



Legco Members of the Finance Committee
Legco Panel Public Works Subcommittee f_c@legco.gov.hk

26th June 2013

Dear Members, ENB's current and future requests for Landfill Extension financing

Our daily MSW is a pain for us, but a commodity for others. Europe has massive shortages of MSW due to their effective recycling laws. They need to import MSW to keep their power stations and incinerators running in order to generate power and heat, therefore MSW is now a commodity – they have to compete for it in Europe which has massive incineration overcapacity.

Why spend good money to expand our landfills when we can sell it or give it away to Europe?

Meanwhile we can use plasma gasification technology to reverse mine our landfills back to their original state.
We were even offered a free demo plant.

Please consider directing ENB to take off their cul-de-sac landfill and incinerator policy blinkers and start to be proactive MSW traders.

Landfill methane is 21 times more damaging to the environment than CO₂.

Yours sincerely,

James Middleton

Chairman

www.cleartheair.org.hk

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<http://www.letsrecycle.com/energy/blog/rdf-export-2013-a-dutch-perspective>

RDF export – a Dutch perspective

1 June 2012

[Waste and Energy Blog](#)

By Paul G.T. de Jong, chief executive officer, Twence, Waste Processing and Energy

Over the past 20 years the Netherlands has developed considerable waste-to-energy incineration capacity for processing and converting municipal solid waste (MSW) into renewable energy. This has been encouraged by the EU Landfill Directive which has driven the construction of energy-from-waste (EfW) plants which now deliver around 12% of all sustainable energy produced in the Netherlands. In the Netherlands people and companies have however, become increasingly efficient at recycling their waste. This has created a shortage MSW to power our EfW plants which now have capacity. **As a result, Twence, our partner Attero, and other Dutch EfW operators, are having to look outside the Netherlands to other European countries for new sources of refuse derived fuel (RDF).**

<http://www.reuters.com/article/2012/11/26/us-sweden-environment-garbage-idUSBRE8AP0MI20121126>

By Anna Ringstrom

STOCKHOLM | Mon Nov 26, 2012 9:44am EST

STOCKHOLM (Reuters) - Sweden has an unusual problem - not enough rubbish.

With a strong tradition of recycling and incinerating, it now has too many waste-to-energy incinerators and not enough rubbish to meet demand. It has become Europe's biggest importer of trash from other countries, currently mainly from Norway. Sweden sees a chance to import more waste from other EU states too. "It sounds almost foul to be importing waste, but the import to Sweden is not a problem. The dumping in landfills abroad is a huge problem," said Weine Wiqvist, head of trade association Swedish Waste Management. Sweden is not the only EU **country importing trash - Germany, Belgium and the Netherlands do too. Germany is the biggest in actual amounts, but as a share of rubbish burnt, Sweden is the leading importer.**

Many European states need to find ways to quickly get away from waste landfill to comply with tougher EU waste handling regulations in a 2008 law. Eastern Europe is currently the biggest landfill sinner, but Britain and [Italy](#) are among countries that also need to change to comply with the EU law and Sweden has already started importing from them. **Sweden last year imported around 850,000 tonnes of combustible waste, and was paid to do so. In all, it incinerated 5.5 million tonnes.**

http://www.umweltbundesamt.de/uba-info-presse-e/2011/pe11-047_waste_knows_no_borders.htm

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Waste knows no borders Imports of waste requiring authorisation remain high

The volume of Germany's waste imports is much higher than its exports. According to current calculations for 2010, a total volume of 6.8 million tonnes of waste was imported to Germany. The majority is recycled and reused, for example as building material. Exports amounted to a mere 1.5 million tonnes, thus continuing the trend of previous years. On the other hand, there has been a sharp increase in transboundary transport of waste – a 31% rise over 2009. Illegal waste shipments are prosecuted by the authorities.

<http://www.avfallsverige.se/fileadmin/uploads/Rapporter/F%C3%B6rbr%C3%A4nning/F2012-04.pdf>

Assessment of Increased Trade of Combustible Waste in the European Union

<http://www.no-burn.org/downloads/Incineration%20overcapacity%20and%20waste%20shipping%20in%20Europe%20the%20end%20of%20the%20proximity%20principle%20-January%202013-1.pdf>

Incineration overcapacity and waste shipping in Europe

Incineration overcapacity 'threatens' recycling 21 January 2013 by Annie Reece

http://www.resource.uk.com/article/News/Incineration_overcapacity_%E2%80%98threatens%E2%80%99_recycling-2653

A new study commissioned by the Global Alliance for Incinerator Alternatives (GAIA) has found that incinerators operating in some EU states have the capacity to burn 'more than the non-recyclable waste generated' and warns that plans to increase incineration capacity pose an 'environmental and an economic threat'.

The '[Incineration overcapacity and waste shipping in Europe: the end of the proximity principle?](#)' report, released today (21 January) by GAIA, an international alliance of more than 650 grassroots organisations in over 90 countries, found that **Germany, Sweden, Denmark, the Netherlands and the United Kingdom already have more incineration capacity than waste to burn** and 'as a result, shipments of waste for burning has increased across national borders'. According to the group, this 'contradicts the proximity principle' of the Waste Framework Directive and causes 'unnecessary CO2 emissions'. The report reads: 'the construction of new incineration plants in countries that already have a high share of waste incineration... can have a negative effect on the achievement of high recycling rates. 'This also opens the door to the increase of waste shipping within the EU, which contradicts the principle of proximity set out in the WFD... [and] the fact that waste shipping for incineration with energy recovery does not need authorisation creates a lack of information and threatens the recycling goals set by the Waste Framework Directive.'

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http://www.nytimes.com/2013/04/30/world/europe/oslo-copes-with-shortage-of-garbage-it-turns-into-energy.html?_r=0

Oslo runs out of garbage

“OSLO — This is a city that imports garbage. Some comes from England, some from Ireland. Some is from neighboring Sweden. It even has designs on the American market. “I’d like to take some from the United States,” said Pal Mikkelsen, in his office at a huge plant on the edge of town that turns garbage into heat and electricity. “Sea transport is cheap.” Oslo, a recycling-friendly place where roughly half the city and most of its schools are heated by burning garbage — household trash, industrial waste, even toxic and dangerous waste from hospitals and drug arrests — has a problem: it has literally run out of garbage to burn

1. [Oslo needs your garbage | IceNews - Daily News](http://www.icenews.is/2013/05/14/oslo-needs-your-garbage/)

www.icenews.is/2013/05/14/oslo-needs-your-garbage/

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May 14, 2013 – A shortage of **rubbish** in Norway’s capital is having an unusual effect on heating for the city. **Oslo’s** forward thinking use of incinerators to ...

2. [Oslo, Norway, Needs Your Trash - Yahoo! Finance](http://finance.yahoo.com/.../oslo--norway--needs-your-trash-122853209.html)

finance.yahoo.com/.../oslo--norway--needs-your-trash-122853209.html

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May 3, 2013 – From Yahoo! Finance: **Garbage** incineration is **Oslo’s** main power source, and they’re running out of fuel.

3. [Oslo’s Weird Problem: Not Enough Garbage - Waste-to-energy ...](http://www.newser.com/story/.../oslos-weird-problem-not-enough-garbage.htm...)

www.newser.com/story/.../oslos-weird-problem-not-enough-garbage.htm...

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Apr 30, 2013 – **Oslo** has got a problem a lot of cities would love to share: a major shortage of **garbage**. Around half of the Norwegian capital is heated by ...

4. [Oslo runs out of garbage, imports it from rest of the world : TreeHugger](http://www.treehugger.com/.../oslo-runs-out-garbage-imports-it-rest-world.htm...)

www.treehugger.com/.../oslo-runs-out-garbage-imports-it-rest-world.htm...

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May 1, 2013 – **Oslo**, the capital of Norway, has a strange **garbage** problem. Too much? No, not enough.

5. [Alternative Energy Sources: Oslo Powers Itself By Burning Garbage](http://www.takepart.com/.../energy-from-waste-alternative-energy-sources-oslo...)

www.takepart.com/.../energy-from-waste-alternative-energy-sources-oslo...

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May 1, 2013 – The energy-from-waste system that powers Oslo, Norway needs an infusion of American trash, it turns out.

6. [Norway's Capital Doesn't Have Enough Trash to Help Power the ...](#)

[newsfeed.time.com/.../norways-capital-doesnt-have-enough-trash-to-help...](#)

May 1, 2013 – While other parts of Europe, notably Italy, suffer from excess-garbage problems, Oslo is sticking with cleaner English waste, the Times reports.

7. [Oslo Running Out Of Trash, How Much Is Yours Worth? | Industry Tap](#)

[www.industrytap.com/oslo-running-out-of-trash-how.../5514](#)

[by David Russell Schilling - in 26 Google+ circles](#)

May 5, 2013 – Oslo, Norway is a city of 1.4 million people that finds itself in the enviable

http://www.gainscotland.org.uk/Incinerator_overcapacity_in_Europe_120828.shtml

[2011 Sita discussion of European incineration overcapacity](#)

A 2011 report by a Sita executive available from http://www.iswa.org/uploads/tx_iswaknowledgebase/Berthoud.pdf is well worth reading for an insight into how the waste industry view the issue of incineration overcapacity in Europe. Incineration overcapacity is bad for the environment. Overcapacity makes it harder for local authorities to source third party waste to 'top up' their incinerator if they were to reduce their own 'residual' waste arisings. This, in turn, leads to excess capacity that results in artificially low gate fees that discourage reduction, re-use, recycling, composting and anaerobic digestion.

Whilst the UK Government has yet to acknowledge domestic overcapacity (perhaps because Defra do not even monitor incineration capacity), overcapacity is more widely recognised in other European countries. Some of these countries import UK waste to keep their facilities going, which both exacerbates our own domestic overcapacity and makes it more difficult for the UK to rely upon importing waste to keep our own incinerators operational.

In ***Final treatment of MSW and C&I waste in Germany and neighbouring countries. How to cope with emerging overcapacities?*** Mathieu Berthoud, Chief Operating Officer Sita Northern Europe (Suez Environnement Group) writes:

“Although these general considerations were known by the authorities, the public and the private waste management companies, an overcapacity was installed in certain countries and will not cease to grow in the near future. In the

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Netherlands the currently existing incineration plants and those under construction already provide an overcapacity. For this reason there will be no expansion of the Netherlands incineration capacity till 2020...”

“Most German studies show an overcapacity [in Germany] estimated between 2 and 4 million tons. As in the Netherlands (overcapacity estimated 600 kt/year) this corresponds in Germany to 8% to 12% of the installed capacity. Already today Germany is a net importer of waste in order to satisfy the demand of the incinerators. As reasons for the overcapacity, the simultaneous declining national waste quantities and expansion of the incineration capacity are given. Like in the Netherlands some are already calling for a moratorium on extension of German incineration capacity.”

“In Sweden the incineration capacity grew from 2 million to 6 million tons in the last 10 years. In the 2012 the overcapacity will reach 2 million tons. Today Sweden continues to build thermal facilities as waste incineration is seen as an energy production business. They are extremely dependent on imports. The situation can become worse if the imports from Norway are stopped.”

“In Belgium an incineration and land filling ban exists for selectively collected waste that can be recycled. A restrictive permitting policy for landfills and incineration facilities has to avoid an overcapacity for the treatment of mixed waste. Such an overcapacity would lead to lower disposal costs and take away the drive towards more prevention, re-use and recycling.”

Section 4, “Consequences of the Overcapacity”,

“a. Financial

Van Gansewinkel Groep closed one of its AVR incinerators in Rotterdam as of 1 January 2010. The current economic situation, overcapacity in the Dutch waste processing market and an uneven European level playing field, made the planned investment in the incineration plant irresponsible. In an interview, the chairman of Remondis’ management board Ludger Rethmann said that the company is planning to sell its interests in two or three waste incinerators over the next two years. The plants might also be shut down altogether. It was also Ludger Rethmann who **warned the ‘waste world’ for the upcoming incineration overcapacity since 2006.** Financial write-offs or bankruptcies cannot be excluded.”

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b. Technological

...As far as Western Europe is concerned, the market for technology providers will be limited to renovation, modernisation and maintenance of existing plants over the coming years.

c. Environmental

...Long-distance transport of waste on the road and in the worst case waste tourism is expected. Pressure on the organic recycling streams (organic waste, plastic and wood) with potential consequences on the European targets will happen.”

See also:

- Data on UK RDF exports – http://www.whatdotheyknow.com/request/rdf_exports_permitted_by_the_ea#incoming-288823.
- “Some European weekend reading” (UKWIN article). <http://ukwin.org.uk/2012/06/08/some-european-weekend-reading/>
- “Rotterdam incinerator closed due to ‘overcapacity’” (UKWIN article) – <http://ukwin.org.uk/2012/05/17/rotterdam-incinerator-closed-due-to-overcapacity/>

<http://www.spiegel.de/international/spiegel/germany-s-booming-incineration-industry-burning-the-world-s-waste-a-467239.html>

Germany's Booming Incineration Industry: Burning the World's Waste *By Udo Ludwig and Barbara Schmid*

A booming new industry has quietly emerged in Germany. Waste incineration firms are importing massive amounts of toxic waste. Now public opposition is mounting against the burning of highly contaminated waste from Australia.

The trip from one end of the world to the other reveals an economic sector that has expanded in Germany largely unnoticed until now: Germany has become one of the major importers of hazardous waste from all over the planet, a giant waste disposal facility for the rest of the world. Munitions waste from Sweden, pesticides from Columbia, asbestos-contaminated rubble from the United States, solvents from China and lead-acid batteries from Montenegro.

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Nothing that harms human beings, animals and the environment seems to be missing on the list, which is meticulously kept by the German Environmental Ministry. And the amounts have tripled since 2000 to reach more than 2,000 tons. Import volumes of asbestos-contaminated waste has risen by 400 percent in this period -- that of industrial sludge by as much as 500 percent.

Sell us your waste

The reason behind this economic growth consists in Germany's unusually strict environmental regulations. They've ensured that the world's best hazardous waste incineration plants were built in Germany, which also has the greatest know-how. But the high-tech incinerators only make economic sense if they are used at or near full capacity. Germany's plant operators would face overcapacities of as much as 20 percent if they didn't process hazardous waste from abroad. But something else remains after the incineration process: gaseous components of the hazardous waste that have the tricky characteristic of recombining in the form of toxic furan polymers and dioxins when cooled down to about 300 degrees Centigrade (572 degrees Fahrenheit). "Cracking them for good" is the job of various combustion chambers, rotation washers, condensation filters and a catalytic converter more than 30 meters (98 feet) large, Beyer explains.

The toxicity of what leaves the chimney at an altitude of about 100 meters (328 feet) lies far below the limit values, Beyer says. That toxicity is only measurable in picograms at best -- and one picogram is just a millionth of a millionth of a gram.

But scientists insist there is no such thing as hazardous waste combustion without harmful emissions. Harry Rosin, a professor of medical microbiology, even thinks the statements issued by the industry are "stultifying nonsense."

<http://www.scmp.com/news/hong-kong/article/1269277/tseung-kwan-o-landfill-plan-withdrawn-amid-strong-opposition#comment-26475>

SCMP Online Comment: dynamco Jun 26th 2013 2:13pm

We do not want the trash - Europe needs it, it is a commodity in Europe - Give it to them or sell it to them ! we do not need landfill extensions if we can export the commodity instead.

'But Norway is importing as much rubbish as it can get its hands on, in an effort to generate more energy by burning waste in vast incinerators.

The Eurotrash business may sound like an unpromising enterprise, but it's one that is increasingly profitable. The UK paid to send 45,000 tonnes of household waste from Bristol and Leeds to Norway between October 2012 and April this year. "Waste has become a commodity,"

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says Pål Spillum, head of waste recovery at the Climate and Pollution Agency in Norway. "There is a big European market for this, so much so that the Norwegians are accepting rubbish from other countries to feed the incinerator."

He refuses to divulge the sums involved, saying only that the market is growing. Spillum is "considering requests" to burn waste from other UK towns. "As a rule we generate about 50% of our income from the fee we receive to take the waste and about 50% from the sale of the energy we create," he says.

Norway is not alone. Waste to energy has become a preferred method of rubbish disposal in the EU, there are now 420 plants in Europe equipped to provide heat and electricity to more than 20 million people. Germany ranks top in terms of importing rubbish, ahead of Sweden, Belgium + Netherlands. But it's Norway that boasts the largest share of waste to energy in district heat production, according to Danish government-funded State of Green.'

<http://www.guardian.co.uk/environment/2013/jun/14/norway-waste-energy>

South China Morning Post 南華早報

Published on *South China Morning Post* (<http://www.scmp.com>) [Home](#) > Tseung Kwan O landfill plan withdrawn amid opposition

Tseung Kwan O landfill plan withdrawn amid opposition

Wednesday, 26 June, 2013, 12:08pm

News>Hong Kong

Lai Ying-kit and Cheung Chi-fai

The government on Wednesday temporarily withdrew a plan to expand a landfill in Tseung Kwan O amid strong objection from political parties and residents. Secretary for the Environment Wong Kam-sing announced the decision at the start of a Legislative Council meeting, admitting the government had failed to secure enough support for the plan.]He said at the public works subcommittee that the administration had to withdraw its application for HK\$1.89 billion funding for the expansion plan from the Legco for now.

"We have made our best efforts but till now we have not had enough votes of support for the Southeast New Territories landfill in Tseung Kwan O," he said. "We feel disappointed," Wong added.

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The proposal involves enlarging the landfill – located next to a large private housing estate – by 13 hectares. Wong did not say when the plan would be resubmitted.

On Wednesday, the Legco subcommittee also failed to cast votes on the other two landfill extension plans because of time constraints. Wong had said all three proposed landfill extension plans are needed to handle the imminent waste crisis.

Wong pledged to resubmit before the summer recess the two plans – a HK\$7 billion funding request to extend Ta Kwu Ling landfill and a HK\$35 million one for a feasibility study for the Tuen Mun landfill extension.

Wong last month urged residents living nearby to consider Hong Kong's overall interests, saying that if the city would soon be “surrounded by rubbish” if it did not expand existing landfills.

Wednesday's developments came as the government's largest allies – the Democratic Alliance for the Betterment and Progress of Hong Kong – opposed the plan.

DAB chairman Tam Yiu-chung said his party objected to the expansion because of odour and impact on traffic in the area.

A group of residents from Tseung Kwan O had also been on a hunger strike to oppose the expansion project.

More on this:

[Tseung Kwan O landfill expansion faces defeat \[2\]](#)

Source URL (retrieved on Jun 26th 2013, 2:13pm):

<http://www.scmp.com/news/hong-kong/article/1269277/tseung-kwan-o-landfill-plan-withdrawn-amid-strong-opposition>

Links:

[1] <https://www.scmp.com/sites/default/files/2013/06/26/wong.jpg>

[2] <http://www.scmp.com/news/hong-kong/article/1268868/tseung-kwan-o-landfill-expansion-faces-defeat>

From: James Middleton [mailto:dynamco@netvigator.com]

Sent: 20 June, 2013 23:55

To: kswong@enb.gov.hk

Subject: Waste to Energy Geotechnical Reports

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If it cost \$630 a tonne to handle ship and dump MSW 13 years ago what does it cost now ?

We could sell or give it to Europe including the shipping cost, for far less. They can send their own ships.

Europe currently has 7 million tonnes incineration capacity and only 1.5 million tonnes of MSW feedstocks.

From: James Middleton [<mailto:dynamco@netvigator.com>] **Sent:** 01 June, 2013 09:22

To: 'cyd4hk@gmail.com'; 'info@cydho.org.hk'; Dennis Kwok; Mary OK TANG

Subject: : You need MSW, we do not want MSW

Dear Cyd Ho,

1 It's time for HKG to be proactive.

Sell the daily MSW to Europe and give the profits to HKG's poor, or just give it to Norway ! They can send their ships. HKG could become the middle man for Shenzhen's trash.

In Europe waste is a commodity. They cannot get enough MSW and compete for it. Hong Kong is a commodity trading centre, so let's trade !

This will give Hong Kong breathing time to retrench and sort out mandatory recycling / waste charging and obviates the need to destroy Shek Kwu Chau and pollute our air further. (let alone the deaths and cancers for those living downwind)

2 Install plasma gasification plants on our existing landfills and reverse mine them back to their original state as Group Machiels are now starting in Belgium. These small plants can also function to safely gasify hazardous waste, bird flu carcasses etc. The soil on the MSW would be vitrified to an inert plasmarok that can be used for road / construction aggregate.

Using the Solena Fuels system landfill MSW could be turned into bio jet fuel / marine fuel / bio naptha.

Our Problems are others' Opportunities.

Kind regards,

James Middleton

Chairman

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From: James Middleton [<mailto:dynamco@netvigator.com>] **Sent:** 01 June, 2013 08:50
To: 'postmottak@ege.oslo.kommune.no'
Subject: You need MSW, we do not want MSW

[Oslo kommune](#)

Klemetsrud energigjenvinningsanlegg

Klemetsrudveien 1

Telefon 02 180

Faks: 23 48 39 01

Norway

http://www.energigjenvinningsetaten.oslo.kommune.no/energigjenvinning_av_restavfall/klemetsrudanlegget/

Dear Sir,

Hong Kong has a waste problem. Landfills are near full and we have 3,000 tonnes of MSW , 3,000 tonnes of food waste and the like amount (non useful) construction waste per day to landfill.

Why don't you do a deal with Hong Kong Government to take their waste ?

If you are interested we'll give you all the appropriate Government contacts.

Kind regards,

James Middleton

Chairman

www.cleartheair.org.hk

www.nytimes.com/2013/04/30/world/europe/oslo-copes-with-shortage-of-garbage-it-turns-into-energy.html?_r=0

New York Times:

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OSLO — This is a city that imports garbage. Some comes from England, some from Ireland. Some is from neighboring Sweden. It even has designs on the American market

“I’d like to take some from the United States,” said Pal Mikkelsen, in his office at a huge plant on the edge of town that turns garbage into heat and electricity. “Sea transport is cheap.”

The problem is not unique to Oslo, a city of 1.4 million people. Across Northern Europe, where the practice of burning garbage to generate heat and electricity has exploded in recent decades, **demand for trash far outstrips supply**. “Northern Europe has a huge generating capacity,” said Mr. Mikkelsen, 50, a mechanical engineer who for the last year has been the managing director of Oslo’s waste-to-energy agency. Yet the fastidious population of Northern Europe produces only about 150 million tons of waste a year, he said, far too little to supply incinerating plants that can handle more than 700 million tons. “And the Swedes continue to build” more plants, he said, a look of exasperation on his face, “as do Austria and Germany.”

<http://www.stateofgreen.com/en/Profiles/Ramboll/Solutions/Waste-to-Energy-CHP-in-Oslo>

Waste-to-Energy CHP, EGE in Oslo Norway

SOLUTION TYPE: IMPLEMENTED

Oslo municipality, Energigjeninnvingsetaten, EGE, is extending the treatment capacity at the waste-to-energy facility at Klemetsrud by a third unit. Ramboll is the lead consultant in connection with the new unit, which is scheduled for commissioning in 2011. In parallel, a waste sorting plant and a biogas plant for treatment of the organic fraction of the household waste are being constructed.

Chinese Incinerators Spark Public Protests

by VOA News

Environmental protests have replaced land grabs as the main source of unrest in parts of the country, according to Chinese officials.

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Grassroots campaigners in China are increasingly using official channels to push for more transparency when it comes to the environment. Thomas Johnson, a researcher specializing in Chinese environmental policy at the City University of Hong Kong, says one example of this ongoing struggle is a waste incinerator near the coastal city of Qinhuangdao, in China's northern province of Hebei. "This incinerator was half-built before it was halted by the government after opposition from the local people," Johnson said. "I went there last year and you can see in the middle of the field there is this half-finished incinerator, with a couple of guards watching it and growing vegetables within the compound."

As a growing number of residents and nongovernmental organizations question the environmental impact of large-scale projects, such starts and stops are becoming more common. Waste incineration has long been a controversial issue in many countries, with opponents focusing on pollution's impact on public health.

How much dioxin

China's limits on pollution by industrial plants are weaker than those of many other nations, and incinerators can release 10 times as much dioxin as similar plants in the European Union. Dioxin and related compounds are highly toxic and are linked to cancer and birth defects in people exposed to high levels of contamination. China already generates one-quarter of the world's total waste, and that amount increases by eight percent every year.

City governments are under great pressure to solve their mounting trash problems, and incineration is an increasingly popular choice. The central government aims to have 300 trash-burning plants in operation by 2015 - twice as many as now. But opposition from local communities has halted work on many plants, at least temporarily. "Even if they encounter opposition, it is unlikely that local governments or construction companies will say clearly that they will not build the incinerators," said Mao Da, a researcher at Beijing Normal University who studies solid-waste treatment techniques. "Between the developers' attitude and citizens' persistent opposition, we sometimes realize that the chance of completing some of these plants is very low."

Mao says the Chinese public does not trust the government to enforce technology and safety standards for incinerators, and there is growing concern about the potentially grave risk posed by increasing airborne concentrations of dioxin and other poisons.

Gas-mask protests

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Opposition to incinerators takes various forms. In Guanxi, signs deploring "smelly" conditions hang from high-rise apartment windows while protesters in Guangzhou ride the subway wearing gas masks. Apart from environmental concerns, Johnson says government agencies' lack of coordination also is a source of trouble.

"One part of the government approves an incinerator in a certain place," Johnson said, "and another part says, 'Let's develop this area for middle-class housing.'" By the time people move into their new homes, Johnson says, too often they discover an incinerator will soon be built nearby.

"In some cases, the house has been marketed to them as being in a very 'green' area - clean air - and they are suddenly very upset that they found this incinerator at their doorstep." Chinese law mandates that authorities study an incinerator's impact before it is built. Guidelines for placement of waste-treatment plants must be observed, and there must be consultation with people living near the site.

Bending the rules?

However, NGOs say environmental departments often bend the rules.

In the case of the half-built Qinhuangdao waste incinerator, the impact assessment reported that 100 people were surveyed, and there was unanimous agreement on the project. Members of the group Friends of Nature checked with the residents named in the official survey, however, and found that none of them had ever heard about the questionnaire. Waste processors and government officials charged with protecting the environment also have recently come under scrutiny for their reluctance to disclose emissions data.

The environmental group Wuhu Ecology Center asked 122 plants that burn trash to provide information about pollution discharges more than two years ago. As of last month, there was no response from a majority of the plants. "What we asked for is information that they are bound by law to make public, and yet they have not complied so far," said Ding Jie, a volunteer at the Wuhu Ecology Center.

She says such unwillingness to disclose information is harming the public, which should be aware of the health risks for those who live near incinerators. As consumer consumption rises in urban areas and more goods and garbage pile up, most observers agree that solving China's trash problem will not be easy. But many believe that transparency could go a long way toward easing popular opposition to incinerators, and help restore the public's trust in government.

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