



ISWA
International Solid Waste Association



ISWA *Austria*
International Solid Waste Association

Study Tour

WASTE-TO-ENERGY



September 12 – 16, 2011

Seminar and Technical Tour to 7 Plants in Operation

Vienna (Spittelau, Pfaffenau, Simmering) ⇒ Zwentendorf ⇒ Gmunden ⇒ Salzburg ⇒ Lenzing

PROGRAM



zukunft
1909-2011
denken

INTRODUCTION

Practice Seminar on Sustainable Waste Management in Austria based on Prevention, Recycling, Recovery, Treatment, and Intermediate Storage - without any disposal of organic wastes exceeding 5 % TOC in landfills



Led by

Franz Neubacher

M.Sc. Technology & Policy (M.I.T., USA)

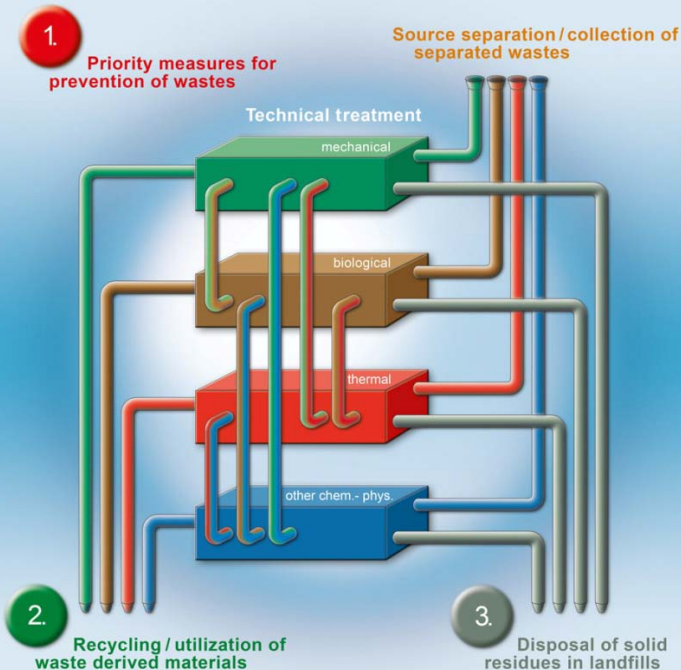
M.Sc. Chemical Engineering (TU Graz, Austria)

Method for the Practice Seminar

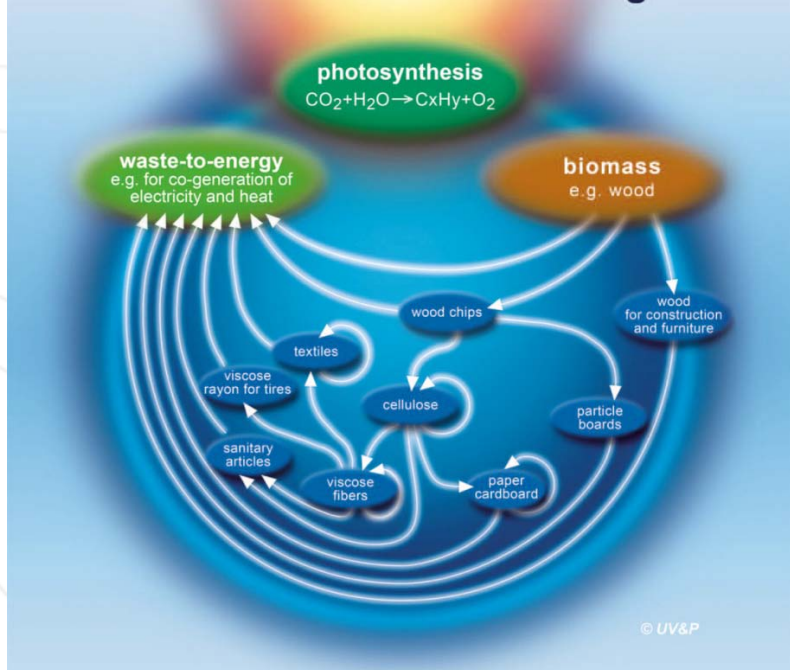
There are 3 pillars of individual benefit and professional learning offered within this unique practice seminar:

1. Quality seminar taught by senior experts in waste management, environmental policy, and engineering
2. Visits of waste treatment facilities representing Best Available Techniques including discussion with operators, government inspectors, and reputable suppliers
3. Discussions with political and environmental experts on control and acceptance of hazardous waste treatment and waste incineration plants (typical "lulu" projects - locally unwanted land use and "NIMBY" - not in my backyard)

Future-oriented Systems for Sustainable Waste Management



Green Technology: Recycling and Recovery for Sustainable Waste Management



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MONDAY, September 12, 2011

10.00 am – 10.50 am

Welcoming Address by ISWA International and by ISWA Austria

(Seminar Room at Hotel [Mercure Josefshof](#) , Josefgasse 4 – 6, 1080 Vienna)

Introduction of the Program and of the Participants

10.50 am – 11.20 am

Coffee & Tea break

11.20 am – 01.00 pm

Seminar on “Development of Waste Management in Austria and EU”

Environmental pollution and waste disposal problems – Development of policy and legal framework in Austria – landfill tax and clean-up of contaminated sites – legal restrictions on landfills and waste treatment operations – legal ban on hazardous wastes and wastes exceeding 5 % TOC (Total organic carbon) from disposal in landfills – integrated waste management systems - technical alternatives for prevention and treatment for recovery of materials and energy – political discussions and development of the most stringent emission standards worldwide – public acceptance – status quo within EU and development according to future-oriented EU Directives

01.00 pm – 02.10 pm

Lunch Buffet

02.10 pm – 02.30 pm

Transfer by metro to Waste-to-Energy Plant Spittelau

02.30 pm – 05.00 pm

Technical Tour of the WtE Plant Spittelau

Historic overview of WtE and district heating in Vienna – technical presentation of the plant (incl. video, questions & answers – site visit of waste reception – control room – rooftop panorama view of Vienna)



05.00 pm – 09.00 pm

City bus tour to the central landfill of Vienna “Rautenweg” with a brief introduction to the historic development of municipal waste disposal and the gradual improvement of the landfill site incl. extraction of landfill gas and utilization in gas motors

07.00pm: Dinner at a Viennese Wine Tavern at the invitation of the City of Vienna

Return to Hotel by City bus



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TUESDAY, September 13, 2011

08.00 am – 08.50 am

Seminar on “Waste Incineration and Integrated Pollution Prevention and Control”

Fundamentals of drying, pyrolysis, gasification, and combustion – abatement and control of atmospheric emissions – chemicals – liquid and solid residues – recovery of materials

08.50 am – 09.20 am

Coffee & Tea break

09.20 am – 10.10 am

Seminar on “Systems for Thermal Waste Treatment and Energy Recovery”

Characterization of wastes as a fuel – sorting and pre-treatment of wastes - fluidized bed systems – rotary kiln with afterburning chamber– grate system - practical experience and limitations for specific wastes in various systems according to state-of-the-art in Austria and EU

10.10 am – 10.40 am

Transfer by City Bus to Pfaffenau

10.40 am – 12.40 pm

Technical Tour of the WtE Plant Pfaffenau and Biogas Plant Vienna

Technical overview of the technology including waste collection, specific treatment of various residues and emission control –site walk of the technical plants



12.40 pm – 02.30 pm

Lunch at the cantina

02.30 pm – 04.30 pm

Technical Tour of the WtE Plants at Simmering

Historic overview of hazardous waste and sewage sludge treatment at the central site of Simmering – technical presentation of rotary kilns for hazardous wastes and fluidized bed systems for sewage sludge and specific wastes – emission control – international cooperation and controlled waste imports - site visit of waste reception and control room – questions & answers



04.30 pm – 05.00 pm

Return to Hotel by City Bus

After 05.00 pm

Open for individual Program



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WEDNESDAY, September 14, 2011

08.00 am – 09.30 am

Seminar on “Alternative systems for treatment of residual municipal wastes with options for energy recovery”

Technical alternatives according to the legal framework in Austria - mechanical sorting - biological treatment - intermediate storage - incineration - energy efficiency - green house gas emission balances - experience and foreseeable future development

09.30 am – 10.00 am

Coffee & Tea break

10.00 am – 11.30 am

Seminar on “Criteria for site selection for new WtE facilities”

Criteria for project development - demand for energy recovery - transport logistics and infrastructure - economic considerations - public information and acceptance - historic and recent examples in Austria

11.30 am – 12.00 am

Coffee & Tea break

12.00 am – 01.00 pm

Bus transfer to WtE Plant EVN in Dürnrrohr/Zwentendorf and Welcoming Buffet

01.00 pm – 03.00 pm

Introduction and Technical Tour of the WtE Plant in Lower Austria

Technical overview of the largest waste incineration plant [EVN](#) in Austria and energy efficiency in combination with the adjacent coal-fired power plant - emission control and monitoring - transport logistics for waste and residues - treatment and disposal of slag - site walk

03.00 pm – 06.30 pm

Bus transfer including a refreshment stop and outside look at the famous Austrian “Nuclear Power Plant” Zwentendorf at the Danube (never in operation) , bus trip through the scenic valley of Wachau to Ybbs entering Highway A1 to Upper Austria for stay over at the Seminar Hotel Oberndorfer in Attersee (directly on the Attersee – the largest lake in the historically famous and scenic region of Salzkammergut)

www.oberndorfer.info

07.00 pm – 08.00 pm

Dinner at the Seminar Hotel at Lake Attersee



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THURSDAY, September 15, 2011

08.00 am – 09.30 am

Seminar on “Analysis of composition and options for material recovery of mixed solid wastes”

(special presentation by senior waste management expert Walter Hauer):

General overview - seasonal fluctuations and regional differences in waste composition - development and impact of source separation, sorting and material recovery - statistical methods - practical examples of failures and successes in the development of waste recovery

09.30 am – 10.00 am

Coffee & Tea break

10.00 am – 10.40 am

Bus transfer to Gmunden

10.40 am – 01.30 pm

Technical Tour of the Cement Plant in Gmunden

Technical overview of the cement plant and of waste derived fuels for cement clinker production - quality management - emission control - questions & answers - *lunch at the cantina (invitation by Hatschek Cement Plant)* - site walk of the technical plant including waste fuel reception, dosing systems, control room, and laboratory for quality control

01.30 pm – 03.00 pm

Bus transfer incl. a refreshment stop at Lake Traunsee to Siggerwiesen / Salzburg

03.00 pm – 04.30 pm

Technical Tour of the Waste treatment Plant SAB in Siggerwiesen

Technical overview of waste management and treatment onsite incl. mechanical – biological treatment of waste, production of waste derived fuel with intermediate storage for just-in-time delivery and anaerobic treatment of biological wastes with recovery of biogas from waste, site walk



04.30 pm – 05.00 pm

Bus transfer to Salzburg

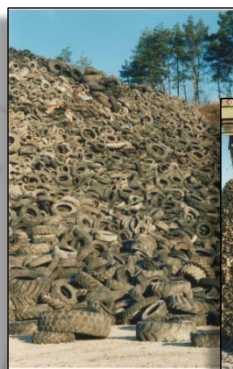
05.00 pm – 07.00 pm

Reception (B2B Meeting) by the Austrian Chamber of Commerce (WKO) in Salzburg

Welcoming address and buffet sponsored by the Austrian Chamber of Commerce with the option for B2B Meeting with reputable suppliers of various machinery and turn key equipment successfully used in WtE facilities in Austria and EU

07.00 pm – 08.00 pm

Return Trip to Seminar Hotel at Lake Attersee



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FRIDAY, September 16, 2011

08.00 am – 09.30 am

Seminar on “Prevention and control of fire hazards”

(special presentation by Prof. Harald Raupenstrauch, Chair of Thermal Processing Technology at the Montanuniversität Leoben and by Gerhard Gresslehner, Chief of Professional Fire Fighting Department in Linz and Representative of Austria in the International Firefighters Association CTIF):

Preconditions and causes for fire hazards in waste treatment facilities and storage of (organic) wastes – state-of-the-art requirements in Austria and EU – design, operation and control of large intermediate storage of organic wastes and waste-derived fuels – examples of failures and reference for appropriate intermediate storage of high calorific wastes

09.30 am – 10.00 am

Coffee & Tea break

10.00 am – 11.00 am

Seminar on “Examples for project development, potential conflicts and public acceptance of new WtE facility in sensitive regions with tourism and organic farming”

Examples for presentation of project alternatives – selection of appropriate sites – public information – option for a control panel with local representatives and critical citizens - management of public hearings – role of media and politicians – positive examples for acceptance of large WtE facilities by Green activists and Green politicians in Austria (discussion with Dr. Johann Wimmer, Environmental State Attorney 1990 – 2007 in Upper Austria)

11.00 am – 11.30 am

Bus transfer to Lenzing

11.30 am – 01.30 pm

Technical Tour of the WtE Plant in Lenzing

Technical overview of integrated waste management services provided by [AVE](#) focusing on waste-to-energy facilities including site visit of waste incineration in a large fluidized bed boiler integrated in the industrial production of Lenzing

01.30 pm – 04.30 pm

Bus transfer to Vienna and/or Vienna International Airport



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REGISTRATION

The deadline for registration is **September 2, 2011**. Please register with **Ms Julia Schönherr** by using the **Registration Form** (see attachment or [here](#)). Registration will only be accepted in written form (E-Mail or Fax) and will be acknowledged by E-Mail within 7 days after submission.

Early Bird Registration Fee (Registration and Payment latest by August 15, 2011):

- 1 person, ISWA Member € 2,400 (approx. US\$ 3,470 / CAN\$ 3,335 / GB£ 2,110)
- 1 person, Non-Member € 2,600 (approx. US\$ 3,760 / CAN\$ 3,610 / GB£ 2,280)

Registration Fee (Registration or Payment after September 2, 2011):

- 1 person, ISWA Member € 2,600 (approx. US\$ 3,760 / CAN\$ 3,610 / GB£ 2,280)
- 1 person, Non-Member € 2,800 (approx. US\$ 4,050 / CAN\$ 3,890 / GB£ 2,460)

All stated amounts are free of VAT. Registration fee includes accommodation with breakfast from September 11 to 16 (3 nights at [Hotel Mercure Josefshof](#) in Vienna, 2 nights at [Hotel Oberndorfer](#) at Lake Attersee), handouts, refreshments, lunch and dinner, transportation and visits to waste treatment plants. On registration seminar participants accept all accommodation arrangements organized by ISWA.

The conference program is subject to change and if necessary the conference date may be postponed to Spring 2012.

The number of participants will be limited to a maximum of 25 persons due to the nature of the program.

Cancellation

Any cancellation of registration must be submitted in writing to ISWA, Ms Julia Schönherr

- by E-Mail to jschoenherr@iswa.org or
- by Fax to +43 1 253 6001 99.

Cancellation and refund will be subject to the following conditions:

- Cancellation **after September 2, 2011** 50% Refund
- Cancellation **on September 11, 2011 or "no show"** no refund

Registration may be transferred to a nominated representative.

In case of cancellation of the event due to unforeseeable events ISWA will refund the registration fee but no other costs incurred prior to cancellation of the Study Tour.

Certificate of Participation

Participants will receive a certificate for participation in the ISWA Study Tour and Practice Seminar "Waste to Energy".

For further technical Information see "[White Book Waste-to-Energy in Austria](#)"

For organisational matters please contact Ms Julia Schönherr

ISWA – International Solid Waste Association, www.iswa.org

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