

WATER RELATED TO SUSTAINABLE ENERGY

NOVEMBER 1-2, 2011
AMSTERDAM, THE NETHERLANDS

Second announcement and invitation to register

INTRODUCTION

From October 29 to November 4, the city of Amsterdam will host the first International Water Week in the Netherlands (IWW). The IWW highlights integrated solutions covering the entire water cycle. One of the conferences that will be organized during the week of the event is the conference Water Related to Sustainable Energy.

Worldwide problems related to finite fossil fuels and phosphorus resources, water scarcity due to climate change and a disproportionate activation of nitrogen urges the limitation of energy and water use and related recovery and reuse of resources. Increasing urbanization enforces a new approach towards water, energy and nutrient consumption and production.

Integrated combinations in the field of water, energy and waste are necessary to find solutions to the challenges we face. Waste can be seen as a raw material and turned into a resource again. Highly promising solutions are being demonstrated across the world. New technologies, total solutions and business models are proving inspiring. For instance, the use of the thermal and chemical heat of surface water, waste water and groundwater represents a source of new opportunities. Combining technologies in the field of nutrient recovery, heat recovery, seasonal thermal energy storage, geothermal energy, biogas production, wind energy, solar energy and hydro energy. During the conference, total solutions and business concepts for cities, industrial areas and rural areas will be presented and discussed.



WELCOME BY THE CONFERENCE PRESIDENT

Dear Delegates,

On behalf of the Programme Committee I would like to invite the water, energy and waste professionals from around the world to attend the International Water Week in Amsterdam and to take part in the conference on Water Related to Sustainable Energy. This conference is a 2-days event, organised by KWN and Waternet, and sponsored by the organic waste treatment company SHANKS/Orgaworld and the public service company HVC. The focus of the International Water Week is on presenting integrated solutions for a changing world. Water Related to Sustainable Energy is one of the conferences during the water week in which new developments will be presented that contribute to these integrated solutions.

The conference will attract decision makers, advisors, researchers, scientists, and practitioners working in the field of water technology and also related sectors as energy and waste. It will offer a platform for discussions and will provide ample opportunities to learn and network with professionals in your fields of interest.

During the International Water Week you have the possibility to attend many conferences, to take part in events and to visit the Aquatech, a thriving international trade exhibition for the global water industry with a focus exclusively on this precious resource.

In addition, the city of Amsterdam and its surrounding area offer great opportunities for recreation such as walking and cycling tours. I look forward to meeting you in Amsterdam during the International Water Week and to seeing you at the conference Water Related to Sustainable Energy.

Andre Struiker
Chairman Programme
Committee



ABOUT SHANKS / ORGAWORLD

Shanks is one of Europe's leading provider of sustainable waste management solutions. With over 4000 employees we have operations in the Netherlands, Belgium, UK and Canada and provide a range of recycling and energy recovery solutions. Within the Shanks group Orgaworld represents multiple key technologies, amongst others: wet and dry anaerobic digestion, waste water treatment and fertilizer production. The company designs, builds, owns and operates all of its facilities using its proprietary technologies. Orgaworld serves top customers in public and private sector.

The latest Orgaworld site in the Amsterdam harbour area is an example of sophisticated, technological and industrial process integration. By recovering and re-using waste, heat and by-products we provide in raw materials for production processes. We call this sustainable philosophy Greenmills.

Through partnerships with neighbors in the vicinity of the Amsterdam site, Orgaworld has finalized in 2011 phase 1 of the project: wet anaerobic digestion of retail waste, industrial waste water treatment and the delivery of green electricity and heat for multiple purposes. In a second phase Orgaworld envisions a bio-ethanol from waste production plant. In close cooperation with Waternet and AEB we seek next steps to intensify our cooperation and close energy, nutrients and waste loops.

Our contribution to this international water week will be the presentation of the integrated Greenmills approach.

Bart Raedts
Director Orgaworld
Member programme
committee



Michael van Hulst
Managing Director Shanks
the Netherlands



ABOUT HVC

Dear Delegates,

HVC is a public utility owned by and serving municipalities and waterboards. Our role is to facilitate our public shareholders to realize their goals in the field of sustainable energy and the recovery of resources from waste. We operate waste to energy plants, digesters, biomass power plants and other plants producing sustainable energy. In waste and waste water treatment we work on sustainable solutions taking optimisation of the whole value chain into account. We always do this in a natural and close cooperation with our shareholders and other public entities.

The revenues in terms of sustainable energy or financial results find their way back to society. The theme of the conference Water related to sustainable energy, as part of the IWW Amsterdam, is close to our core values.



We gladly support this conference.

Wim van Lieshout
CEO HVC

Foto van Lieshout

SCOPE OF THE CONFERENCE:

The conference will consist of a two day session and will focus on Water related to Sustainable Energy. But also smart waste solutions will be shown. On the third day excursions are taken place. The core of the conference is the use of new technologies integrated to product-market combinations. During this congress total solutions and business concepts in cities, industrial areas as well as rural areas will be showed and discussed. Meet interesting partners and discuss about new opportunities, offering an answer for the problems of today and challenges of tomorrow. In this announcement we invite parties worldwide to share concepts. Use the thermal and chemical heat of surface water, waste water and ground water. Combine technologies in the field of heat recovery, thermal seasonal storage, geothermal energy, biogas production, wind energy, solar energy and hydro energy.

TOPICS OF THIS CONFERENCE:

Strategies and business models

- Strategic plans of countries, regions and cities.
- Combining technologies to integrated solutions
- Energy savings in water utilities (including wastewater transport and treatment)
- The role of water, energy and waste in cities of the future
- Life Cycle Analysis (LCA) concepts and use in management decisions

New water/wastewater treatment concepts and technologies versus energy efficiency

- Scientific understanding – ongoing research
- Technical development and demonstrations
- Practical applications at full scale
- 'Green Chemistry' applications
- Optimization of operation by instrumentation, control and automation
- Co-digestion (organic waste)
- Heat recovery from domestic wastewater
- Underground thermal storage systems
- Biogas for power production/vehicle transport
- Heat pumps for district heating and cooling
- New forms of energy recovery
- Decentralized integrated energy production and water treatment (wind, wave, and solar energy, microbial fuel cells, etc.)
- Interdependency between the two sectors transition strategies from centralized systems to decentralized systems

OUTLINE PROGRAMME
 “WATER RELATED TO SUSTAINABLE ENERGY”
 1 – 2 NOVEMBER 2011

Monday	31-10-2011
09.30 – 17.30	Excursions
17.00 – 19.00	Meet and greet in the centre of Amsterdam. You can pre register here.
Tuesday	1-11-2011
08.30 – 09.15	Registration
09.15 – 09.30	Opening conference
09.30 – 11.00	Session 1: Resourceful water: from water management to management of resources. The relationship between water, energy, waste
11.00 – 11.30	Coffee break
11.30 – 13.00	Session 2: Energy related to water: what is in it for me?
13.00 – 14.00	Lunch
14.00 – 15.30	Session 3: Heat and cold from drinking water, waste water and groundwater
15.30 – 16.00	Tea break
16.00 – 17.30	Session 4: Regional Opportunities, Case Amsterdam: centralized or decentralized heat and cold
Wednesday	2-11-2011
09.30 – 11.00	Session 5: Climate Neutral Sewage Treatment Plant
11.00 – 11.30	Coffee break
11.30 – 13.00	Session 6.1: Biogas & fuels Session 6.2: Life Cycle Analysis (LCA)
13.00 – 14.00	Lunch
14.00 – 15.30	Session 7.1: Electricity Session 7.2: Waste Water Treatment Optimization
15.30 – 15.50	Tea break
15.50 – 17.00	Session 8: Resources
17.00 – 17.30	Closing session
Thursday	3-11-2011
09.30 – 17.30	Excursions

TUESDAY 1-11-2011

08.00 – 09.15 **Registration**

09.15 – 09.30 **Opening of the conference and welcome** – André Struker (Waternet / KNW)

Room **Session 1: Resourceful water: from water management to management of resources. The relationship between water, energy, waste.**

Chair: Michael van Hulst (tbc)

09.30 – 10.00 **Water, energy and re-use of nutrients from a policy point of view.**

10.00 – 10.45 **Resourceful water: from water management to management of resources. The relation between water, energy, waste.**

Ad van Wijk, the Netherlands

10.45 – 11.00

Discussion

11.00 – 11.30

Coffee break

Room

Session 2 Energy related to water: what is in it for me?

Chair: Michael van Hulst (tbc)

11.30 – 11.50

Integrated policies can contribute to overcoming the challenges arising from the water/energy/climate nexus.

R. Bohle Zeller, Denmark

11.50 – 12.10

Integrated approach of the waste/water/energy chain.

A.R. Bresters, the Netherlands

12.10 – 12.30

The role of energy and water in cities of the future.

I. Leusbrock, the Netherlands

12.30 – 12.50

Water, Energy and Salt: an interrelated sustainable technology paradigm.

H. Rijnaarts, The Netherlands

12.50 – 13.00

Discussion

13.00 – 14.00

Lunch

Room

Session 3 Heat and cold from drinking water, waste water and groundwater

Chair: Michael van Hulst (tbc)

14.00 – 14.25

Sustainability of thermal water and urban development in turkey: a view from Bursa.

D. Altunbas, Turkey

14.25 – 14.50

Energy harvesting in the urban water cycle: case studies.

H. Brauw, J. Kluck , R. Sukkar, J. Blom, F.C. Boogaard, the Netherlands

14.50 – 15.15

Thermal energy from drinking water and cost benefit analysis for entire city.

M. Blokker, A.M. van Osch, R. Hogeveen, C. Mudde, the Netherlands

15.15 – 15.30

Discussion

15.30 – 16.00

Tea break

Room	Session 4: Regional Opportunities, Case Amsterdam: centralized or decentralized heat and cold Chair: Michael van Hulst (tbc)
16.00 – 16.25	District heating and cooling in Amsterdam. R. Kemmeren, the Netherlands
16.25 – 16.50	Energy related to water. J. Kerpershoek e.a, the Netherlands
16.50 – 17.15	Facilitating optimal and sustainable subsurface use for Energy Storage by innovative governance. T. Olsthoorn, J. Bloemendal, The Netherlands
17.15 – 17.30	Discussion

WEDNESDAY 2-11-2011

Room	Session 5 Climate Neutral Sewage Treatment Plant Chair: Michiel Beeldman (HVC)
09.30 – 09.55	Integrated new energy solutions and strategies enable full scale application of zero power consumption sewage treatment plants. S. Wyffels, J. Delathouwer, N. Philips, R. Gerards, W. Gils, L. Vriens, Belgium
09.55 – 10.20	Hamburg Wasser's efforts for a self-sufficient Energy Supply of the Köhlbrandhöft/Dradenau WWTP. F. Laurich, Germany
10.20 – 10.45	Towards a sustainable sewage treatment plant. H.M. van Veldhuizen, A. Visser, the Netherlands
10.45 – 11.00	Discussion
11.00 – 11.30	Coffee break

Parallel sessions

Room A	Session 6.1: Biogas & fuels Chair: Michael van Hulst (tbc)
11.30 – 11.55	Nutrient refinery in AD & Greengas hub. H. Kaskens, the Netherlands
11.55 – 12.20	Optimisation of biogas usage at wastewater treatment sites. F. Schelleman, the Netherlands
12.20 – 12.45	Possibilities and limitations of sewage biogas-powered SOFC systems. N. de Arespachoga, C. Mesa, A. Hornero, L. Bouchy, E. Larrotcha, M. Sánchez, C. Peregrina, Spain
12.45 – 13.00	Discussion

Room B

Session 6.2: Life Cycle Analysis (LCA)

Chair: Joost Kappelhof (Waternet)

11.30 – 11.55

Energy optimization in groundwater abstraction at Copenhagen Energy.

T.A. Jorgensen, Denmark

11.55 – 12.20

Life Cycle Assessment as a support tool in the water cycle management: the Barcelona Metropolitan Area Case Study.

D. Marín, A. Massagué, J.L. Cortina, S. Juncà, I. Fonseca, Spain

12.20 – 12.45

The Use of LCA for the reduction of indirect greenhouse gas emissions in the Amsterdam water cycle.

E. Klaversma, A.W.C. van der Helm, J.W.N.M. Kappelhof, the Netherlands

12.45 – 13.00

Discussion

13.00 – 14.00

Lunch

Room A

Session 7.1: Electricity

Chair: Rick van Diest (Vattenfall / Nuon) / Peter Simoës (AEB)

14.00 – 14.25

Balancing Supply and demand in energy for the Dutch Water Boards.

D. Heijkoop, W. Malda, the Netherlands

14.25 – 14.50

Hydropower from Lowland currents, Latest developments.

J. Blom, the Netherlands

14.50 – 15.15

Large Dams: How to deal with historical impacts?

A. Straetmans, H. Thorborg, M. Hartman, The Netherlands

15.15 – 15.30

Discussion

Room B

Session 7.2: Waste Water Treatment Optimization

Chair: Cora Uijterlinde (STOWA)

14.00 – 14.25

Hydrothermal carbonization (HTC) of sewage sludge.

K. Palmu, C. vom Eyser, C. Glasner, J. Behrendt, R. Otterpohl, J. Türk, Germany

14.25 – 14.50

Prospects of supercritical water gasification of sewage sludge integrated in a waste water treatment facility.

J. Koppejan, N. ten Asbroek, J. Zeevalkink, M. Kampschreur, the Netherlands

14.50 – 15.15

Investigations into energy efficient full-scale membrane bioreactors.

P. Krzeminski, J. van der Graaf, J. van Lier, the Netherlands

15.15 – 15.30

Discussion

15.30 – 16.00

Tea break

For registration please visit
www.internationalwaterweek.com

Room**Session 8: Resources**

Chair: Kim Augustin (Hamburg Wasser), André Strucker (Waternet)

16.00 – 16.20

New concepts for wastewater treatment in urban context with respect to nutrient recovery.

T. Bettendorf, J. Behrendt, R. Otterpohl, Germany

16.20 – 16.40

Water and waste water treatment in the energy cycle.

L. Backman, Sweden

16.40 – 17.00

Algae farming for recovery of nitrogen and phosphate from industrial WWTP effluent as base material.

H. Menkveld, A. Dekker, the Netherlands

17.00 – 17.30

Key-note speaker: Bio based Economy, the opportunity for saving the world.**REGISTRATION**VIA WWW.INTERNATIONALWATERWEEK.COM

The conference fee covers attendance at the conference sessions, conference documentation, conference dinner on Tuesday 1 November or Thursday 3 November, morning and afternoon coffee/teas and lunch, attendance at RAI exhibition. Below prices are excl. of 19 VAT.

Categories	Early bird rate (before 1st September)	Normal rate (after 1st September)
Member KNW	€ 545,-	€ 595,-
Non member	€ 565,-	€ 595,-
Student	€ 150,-	€ 200,-
RAI exhibitor (5 places)	€ 365,-	€ 415,-
Day rate	€ 356,-	€ 395,-
Passe-partout for all conferences	€ 896,-	€ 995,-
Technical visit	€ 60,-	€ 60,-
Conference dinner ticket	€ 100,-	€ 100,-

The online registration form is available at www.internationalwaterweek.com. After we have received your registration we will send you an invoice with the information how to pay the fee. All remittances should be made in Euro's. Above prices are exclusive of the prevailing Goods & Services TAX (as a guide to delegates the current exchange rate of Euro € 1,- = US \$ 1,28). The organising committee of the conference will confirm registrations after receipt of the payment.

Early Bird Discount:**For registrations confirmed and paid before the 1th of September.****Cancellation:**

Before the 1st September 2011, a total refund minus a € 100,- administration fee will be issued.

Between the 1st September – 15th September 2011 a 50% refund will be issued.

After the 15th September 2011, no refund will be made for cancellation.

Refunds of registration after must be applied for in writing and will be settled after the conference.

EXCURSIONS

During the International Waterweek there will be several excursions. The costs are € 60,- per excursion. Please mention this on your registration form. On the website www.internationalwaterweek.com you can find information about all the excursions and more information.

Waste Water Plant Amsterdam-West & Energy Plant Amsterdam

Monday 31 October

Visit the largest wastewater treatment plant in Amsterdam (1 million p.e.) in combination with the largest Waste to Energy plant in the world. More than 1.5 million ton of waste and sludge is incinerated at this plant.

The organic Waste cycle concept Greenmills

Monday 31 October

The new Orgaworld site in the Amsterdam harbour area is an example of sophisticated, technological and industrial process integration. By recovering and re-using waste, heat and by-products we provide in raw materials for production processes. We call this sustainable philosophy Greenmills.

Lake Ouderkerkerplas: cold retrieval and water-quality improvement

Thursday 3 November

This excursions shows a win-win situation in South-east Amsterdam. Energy company Nuon retrieves since 2009 cold water from the 40 meter deep lake Ouderkerkerplas. A communal surface water cooling-system, reduces up to 80% energy-consumption and CO₂-emission compared to the traditional situation of individual air-conditioning. An innovative technique is introduced to reduce the negative effects on water quality, ecology and recreation possibilities. You 'll hear the results of an extensive research, supported by the EU, that gives insight into the development of the lake and the effects of cold retrieval and oxygenation.

HVC: waste incineration plant and a bio energy power station

Thursday 3 November

HVC organises a site visit to plants in Alkmaar and Middenmeer. In Alkmaar HVC operates a waste incineration plant and a bio energy power station. Sludge granules from waste water treatment will also be converted to energy in this plant. The visit starts with a short presentation about HVC and its activities in waste treatment and renewable energy. After the visit to Alkmaar a newly built plant for producing green gas from organic waste will be visited.

CONFERENCE VENUE

The conference will take place in the centre of Amsterdam in the West Indisch Huys. This beautifully restored 17th century building reverberates with the atmosphere and style of what was, viewed from a Dutch perspective of world history, the Golden Century. It was here that the 'Heeren Negentien', the masters of the Dutch West India Trading Company, planned events that were to have lasting effects in what were then far-flung corners of the earth. The West Indisch Huys was built by the Amsterdam City Council in 1617 as meat-market, with rooms above for the city militia. Just four years later, the West India Company was formed and, after two years in other offices, moved to the building that bears its name to this day. In fact, from the courtyard, the building looks very much the same as it did in 1623: only the windows have changed, which happened in the 18th century.

CONFERENCE DINNER

There will be 2 conference dinners during the International Waterweek. The conference dinners will take place on Tuesday 1 November and Thursday 3 November. The dinners will be in the centre of Amsterdam. You can join one of the dinners. This is included in the fee. Please mention the date you prefer on the registration form. More information will be available later.

ACCOMPANYING PERSONS

Through the hotels a variety of touristic tours in Amsterdam and the surrounding cities are organized every day. accompanying persons are welcome to attend the conference dinner on Thursday 3 November. The fee for accompanying persons is €100,-. Please mention this option on your registration form.

HOTEL RESERVATIONS

For hotel reservation please visit www.moorga.com and select your conference. You can find all information and bookings of the different hotels in Amsterdam near the West Indisch Huys. On the website the organising committee made a selection of 4 hotels near the conference venue, so all delegates can stay in vicinity.

GENERAL INFORMATION

Conference venue

The conference will take place in the West Indisch Huys, Herenmarkt 99, 1013 EC Amsterdam, the Netherlands.

Transport

Transport from Amsterdam Schiphol Airport to RAI Conference centre:

- by train directly from the airport to Amsterdam RAI station; every 15 minutes (transfer time 15 minutes). From station RAI a 5 minute walk to the Conference centre.
- of course also taxi's are available at the Airport and Central station of Amsterdam.

Visa

Delegates should check if they require visa for entry to the Netherlands. If any delegate experiences difficulty obtaining a visa please contact the secretariat.

Climate

The Netherlands have a maritime climate. In November the average daily temperature is 9 degrees Celsius and generally mild. A raincoat is advisable.

Conference language

The conference language is English. Therefore, all papers and posters are written and presented in English. There will be no translation facilities.

Insurance

Participants are advised to check whether they are insured during their stay in the Netherlands. Although good care will be taken of the participants, the organisers cannot be held responsible for any loss, damage or personal harm.

Publication

The papers and posters will be published on cd-rom.

SURPRISING AMSTERDAM

Unique city of water

Amsterdam's ties to water are inextricable. The city was not only founded on water, it continues to play a significant role. The Amsterdam Metropolitan Area is renowned for the major role water plays in daily life. It was during the Golden Age that Amsterdam developed into the most prosperous city in Europe on the heels of thriving transoceanic trade. The Dutch have also had to battle against – and ultimately prevailed over – water. With this rich tradition of working together to live with water, Amsterdam has developed into a bustling commercial centre, tourist destination and cultural stronghold.

Things to do and see in Amsterdam

A canal trip is the best way to see the most characteristic parts of Amsterdam. In November the canals are illuminated with thousands of lights. In the Vincent van Gogh museum, the Historic museum or the Municipal museum you will find a great collection of classic and modern art. The house where Rembrandt lived and worked is open to visitors.

Public events

During the week public events will be staged on different locations throughout the city of Amsterdam. These public events should increase the familiarity of residents and visitors with the various stories and images that are part of the unique features of this water city. It also highlights Amsterdam as an appealing economic, tourist and cultural destination and as a unique city with a rich history in which its people live on and near the water.

ORGANISING COMMITTEE

Roelof Kruize	Waternet, the Netherlands
Gerard Blom	Deltares, the Netherlands
Martien den Blanken	PWN, the Netherlands
Peter de Jong	Witteveen + Bos, the Netherlands
Monique Bekkenutte	Royal Netherlands Water Network (KNW), the Netherlands

PROGRAMME COMMITTEE

André Struiker	Waternet, Watercycle company, the Netherlands
Kim Augustin	Hamburg Wasser, Germany
Cora Uijterlinde	Stowa, Foundation for Applied Water Research, the Netherlands
Peter Simoës	AEB, Waste to Energy company, the Netherlands
Albrecht Bresters	HVC, Sustainable waste /green energy, the Netherlands
Rick van Diest	Vattenfall / Nuon, Energy Company for Northern Europe
Rob Kemmeren	Development company of Amsterdam, the Netherlands
Jannis van Zanten	Physical Planning Department, Amsterdam, the Netherlands
Bart Raedts	Orgaworld, Organic Waste Company, The Netherlands
Johan Kerpershoek	Waternet, Watercycle company, the Netherlands

All information can be obtained from:

Conference secretariat Moorga

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E sustainableenergy@moorga.com
I www.internationalwaterweek.com
or www.moorga.com (latest news)

Conference location:

West-Indisch Huis
Herenmarkt 99
1013 EC Amsterdam
The Netherlands

Partners conferences:



OVERALL PROGRAMME CONGRESSES

	CONGRESSES	EXCURSIONS
Monday 31-10-2011	Watercities in Transition (NEMO) Young Water Professionals (Waternet)	<ul style="list-style-type: none"> • Waste water plant Amsterdam West & Energy Plant Amsterdam • Amsterdam Water Management; a glance behind the stages • Flood protection in Amsterdam, a multi layer safety approach • Drinkwater winning area Leiduin: a bike safari • History of the Amsterdam Watercycle: a boat tour • Orgaworld
Tuesday 01-11-2011	Watercities in Transition (NEMO) Young Water Professionals (Waternet) Water related to sustainable energy (West Indisch House)	<ul style="list-style-type: none"> • Flood early warning in the Amsterdam area • Flood protection in Amsterdam, a multi layer safety approach
Wednesday 02-11-2011	Water Operator Partnership (Waternet) Water related to sustainable energy (West Indisch House) Young Water Professionals (RAI)	<ul style="list-style-type: none"> • WATERgraafsmeer • Zuidas, Amsterdam: urban densification • Amsterdam Water Management; a glance behind the stages • Drinkwater winning area Leiduin: a bike safari
Thursday 03-11-2011	Water & Innovation : Watertechnology (RAI) International conference on Benchmarking (RAI) Young Water Professionals (RAI)	<ul style="list-style-type: none"> • Lake Ouderkerkerplas: cold retrieval and water-quality improvement • Amsterdam Water Management; a glance behind the stages • HVC, waste incineration plant and bio energy power station
Friday 04-11-2011	Water & Innovation: Watertechnology (RAI) International Conference on Benchmarking (Waternet) Young Water Professionals (RAI)	<ul style="list-style-type: none"> • IJburg, Amsterdam: building a neighbourhood in Lake IJmeer • Flood protection in Amsterdam, a multi layer safety approach • History of the Amsterdam Watercycle: a boat tour