

## ENERGY FROM WASTE INFRASTRUCTURE JAPAN STUDY TOUR

### About The Study Tour

Jackson Environment and Planning Pty Ltd is a specialist infrastructure and planning firm and is organising a study tour in Osaka, Japan, 18 to 20 February 2019. The study tour focuses on advanced energy from waste infrastructure and specialised facilities for construction and demolition waste sorting and processing.

As part of the tour we will inspect four advanced energy from waste plants in Osaka and meet with the Osaka City Government responsible for the environmental regulation of these plants. We will also be visiting an advanced construction and demolition waste sorting facility and a bioethanol production facility using wood waste.

This is a unique opportunity to be exposed to international best practice on the latest energy from waste infrastructure suitable for treatment of residual wastes, and advanced infrastructure for sorting construction and demolition waste, including value-added manufacturing processes for wood waste.

## Why inspect facilities in Osaka?

Over the past 20 years, Japan has invested heavily to develop and build its energy from waste infrastructure capability to conserve its landfill space and to provide sustainable energy alternatives to nuclear power.

The country has 1,162 energy from waste plants, including a number of incineration plants with no energy recovery, through to modern gasification plants with advanced pollution control, energy recovery and plasma arc treatment of ash.

The Osaka Prefecture is the second largest by area in the country, and it accounts for 7% of the nation's population. The Kansai metropolitan area, which includes Osaka, has a population that exceeds 20 million people, making it one of the largest metropolises in the world.

## Who should attend?

The study tour has been designed for private sector investors and developers of energy from waste and advanced sorting and processing infrastructure.


## What meetings have been arranged?



Jackson Environment and Planning Pty Ltd has arranged the following meetings in Osaka between 18 and 20 February 2018 for four participants:

- ✓ Regulatory officials from the Osaka City Government and Environment Facilities Association
- ✓ Operational site tour of the Nishiyodo Energy from Waste Plant
- ✓ Operational site tour of the Maishima Energy from Waste Plant
- ✓ Operational site tour of the Higashiyodo Energy from Waste Plant
- ✓ Operational site tour of the Toyonaka City, Itami City Cleanland Energy from Waste Plant
- ✓ Operational site tour of the DINS Sakai RAC C&D Processing Plant
- ✓ Operational site tour of the DINS Sakai Bioethanol Plant

At the conclusion of the tour, a report will be prepared by Jackson Environment and Planning Pty Ltd for participants summarizing the findings and outcomes of the tour. The report will also provide an up to date account of energy from waste projects under development, and finance opportunities in Australia.

## About the plants to be inspected

Facility to be inspected	Facility name & location	Annual tonnage (tpa)	Year built	Manufacturer
	Nishiyodo Energy from Waste Plant  Kansai, Osaka	150,615 tonnes per year	1995	Takuma Corporation  Stoker type incinerator with steam turbine generator
	Higashiyodo Energy from Waste plant  Kansai, Osaka	146,000 tonnes per year  Power Capacity: 10 MW	2010	Hitachi Zosen Corporation  Moving grate incinerator with steam turbine generator
	Maishima Energy from Waste Plant  Kansai, Osaka	328,000 tonnes per year  Power Capacity: 32 MW	2001	Hitachi Zosen Corporation  Moving grate incinerator with steam turbine generator
	Toyonaka Itami City Cleanland Energy from Waste plant  Toyonaka City, Osaka	191,000 tonnes per year  Power Capacity: 14 MW	2011	Hitachi Zosen Corporation  Moving grate incinerator with steam turbine generator

Facility to be inspected	Facility name & location	Annual tonnage (tpa)	Year built	Manufacturer
	DINS Sakai RAC C&D Processing Plant  Kansai, Osaka	Construction waste recycling assortment center	2011	DINS Sakai
	DINS Sakai Bioethanol plant  Kansai, Osaka	14,218 tonnes per year	2011	DINS Sakai

## Meeting priorities and expected outcomes

To help in the transfer of knowledge and to identify possible trade and technology transfer opportunities between Japan and Australia, Jackson Environment and Planning Pty Ltd has arranged inspections and site tours of six plants and a meeting with Japanese Government officials. Key priorities for the meetings include:

- ✓ Discussion and review of the planning, impact analysis & environmental assessment & approach to incineration and energy from waste projects in Osaka;
- ✓ Review the community consultation approaches deployed at the project planning stage, & typical community beliefs & expectations regarding existing plants and plants at the planning stage;
- ✓ Understand the environmental performance of older and new plants in operation in Osaka, environmental emissions, thermal efficiency performance, and government regulation and performance of these plants;
- ✓ Key learnings from development and delivery of public energy from waste infrastructure;
- ✓ Ongoing environmental performance of plants, particularly with respect to air emissions; &
- ✓ Site inspections and reviews of six plants in Osaka.

## Who is leading the tour?

The tour will be led by Dr Mark Jackson, Director and Principal Consultant of Jackson Environment and Planning Pty Ltd. Mark is a nationally recognised waste management specialist with 23 years' experience in the field. He is Director of Jackson Environment and Planning Pty Ltd, a specialist infrastructure, planning and advisory firm based in Sydney.

Mark's firm is responsible for leading many resource recovery infrastructure planning approval projects across NSW, as well as EPA licensing of these facilities. Mark has a keen interest in industry development, technology transfer and international best practice. Mark has led two successful study tours of Energy from Waste plants in Tokyo in 2017 and 2018.



**Dr Mark Jackson,**  
Director and Principal Consultant



**Mr Satoshi Akaike**  
Business Translator, Yokohama, Japan

Local coordination and facilitation of the tour will be performed by Mr Satoshi Akaike, a Japanese translator who is based in Yokohama. Mr Satoshi has almost 9 years of business experience as a machinery engineer and machinery trader in Japan. He has a Master of Science in Urban Environmental Management from Wageningen University, Netherlands. He is passionate about Waste Technology, Sustainable Energy and Clean Technology and works as a translator of English and Japanese for the field of business and academics. Mr Akaike will attend all meetings arranged to assist in translation and meeting facilitation where required.

## Tour inclusions

The tour includes the following items:

- ✓ All transport to and from meetings and site tours;
- ✓ All lunches and dinners during the tour (except for free nights);
- ✓ All costs associated with coordination, facilitation and translation services at meetings;
- ✓ A report prepared by Jackson Environment and Planning Pty Ltd summarising the findings and outcomes upon completion of the tour.



Please note that tour participants will need to organise their own flights, hotel accommodation, transfers from / to the airport & travel insurance. We can provide guidance on preferred flights.

We recommend participants book into the Hotel Monterey Grasmere Osaka. This is a centrally located Western style hotel close to public transport and major attractions. Bookings can be made online via the Wotif or Booking.com web sites. It is recommended participants check in on Sunday 17 February and check out on Thursday 21 February 2019.

## Registration Form(Please complete details below)

<b>Tour participant name(s):</b>			
<b>Position:</b>		<b>Organisation:</b>	
<b>Post address:</b>			
<b>Telephone (direct):</b>		<b>Mobile:</b>	
<b>Email:</b>			
<b>Key outcomes sought from the tour:</b>			

### I acknowledge that:

1. The cost associated with the tour is **\$4,100.00 (ex. GST)**.
2. I am responsible for booking and paying directly for my own flights to and from Osaka and my hotel accommodation in Osaka.
3. I am responsible for taking out my own travel insurance policy.
4. I acknowledge that the meeting times, dates and locations arranged as part of the tour are fixed and I am responsible for ensuring that I am available to join the tour on Monday 18 February 2019 in Osaka.
5. I am responsible for taking out my own travel insurance policy.
6. Cancellation and refund policy. Cancellations and refunds will only be accepted up until 11 January 2019 less an administration fee of \$200.00 (ex. GST). Cancellations after 11 January 2019 will result in forfeit of payment.
7. Electronic bank transfer, Cheque, Mastercard, Visa and American Express are all accepted forms of payment.
8. We will issue you a tax invoice once your booking form is received and your request is accepted.
9. Please note that confirmation of your place on the tour can only be done once payment is made.
10. You authorize that your name, position and organizational name can be provided by Jackson Environment and Planning Pty Ltd to the hosts of meetings.
11. Jackson Environment and Planning Pty Ltd reserves the right to not accept your booking.
12. Places are limited and places will be assigned based on the date of registration.

Name:

Date:

Signature:

Please email your completed booking form to (as soon as possible):  [admin@jacksonenvironment.com.au](mailto:admin@jacksonenvironment.com.au)

### Contact for more information

For further information about the study and trade tour, please contact:

Dr Mark Jackson, Director, Jackson Environment and Planning Pty Ltd

 (02) 8056 1849 /  [mark@jacksonenvironment.com.au](mailto:mark@jacksonenvironment.com.au)