy while still ensuring local economic development and job creation.

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The C40 Mayoral Summit was an opportunity to share best practice with other member cities and for members to be reassured that the world will continue to fight climate change despite the vocal opposition from certain government heads of state. Copenhagen, as host city, leads the way in terms of its commitment to carbon neutrality by 2025 and has already implemented a number of initiatives aimed at reducing its carbon footprint.

The City may opt not to join the group that focuses on greening of ports. The management of ports remains a national competency and it is expected that the City of Cape Town will act in an advisory capacity, rather than as lead.

The City of Cape Town will have to assess whether it wishes to join the Carbon Neutral Cities Alliance. If it does so, it will have to adopt a more stringent carbon neutral target than is currently the case. This is a matter that requires further deliberation at various fora.

10. ANNEXURES

A. Presentation

FOR FURTHER DETAILS, CONTACT:

DATE	20 th January 2020		
NAME	Kadri Nassiep	CONTACT NUMBER	021 400 5143
E-MAIL ADDRESS	Kadri.nassiep@capetown.gov.za		
DIRECTORATE	Energy & Climate Change	FILE REF No	
SIGNATURE :			

COMMENT:



EXECUTIVE DIRECTOR

KADRI NASSIEP

NAME

Kadri Nassiep

DATE

20 January 2020

b✓

MANAGER: INTERNATIONAL RELATIONS

DR. DENVER VAN SCHALKWYK

04/02/2020

DATE

COMMENT:

NOTED



LEGAL COMPLIANCE

☒ REPORT COMPLIANT WITH THE PROVISIONS OF COUNCIL'S DELEGATIONS, POLICIES, BY-LAWS AND ALL LEGISLATION RELATING TO THE MATTER UNDER CONSIDERATION.

☐ NON-COMPLIANT

COMMENT:

NAME

Jean-Mari Holt

TEL

021 400 2753

DATE

24/02/2020

JMH.

Certified as legally compliant:
based on the contents of the report.



CITY MANAGER

☒ SUPPORTED FOR ONWARD SUBMISSION TO:
MAYCO ☒

RELEVANT SECTION 79 OR 80 COMMITTEE

☐ NOT SUPPORTED

☐ REFERRED BACK

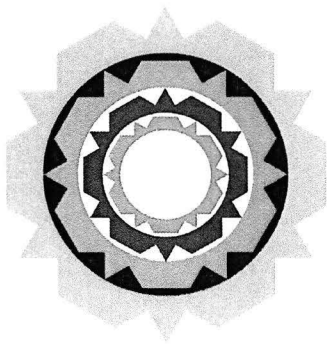
COMMENT:

DATE

Lungelo Mbandazayo

26 FEB 2020

City Manager



**CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD**

Denmark 9th to 14th October 2019

Energy & Climate Change Directorate

Making progress possible. Together.

C40 MAYORS SUMMIT Copenhagen, Denmark

Attended By Mayco Member for Energy & Climate Change Councillor Phindile Maxiti &
Executive Director Energy & Climate Change Mr Kadri Nossiep



Objectives of trip

- **Attend the C40 Mayoral Summit in Copenhagen on behalf of Executive Mayor of Cape Town**
 - *In attendance: Councillor Phindile Maxiti, Mr. Kadri Nassiep*
- **Attend African Delegates meeting on the margins of C40**
 - *In attendance: Councillor Phindile Maxiti, Mr. Kadri Nassiep*
- **Attend Exploratory Green Ports Meeting for port cities in C40**
 - *In attendance: Councillor Phindile Maxiti, Mr. Kadri Nassiep*
- **Site visit to the Amager Bakke Waste to Energy Plant**
 - *In attendance: Councillor Phindile Maxiti*
- **Attend Carbon Neutral Cities Alliance Meeting (introductory)**
 - *In attendance: Mr. Kadri Nassiep*
- **Site visit to the GreenLab facility in Skive, Denmark**
 - *In attendance: Mr. Kadri Nassiep*



Background to C40 Mayoral Summit

- CoCT joined C40 Climate Leadership Group in 2014
- Involves participation in a number of programmes, networks, events and declarations/pledges
- **Declarations**
 - Deadline 2020 Commitment
 - Fossil Free Streets Declaration (Green and Healthy Streets)
 - Net Zero Carbon Buildings Declaration
 - Inclusive Climate Action (Equity Pledge)
- **Programmes**
 - Deadline 2020 Climate Action Planning Technical Assistance Programme
 - Building Energy 2020: SA Buildings Programme
 - Reinventing Cities Programme (design competition)
- **Network/forums**
 - Adaptation Implementation Initiative
 - Energy and Buildings Programme
 - Transport and Urban Planning Programme
 - Inclusive Climate Action
 - Divestment /Investment Forum

C40 Mayoral Summit 2019

- Hosted by City of Copenhagen at the Tivoli Congress Centre
- Theme: The Future We Want
 - The focus of the event was heavily on what is perceived as a climate emergency, and what cities are doing in response to climate change
 - This was an opportunity to also share with delegates the preparation of climate action plans that are required by cities who signed up to pledges and are to be submitted before Deadline 2020 next year
- Programme Director: Ms. Connie Hedegaard (former EU Minister and ambassador)
- The opening provided an opportunity for the outgoing C40 chairperson, Ms. Anne Hidalgo (Mayor of Paris) to hand over to the incoming chairperson, Mayor Eric Garcetti of Los Angeles.
- Mayor Garcetti stressed the importance of the Global Green New Deal, that would be required in order for cities to limit the average global temperature increase to below 1.5°C
- The Mayor of Copenhagen, Mr. Frank Jensen, after berating some world leaders who are climate denialists, stated that the rest of cities are still in, and will continue the fight against climate change
- The central theme was divided into plenaries that focused on:
 - The future we want is possible
 - The future we want is resilient
 - The future we want is inclusive
 - The future we want will be built together



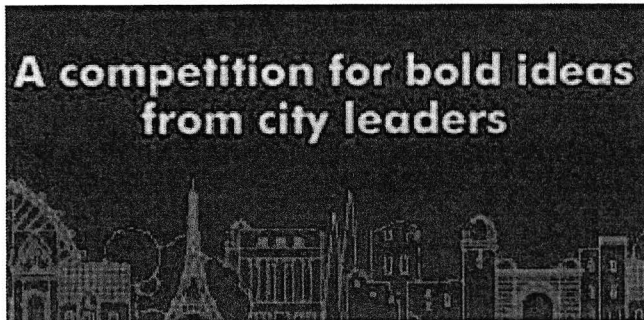
C40 Mayoral Summit content highlights

- Deep Dive sessions included panel discussions that focused on topics such as
 - Ultra-efficient and renewably-powered cities
 - A future without waste
 - Investing today for a sustainable tomorrow
 - Urban green havens – letting nature lead the way
 - Breathe deeply – city solutions for clean air
 - A recipe for the future – healthy food for a healthy planet
 - Our house is on fire – is our economy driving inequality and environmental disaster?
 - Women4climate tech challenge – innovation in climate action: women leading the way
- Former US Vice President Al Gore presented on the changes in predictions regarding the timing in rise of global mean temperature to 1.5°C above the baseline. The IPCC report also paints a picture of a worsening scenario – we are not doing enough to combat climate change
- Alexandra Ocasio-Cortez – a US Democrat member of congress spoke passionately about what kind of future lies ahead for cities in the event that we cannot turn around the current growth trend in greenhouse gas emissions. She is an ardent opponent of President Trump's denialist views



Bloomberg Philanthropic Awards

- Hosted by Michael Bloomberg
- Awarded to Mayors of Cities in 7 categories
- Cape Town was a nominee in the Renewable Energy Category
- Seoul (South Korea) won the award in that category
- Dakar did win an award for its work on waste management



African Delegations Meeting at C40

- Meeting chaired by Hastings Chikoko (C40 Regional Director – Africa) and HE Mayor Sowah of Accra
- The focus of the meeting was on garnering inputs from African city delegates in light of the theme of the C40 Summit and the implications for African Cities
- SA was represented at the political level by the executive mayors of Johannesburg, Tshwane and Durban with Councillor Maxiti representing the Mayor of Cape Town
- Importantly, Durban produced their Climate Action Plan (CAP), the first African city to do so. Durban had been part of the pilot project with C40 and the rest of the cities who signed up to pledges in line with Deadline 2020 will need to submit their CAPs by June 2020
- Freetown was seeking to be accepted as the next African city to become members of C40. An announcement in this regard was expected during the Summit
- The emphasis of inputs at the African Delegates meeting varied significantly but focused primarily on taking C40 activities and customizing them for African conditions
- The Cape Town delegates' inputs at this meeting focused on two important issues
 - The disjuncture between cities' aspirations (mostly in terms of carbon reduction) and the national legislative and regulatory framework. This sentiment was supported by many cities at C40
 - The lack of support for innovation at the cities' level. Noting the prevalence of grassroots innovation which is not supported through nationally controlled structures



African Delegates

C40 Mayoral Summit, Copenhagen 2019



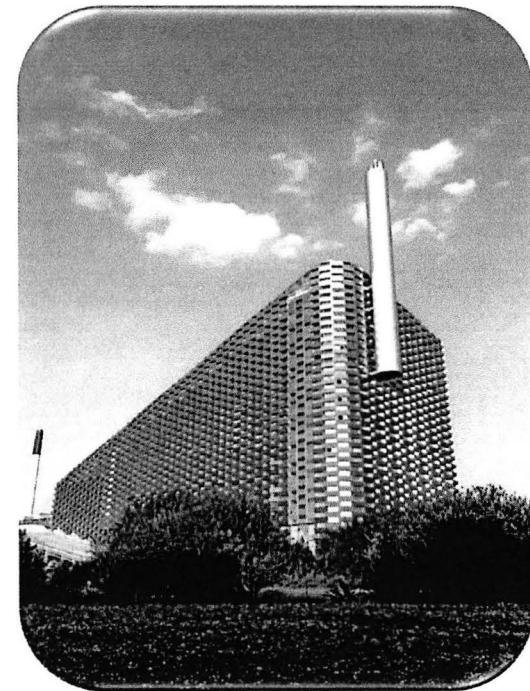
Executive Mayors (African Delegation)



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Visit to Amager Bakke Waste to Energy Plant

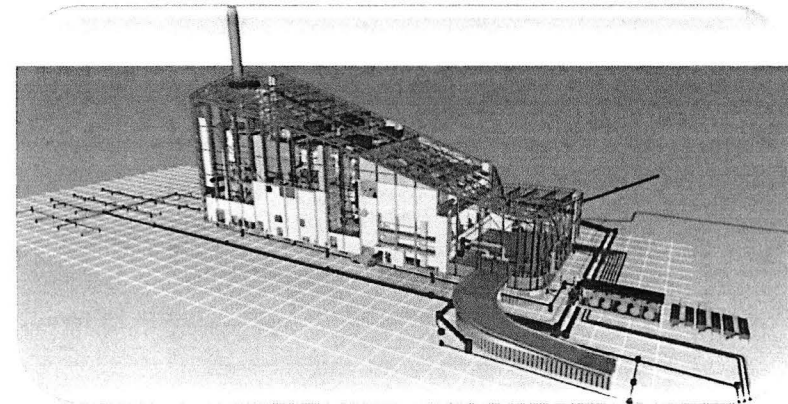
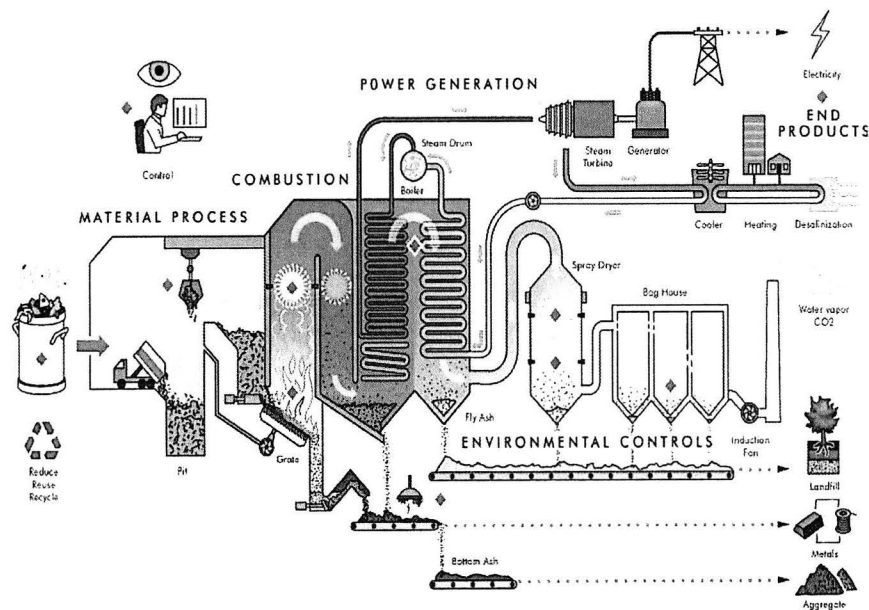
- Official site visit undertaken by Councillor Maxiti
- Plant located in Copenhagen, Denmark and developed by Ramboll
- The plant opened on 30 March 2017 and is estimated to have cost \$670 million
- The plant is expected to burn 400,000 tons of municipal solid waste annually
- It was designed by Bjarke Ingels Group with a 85 m (279 ft) tall sloped roof that doubles as year-round artificial ski slope, hiking slope and climbing wall
- Technically, 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 emissions are 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



Cleanest incinerator plant in the World

Waste-to-Energy: How It Works

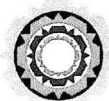
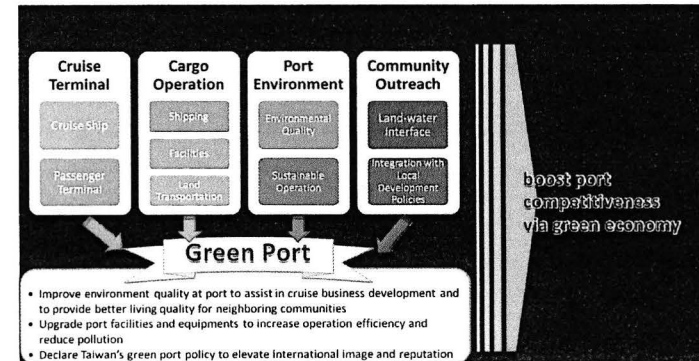
Waste-to-energy uses trash as a fuel for generating power, just as other power plants use coal, oil, or natural gas. The burning fuel heats water into steam that drives a turbine to create electricity. The process can reduce a community's landfill volume by up to 90 percent, and prevent one ton of carbon dioxide release for every ton of waste burned.



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Exploratory Green Ports Meeting

- Meeting attended by Cllr Maxiti and Mr. Nassiep
- Meeting convened by City of Los Angeles
- Cities that attended include:
 - Cape Town
 - Durban
 - Beijing
 - Singapore
 - Auckland
 - New York
 - Los Angeles
 - Venice
 - Copenhagen
 - Rio de Janeiro



Green Ports Meeting

- The focus of the meeting was on getting a sense from participants what they were already doing to introduce the necessary interventions to green their ports and whether cities could work together going forward (mainly sharing of information)
- Los Angeles, together with Long Beach, committed to all zero emission cargo handling by 2030
- Auckland is trialling a hydrogen plant for fueling vehicles and has a fully electric tug boat (first in New Zealand)
- Singapore is upgrading its ports to be LNG ready by 2020
- Copenhagen has limited emissions in its port and has reduced other pollutants to the point that it is safe to swim in the harbour
- Cape Town, like some of the other cities, does not control its own port but can work with Transnet and national government to green the Cape Town harbour and smaller harbours such as Kalk Bay
- Cape Town raised the possibility of using ultra light rail to move freight from depots to harbours
- The interest shown by members to continue dialogue will probably result in a new workstream under C40 and a follow up meeting



Visit to EnergyLab Nordhavn

- The official site visit was attended by Cllr Maxiti and Mr. Nassiep
- The area is a sustainable habitat which features innovative and integrated energy solutions – creating a smart city environment in this harbor
- The site integrates multiple energy infrastructures (electricity, thermal, transportation) and provides an intelligent control of subsystems and components – providing the necessary flexibility for efficient utilization of renewable energy
- The various technologies on display include:
 - Large battery storage system for peak shaving and frequency regulation
 - Intelligent controllers/switches that control individual cells of the battery pack
 - Electric vehicle fast charging stations
 - Smart building management systems that provide data and controls
 - A district heating system substation in combination with a heat pump
 - District heating used as demand response measure – due to flexibility of use
 - Smart control of heating systems – used as part of load shifting activity
 - Waste heat reuse – particularly for district heating (sourced from cooling systems in the supermarket)
 - Flexible water heating using fuel switching (district heating with water tank and supported by direct electrical heating)
 - Energy-Hub – which is a co-working platform for companies working on sustainable solutions with a focus on urban development and energy solutions



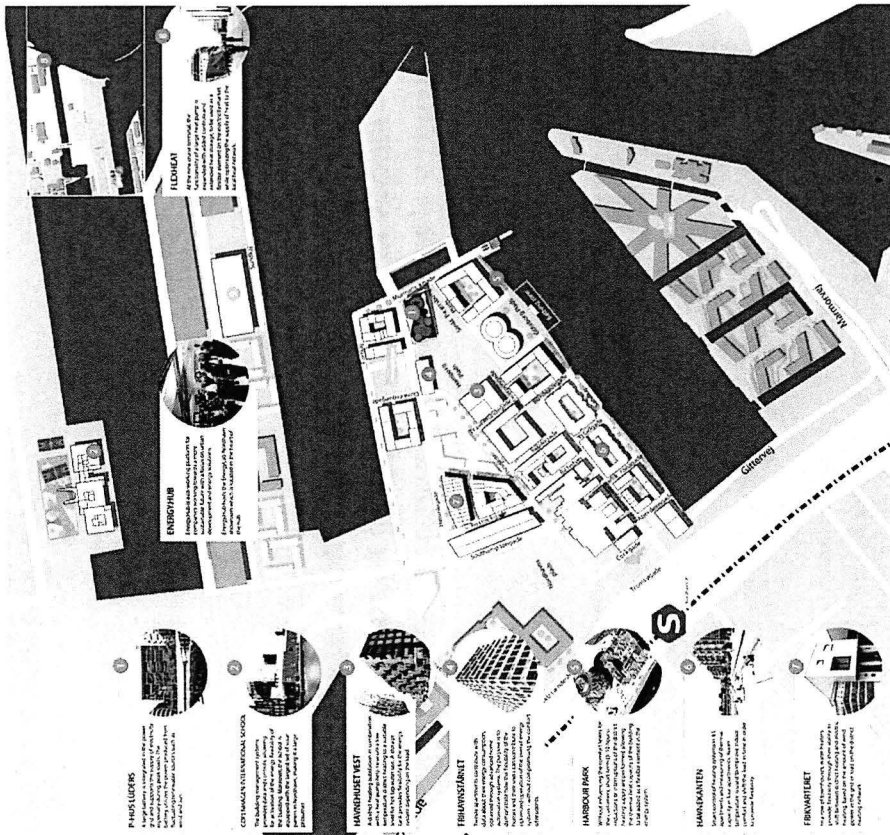


Photo: By & Havn / Rasmus Hjortshøj

EnergyLab Nordhavn (North Harbour)



Meeting with Carbon Neutral Cities Alliance

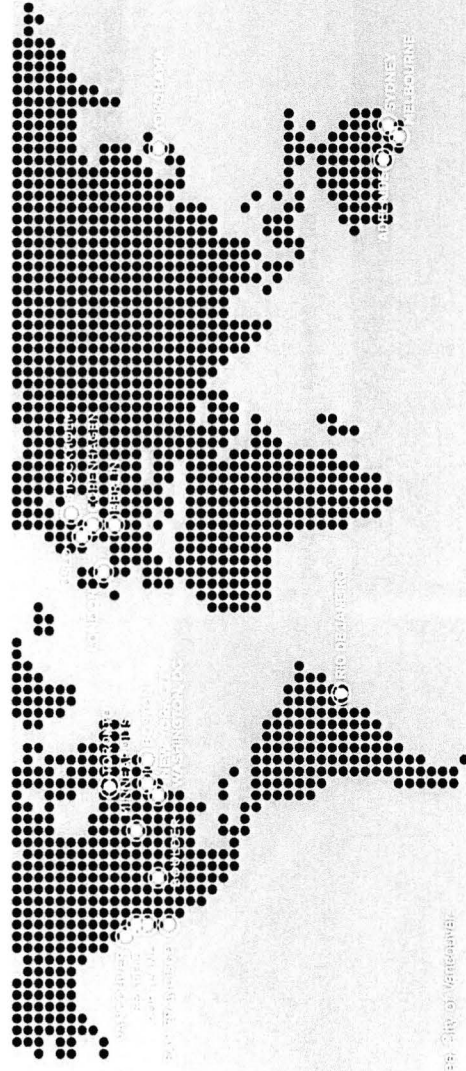


Image adapted from original by David West, City of Vancouver

The Carbon Neutral Cities Alliance is a collaboration of leading global cities working to cut greenhouse gas emissions by 80–100% by 2050 or sooner—the most aggressive GHG reduction targets undertaken anywhere by any city.



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CNCA
CARBON NEUTRAL CITIES ALLIANCE

CNCA Meeting

- Meeting attended by Mr. Nassiep
- CNCA comprises 21 members at present – made up of cities who:
 - Are members of C40
 - Have formally pledged to reduce their emissions by at least 80% by 2050
 - Are willing to share information on their experiences
 - Adhere to participation standards
 - Are willing to commit to attendance at specific meetings
- There is a membership fee of \$10,000 p.a. but there is a possibility of applying for a scholarship
- CNCA will send us application form and the CoCT will have to agree on submitting a request to join CNCA – will also require a commitment to carbon neutrality by 2050 or at least an 80% reduction in emissions
- A City representative would be required, if the City of Cape Town joins, to serve once every five years on a leadership committee



Greenlab Skive

Site Visit on the 14th October 2019 by Kadri Nassiep

Visit to GreenLab Skive

- Visit undertaken by Mr. K Nassiep
- Site is located in town of Skive, in northern Denmark
- The site houses various industrial plants, provided with electricity, heat, carbon dioxide and other waste resources in what is termed a Symbiosis Net
- The project has moved forward from conceptualization in 2017 to commercial operation of industrial plants in 2019
- The concept is now being studied by the World Bank to determine the mechanism by which it can be replicated in countries such as Mexico and Gabon
- This is an ideal model to be used to stimulate economic development and promote sustainable industrial practices that make economic sense, not just for environmental purposes
- The discussions with the GreenLab management focused on the possibility of collaboration with Cape Town – to assess the feasibility of using this model in sites such as Bellville South, Atlantis, Paardevelei and/or the Athlone Power Station



GreenLab Skive

