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Incentive Offered to Encourage Replacement of Older Buses and Trucks

The EPA plans to use a large incentive to help accelerate the process of replacing large diesel passenger buses and freight trucks with newer, low-polluting vehicles. On average, the EPA will offer NT\$100,000 to users that replace diesel vehicles that are more than ten years old. The EPA Air Bureau stated that the incentives will be offered for public vehicles, tour operators, and private shipping companies. The EPA has almost finished the first draft of the implementation rules and plans on promulgating them by January 2002. Implementation will begin in February 2002.


On December 13, the EPA convened a public hearing to discuss proposed incentives for replacing old vehicles. Representatives from tourism and shipping companies as well as industry associations participated in the hearing. The industry association representatives stated that a large number of willing subscribers has caused previous subsidy programs to suddenly become fully enrolled in the days leading up to their announcement. The result often leaves companies that are excluded hoping to make the process for issuing subsidies as fair as possible.

Under the proposed implementation rules, large passenger buses (capacity of 25 or more passengers) that have been in use for more than 10 years will be eligible for a subsidy of NT\$100,000, and NT\$50,000 will be offered for medium-sized vehicles (capacity of less than 25 passengers). Freight trucks with a capacity of 20 tons or more will be valued at NT\$100,000 and NT\$50,000 will be offered for vehicles of less than 20 tons. Industry representatives expressed their deep appreciation to the EPA for proposing the new incentive system,

and predicted that it will be an important catalyst in encouraging businesses to replace their older vehicles.

The tour bus association and representatives from numerous city and county government offices governing public buses suggested that basing compensation on a ratio related to the actual number of vehicles owned by the organization or enterprise would be a fairer method and avoid the over-subscription problems described above. A company with 100 vehicles who was awarded a compensation ratio of 5% could collect subsidies for replacing 5 vehicles. The proposed incentives are limited to commercial vehicles and will not be offered for replacement of private vehicles.

The EPA Bureau of Air Quality Protection and Noise Control stated that EPA Administrator Edgar Lin strongly encouraged the replacement of old vehicles. However, since the EPA's Air Pollution Control Fund is limited, some companies will be left out. In order to ensure a fair process, future implementation rules will be based on the dual principles of feasibility and fairness and would allocate compensation based on the actual number of vehicles owned by organizations. The tour bus association suggested allowing industry to directly manage the incentive program. Industry associations would allot funds based on the actual number of vehicles owned by each company.

The new implementing rules will also provide subsidies of NT\$1,000,000 for the purchase of low-polluting vehicles, including electric vehicles, hybrid diesel and electric vehicles, LPG vehicles and CNG vehicles. 

Local Governments Asked to Phase Out Disposable Tableware

The EPA has proposed a program designed to phase out disposable tableware over three stages. The EPA hopes that county and city governments will embrace this gradual approach to banning the use of such items on the market. The first stage will target government agencies, schools, state-run and military organizations. The plan will go into effect as soon as county and city governments set their respective timetables.

The EPA recently invited county and city environmental protection bureaus (EPBs) to discuss the scope and timetable of banning the use of disposable tableware. The EPA's Bureau of Solid Waste Management expressed hopes that county


and city governments will embrace a three stage program to enacting such a ban. The first stage, which would go into effect five months after the program is announced, targets government agencies, schools, state-run and military organizations, which are most prepared to restrict usage of these items. The second stage focuses on dining establishments above a certain scale, and would begin six months after the program is announced. The third stage would cover all restaurants, including small vendors that account for the greatest quantities used.

"Disposable" refers to tableware that is used once and then thrown away, such as cups, bowls,

plates, chopsticks, and cutlery made of polystyrene, paper and plastic. The Waste Bureau points out that although the EPA has listed polystyrene, paper and polypropylene containers as mandatory recycling items, the EPA would eventually like to put wide restrictions on disposable tableware, which has very low recycling value due to food remnants and oil stains and can cause contamination of other recyclables during the storage process.

During a full meeting of Taiwan's environmental agencies at the EPA, Administrator Lin made a point of asking each EPB Director their opinion

on the question of polystyrene tableware. All expressed support for a ban. However, because of local differences in lifestyle, allowing local governments to set their own scope and timetable would greatly increase the feasibility of a ban.

Some proactive EPBs, such as Taipei City, have already proposed autonomous statutes for the ban of disposables. Others, such as Yilan County and Taichung City, are in the process of developing regulations. The EPA hopes that local governments can propose timetables for the regulations so that the EPA can support their implementation. 

EPA Decides to Make Small Change in Subsidy for Electric Scooters


Following a commitment by industry representatives to sell 20,000 electric scooters in 2001, EPA Administrator Edgar Lin reached an agreement with industry to reduce the average subsidy for each electric scooter from NT\$25,000 to NT\$17,000, effective January 1, 2001. Industry representatives agreed to take responsibility for promotion and sale of vehicles, and will develop a comprehensive sales and distribution network to service purchasers of electric scooters.

Following over one month of discussions, the EPA's Electric Scooter Project Reassessment Taskforce concluded that the capabilities and technology of Taiwan's electric scooters have been gradually improving. For example, Taiwan now manufactures batteries on a par with imports, which has allowed production costs to begin to slowly decrease. At the same time, sales have begun to grow and the industry has achieved an initial economy of scale. As a result, the Taskforce decided to lower the average subsidy of NT\$25,000 per scooter to NT\$17,000.

Several industry representatives expressed satisfaction with the Taskforce's decision and the industry has committed to the goal of selling 20,000

electric scooters in 2001. Industry representatives also promised to: establish servicing stations and emergency roadside service in all cities and counties in Taiwan; create a maintenance and service infrastructure; provide battery service guarantees to protect consumers' interests; and continue researching electric scooter technology to improve vehicle capabilities. The Taskforce also hopes that industry will adopt a constructive and proactive attitude towards the manufacture and sale of electric scooters; continue R&D efforts; and take steps to import the new generation of battery technology.

The EPA began using the Air Pollution Control Fee in September 1995 to provide subsidies to promote the purchase of electric scooters. The subsidy policy has been in place for five years and subsidies range from NT\$20,000 to NT\$33,000 (average of NT\$25,000). However, the promotion has not been highly effective, and only 16,000 scooters have been sold to date.

The EPA Air Bureau stated that the EPA is willing to help subsidize the cost of replacing the current lead acid battery used in scooters with the newest generation of batteries. 

EPA Administrator Takes the Reins on Pollution in the Erhjen River

The EPA is preparing heavy medicine to help fully implement cleanup of pollution on the Erhjen River. In the shortest time possible the EPA will begin a series of executive actions, including issuing citations, taking enforcement actions, and initiating cleanup measures. The EPA Water Bureau emphasized that when a pollution incident is reported, if improvements are not made within 12 hours, the Administrator himself will be notified and take personal command of the issue. If the problem cannot be solved within 24 hours the Executive Yuan must

be informed and the problem designated as an emergency. The case will then be sent to investigative authorities as a public hazard issue.

Illegal smelting activities have persisted on the Erhjen River for close to ten years. The EPA recently established the Erhjen Pollution Cleanup Taskforce to help put an end to this dirty problem.

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Now the EPA has taken another step forward by deciding to utilize public pollution reports in combination with quick-time response in the battle to halt continued smelting pollution on the Erhjen.

The EPA's Bureau of Water Quality Protection expressed that pollution reports for the Erhjen River will be now be dealt with based on the same principles used to handle emergencies. As soon as a public report is filed the local environmental protection bureau will have three hours within which to handle the problem. If this is not possible, the county or city government head must be immediately notified, as well as the appropriate supervisors in the EPA's Air, Water, Solid Waste, and Inspection divisions. All efforts must be made to resolve the problem within 8 hours. After 12 hours the Administrator himself will be notified and take command of the situation until its resolution. If the Administrator has not put the matter to rest in 24 hours then a report must be filed with the Executive Yuan. At this point the case will be passed on to investigative authorities as a public hazard.

The EPA hopes to foster active public participation in the fight against pollution on the Erhjen River by encouraging residents to contact local en-

vironmental agencies through public reporting hotlines. The EPA would like to have 300 trained volunteers to help gather evidence and file reports against polluters. In addition to the EPA's 080-066666 hotline, the public can also call (06) 657-2916 xt. 115 in Tainan County, (06) 260-5954 in Tainan City, and (07) 731-0500 in Kaohsiung County. After a report is filed, the local EPB must immediately mobilize local inspection personnel, the EPA's central and southern inspection teams and the environmental protection police.

In addition, the EPA would like to organize a variety of community-based activities to strengthen local concern, using mechanisms such as continuing environmental education programs organized in cooperation with local community groups. The public will be called upon to help organize Seed Teacher lectures, Erhjen River environmental photo-competitions, design and manufacture of educational CD-ROM and websites, local environmental education materials, training programs for volunteer pollution patrols, and a number of other lectures and discussion forums. These activities will build consensus and concern for this historical cleanup mission, as well as a greater appreciation of the value of the history, culture and nature surrounding the Erhjen River. 

Biodiversity Gains Rank in the Sustainable Development Effort

A recent meeting of the Executive Yuan's National Council for Sustainable Development included new members from industry circles and public groups and saw the decision to add a working group dedicated to biodiversity. Chairman and Executive Yuan Vice-Premier, Lai In-Jaw, expressed that the Council will promote sustainability among Executive Yuan agencies and also strengthen communications with Legislative organizations, public groups and industry.

On December 21, the Executive Yuan's National Council for Sustainable Development (NCSD) convened its 10th meeting, led by Council Chairman and Vice-Premier Lai In-Jaw (賴英渥) and Vice Chairman and EPA Administrator Edgar Lin. The meeting focused on ways to improve functioning of the NCSD, create a sustainable government, and promote sustainable development concepts throughout the nation.

The session also featured a newly reorganized NCSD. To increase its representation, the NCSD specifically called on the heads of related government agencies, experts and academics, and industrial and public groups to act as council members. The

newly designed Council members list is expected to provide a broad pool of collective wisdom and include new representation for the voices of both industry and the public. In addition, to show the importance the government attaches to preservation of biodiversity, at this meeting the NCSD approved addition of a new Biodiversity Working Group. The Group will be headed by Minister without portfolio Tsay Ching-yen (蔡幸雄), and is charged with completing and implementing Taiwan's national biodiversity strategy.

Executive Yuan Vice-Premier Lai In-Jaw pointed out that the pursuit of sustainable development has become a common goal of government administrations across the world. But besides governments, well-known industry groups across the world have begun paying greater respect to the notion of using industrial sustainability as a way to gain a competitive foothold in the 21st Century. In the future, sustainability will be an important indicator used to measure the strength of both a company or a nations' competitiveness.

Because the EPA also acts as the NCSD sec-

retariat, Administrator Lin introduced the EPA built, "National Sustainable Development Global Information Network." The site is situated at ww2.epa.gov.tw/nsdn/, and offers both Chinese and English. The website structure includes an introduction to the NCSD, sustainable development progress reports, international sustainable development news, links to international and domestic protocols and organizations, links to the sustainable development windows in each country, and documents and publications related to sustainable development.

To facilitate its use the EPA has registered the site with major domestic search engines and web

portals. Users need only key in "sustainable development," "national sustainable development," or "Executive Yuan National Council of Sustainable Development," and search results will turn up a link to the National Sustainable Development Global Information Network.

Vice-Premier Lai stated that besides promoting the Executive branch's pursuit of sustainability, the newly organized NCSD will improve communication and cooperation with Legislative organizations, public groups and industrial circles. Better communications will help the NCSD unite all parties to work together towards achieving sustainable development in Taiwan. 

EPA Considers Banning MTBE Fuel Additive

Methyl tert-butyl ether, MTBE, is a proven carcinogen in animals and a number of countries have considered banning its use. The Taiwan EPA recently gathered affected parties to discuss methods of reducing health threats posed by MTBE. Initial conclusions are that aside from a total ban on MTBE, stricter prevention of leaks from gasoline storage would also lower health risks. The EPA has already decided to establish an MTBE Risk Assessment Working Group that will evaluate the risks of MTBE over the next two years.

Leaded gasoline creates serious pollution problems. Methyl tert-butyl ether, MTBE, is a fuel additive used to replace lead and avoid lead pollution problems. However, as it has come to light that MTBE is a proven animal carcinogen, the human risks posed by MTBE use have become a serious topic of concern.


On December 20, 2000 the EPA called representatives from the petroleum industry together with experts and academics to discuss a possible ban on MTBE use. The EPA expressed that based on American research, MTBE is a proven animal carcinogen. Although there is no conclusive evidence that it causes cancer in humans, exposure to high concentrations of MTBE results in nausea, vomiting, dizziness, and confusion. MTBE is currently designated as a Class IV toxic chemical substance in Taiwan, which means that mandatory reporting is required regarding substance use.

Academics present at the discussions pointed out that MTBE is an inflammable volatile organic compound (VOC) used mainly as an additive to raise the octane value of gasoline. MTBE is easy to produce and ship, is inexpensive, reduces carbon monoxide and hydrocarbon emissions, and has become the most representative gasoline oxidizer since it was introduced in the 1990s. However, because

MTBE easily escapes through cracks in gasoline storage containers to pollute groundwater, the State of California has already enacted a comprehensive ban on MTBE beginning in the year 2003, with New York set to follow in 2004.

Petroleum industry representatives pointed out that there is no way to prove that MTBE causes cancer in humans and oppose a ban. In addition, if petroleum industries are forced to use another additive they must also modify their production processes. As a result, the cost of switching over is more than just the cost of finding a new additive, and would require a significant amount of time. Taiwan uses 500 thousand tons of mostly imported MTBE each year. Domestic production only accounts for an annual 200 thousand tons.

The latest data shows that ethanol, like MTBE, is high octane, reduces carbon monoxide and hydrocarbon emissions, and would be an efficient replacement fuel additive. Ethanol is already being tested in parts of the United States with results in no way inferior to MTBE. Further, ethanol is manufactured through the fermentation of carbohydrates such as sugarcane or corn which are produced renewably through photosynthesis. For this reason, from a sustainable use perspective ethanol deserves further promotion as an MTBE substitute.

The EPA expressed that lowering risks from MTBE could be accomplished by a full ban or by improving leak prevention during gasoline storage. The EPA has decided to create an MTBE Risk Assessment Working Group to look deeper into this issue. The Working Group will include representatives from industry, government and academia and will have two years to evaluate the risks of MTBE use and formulate a control strategy. 

Feature Article

National Economic Development Conference Calls for Simplification of EIA Procedures

On January 6 the Executive Yuan convened the National Economic Development Conference to discuss means of stimulating economic growth. A portion of conference discussions were directed at environmental issues, such as environmental impact assessments. In regard to EIAs, final suggestions were formulated to provide direction for future administrative work: (1) simplify environmental permitting procedures, (2) raise EIA efficiency, and (3) create a “one stop” government window for handling environmental permits. The suggestions are intended to increase government efficiency, maintain protection for the environment and help economic development.

On January 6 the Executive Yuan convened the National Economic Development Conference to discuss means of stimulating economic growth and improving government efficiency. During the conference a working group was dedicated to discussion of environmental issues, covering: integration of environmental regulations and simplification of review procedures; promotion of green production and consumerism; and promotion of a national industrial waste disposal plan to effectively solve industrial waste treatment problems.

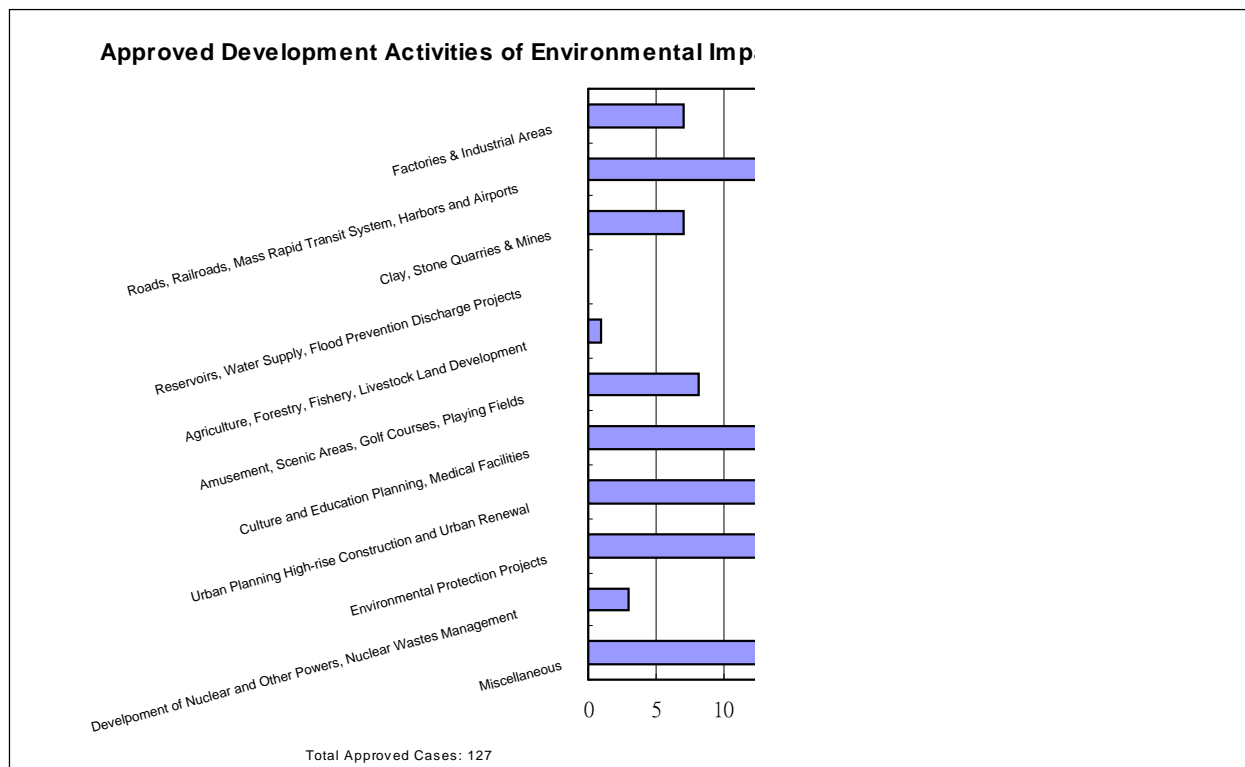
Final conference resolutions recommended measures to help improve the efficiency with which companies carry out environmental impact assessments (EIA), under the premise that such changes

would not have negative environmental impacts. The resolutions include:

- (1.) encourage industries to locate in appropriate areas by exempting factories applying to establish in industry parks, science parks, and import export processing zones from carrying out an EIA if the park in question has already completed an EIA review and implemented total pollution quantity controls that would not be exceeded by the new facility;
- (2.) exempt companies planning to scale down production, improve environmental treatment capabilities, or make other changes beneficial to the environment from proposing an EIA change assessment report and allow instead a simple comparison and review of resulting changes;
- (3.) allow companies that have completed EIA review procedures to obtain an installation permit from the competent country or city authority after paying their installation licensing fee, as opposed to the current system which requires a separate application procedure.

The conference also proposed measures aimed to raise EIA review efficiency. These include:

- (1.) establishing base standards and technical guidelines to increase normalization and transparency of



the EIA review process and reduce any disputes over the process;

(2.) establishing an EIA pre-review mechanism and integrated review of soil and water preservation, land change, and EIA permits to reduce unnecessary redundancies;


(3.) evaluation, technical seminars and training for EIA technical consulting organizations aimed at raising the quality of EIA reports and reducing the frequency of report rejections and requests for supplemental information;

(4.) creating a geographic information system for environmentally delicate regions in Taiwan and plans to study the environmental resources and baseline total quantity control standards for each county in order to reduce the conflicts that stem from development plans sited in inappropriate areas.

Another important idea promoted at the conference was the idea of a "one stop" government window for handling environmental permits. Such a mechanism would:

(1.) provide a "one stop" window to handle all environmental applications regarding factory set up. Unless an applicant lacks required data or the case raises legal doubts, the window should notify them within 5 days which environmental permits are required and what procedures must be followed;

(2.) provide stronger information services to assist industries in speedily carrying out environmental permitting work.

Because EIAs involve a wide range of organizations and sectors, the EPA will put its full efforts behind coordinating with other government agencies during the legislative review process. The EPA expects that a number of redundant procedures can be removed and prevent industries from losing valuable business opportunities due to administrative delay. In this way the government can help resolve industrial environmental protection problems, improve government efficiency and promote economic development that does not increase burden on the environment. 

Taiwan Continues to Closely Follow Trends in COP6

The Taiwanese delegation to the Sixth Session of the United Nations Framework Convention on Climate Change Conference of the Parties (also known as COP6) led by EPA Deputy Administrator James J. Lee has returned to Taipei. In a press conference following his return, Deputy Administrator Lee reported that the national representatives at the conference were unable to arrive at a consensus. The compromise proposal presented by the Chairman of the Conference near the end of the negotiating period failed to gain the support of the United States and European delegations. As a result, it was decided to schedule another conference (COP6 Part 2) for May 2001 in Bonn, Germany to seek a final consensus. Deputy Administrator Lee stated that the EPA will prepare a briefing and set of policy recommendations to circulate amongst each ministry based on the information obtained at the conference to help coordinate Taiwan's overall greenhouse strategy.

After two weeks of long discussions delegates to the COP6 conference were unable to achieve a consensus on key points. The leader of the Taiwanese delegation, EPA Deputy Administrator James J. Lee, stated that the implementation of the Kyoto Protocol would have an enormous impact on the economic development, energy policy and industrial structure of virtually every country around the world. As a result, countries have formed into blocks to protect their interests in negotiations. Groups include the United States-led JUSSCANNZ,

developing countries led by China (the G77 and China), the European Union, the Alliance of Small Island States, and those from Central American and petroleum exporting nations. The inability of the groups to compromise on their differences was one of the main reasons the conference was unable to reach a conclusion.

Deputy Administrator Lee recommended that Taiwan seek opportunities to cooperate with interest groups on specific issues that would benefit the environment. Cultivating partnerships with groups on different issues will help expand Taiwan's ability to operate in the international arena. The EPA will review the information gathered during the two weeks of conference negotiations and present specific policy recommendations to each relevant ministry of the ROC government. On the subject of the implementing details for the Clean Development Mechanism of the Kyoto Protocol, there is still much opposition to including nuclear power in the Mechanism. The international trend is clearly against building new nuclear power facilities, and most countries have developed energy policies to encourage widely distributed, small-scale, diversified power generation sources. Deputy Administrator Lee stated that this emerging trend should be considered in reevaluat-

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ing Taiwan's energy policy.

COP6 also saw the emergence of several new trends, including voluntary business initiatives. A number of major corporations such as British Petroleum and Shell Corporation have stated their willingness to voluntarily reduce CO₂ emissions, and are developing methods to improve energy conservation and raise overall energy efficiency. Deputy Administrator Lee stated that due to Taiwan's unique political status, it is unable to directly participate in discussions. However, Taiwan should increase its efforts to gather information and assist domestic companies in undertaking appropriate measures related to reducing greenhouse gas emissions. Taiwanese companies can participate in international

discussions as individual entities and can help improve Taiwan's opportunities for international cooperation.

Deputy Administrator Lee stated that countries like Korea and Singapore, whose economic development status is very similar to Taiwan, have already submitted national communications. Korea is also considering a new law to control greenhouse gas emissions. Deputy Administrator Lee warned that even though Taiwan is not a member of the United Nations, sooner or later its greenhouse gas emissions will come to the attention of the international community. The National Council for Sustainable Development should therefore improve integration of interagency efforts in order to allow the process to move forward more quickly.



Online Inspection Takes a Step Forward

In response to the headaches in Taiwan created by industrial waste, on December 19 the EPA's Industrial Waste Control Center announced a new plan to strengthen enforcement of industrial waste laws. Under the Plan, the Center will work with local environmental agencies, the EPA Inspection Team and the Environmental Police in hopes of putting an end to illegal dumping.

In the two months since its official inception on October 21, the EPA's Industrial Waste Control Center has registered an increasing number of companies, reports and waste volumes on their online system. Over two months the number of items reported increased by around 20%, or a 56% increase over the same time period last year. As a result of Center data reviews 544 enterprises were found not to have filed online reports or to have exceeded their permitted operating capacities. Citations were issued on 29 of the more serious violations, including 19 companies that had never managed to report online or whose storage facilities were not in accordance with regulations, and 10 waste haulers that exceeded permitted capacity. Following up this success, the Industrial Waste Control Center called on local environmental agencies to develop a plan to further strengthen inspection, oversight and control of industrial waste treatment.

The Center stressed that these results are simply the result of irregularities filtered out through comparative analysis of data reported online and accompanying inspections. In the future the Center will strengthen their work by cooperating with the EPA Inspection Team, local environmental agencies,

the Environmental Police and a GPS waste flow tracking system. The success has inspired the EPA to invite local governments to help draw up industrial waste pollution inspection and control improvement plans. As it stands, the current plan mainly targets companies that report waste online and their contracted waste management companies, with an emphasis on checking hazardous industrial waste items.

In the past, inspection of major environmental pollution cases were based mostly on petitions or evidence provided by the public. However, the database established by the Center will help local agencies perform comparative data analysis, screening, number crunching and inspection work. This ability will allow environmental agencies to abandon their previous reactive role and adopt a proactive approach to industrial waste control. By using the Center's information, local environmental agencies can assign priority for waste inspections, making the most efficient use of limited manpower and resources.

The Center stresses that inspections are merely a tool and not the final goal. In the future the Center plans to use workshops, lectures and other methods of education to help all parties involved better understand the Center's strategy and to learn how they can help. Further, these measures will encourage industrial organizations and waste management companies to properly dispose of industrial waste and invest in waste treatment facilities. This strategy gets at both the pollution problems manifested by industrial waste and also their root cause.



EPA Establishes Threshold to Avoid Import of "Inkfish" Vehicles

Beginning January 1, 2001 the Taiwan government lifted restrictions on the import of used cars. Recently the EPA convened a public hearing attended by over 50 participants, including representatives from the Ministry of Transportation, the Energy Commission and associations representing automobile dealerships and manufacturers to discuss this development. The EPA Air Bureau stated that with the lifting of restrictions it is important to consider how to prevent Taiwan from becoming a "dumping ground" for used vehicles. The EPA vowed to take the necessary steps to clamp down and ensure that substandard vehicles from other countries are not allowed to enter Taiwan.

As of January 1, 2001 Taiwan has agreed to ease restrictions on the import of used cars. In order to take firm control of the situation, the EPA has drafted a control method to require imported used cars to meet a minimum air emissions threshold of Taiwan's 1999 phase three emissions standards. The EPA Bureau of Air Quality Protection and Noise Control has been working quickly to convene meetings with related government agencies and industry representatives to discuss the issue.


For cars that have been used for four years or less the control method utilizes a system based on model certification. Each model must apply for an inspection certificate from the EPA. The EPA will test one car for every 200 imported to check for compliance with the standard. For cars that have been in use for more than four years each individual vehicle must pass inspection. The cars that pass inspection can be imported. A representative from the Taiwan Transportation Vehicle Manufacturers' Association, which opposes the large-scale import of used cars, stated that model

certification is not effective for evaluating used cars. The Association recommended approval of small batches of imports as a better approach.

The Transportation Vehicle Manufacturers' Association stated that model certification is only relevant for new vehicles that have been mass-produced according to the same specifications in factories with good quality control. Second-hand cars have already been in use for a number of years and may have undergone significant modification. If the EPA only relies on inspection information related to the original manufacture or design, it will be impossible to guarantee air quality. Therefore, the Association recommended using a system of batch approval that would mean for every 20 vehicles imported one should be randomly selected for testing.

The Association emphasized that Taiwan should follow the model of developed countries and not that of the developing world which often accepts "garbage" from other countries. The United States, Europe, and Japan perform individual testing on imported used cars. Only given the doubts about Taiwan's ability to implement an individual testing system does the Association recommend batch approval as a means to prevent an invasion of used cars.

However, not all companies agree with this opinion. Some companies noted that since used cars will be allowed for import, the government should not erect any barriers that go against WTO principles of fair trade.

The EPA stated that it will develop fair and feasible regulations after further assessment of enterprises' comments. 

Study Shows Recycling Gains in Popularity

Recycling has become something of a national pastime in Taiwan. According to the results of the EPA's newest recycling survey, 73.5% of households in Taiwan now recycle. The most commonly recycled items are waste paper, recycled by 68.8% of households, and waste bottles, recycled by 61.4% of households.

In order to understand the current level of knowledge, attitude, habits and degree of satisfaction regarding current recycling policies and systems in Taiwan, the EPA commissioned a company to undertake a telephone survey to assess public opin-

ion. The survey, which took place last year from September 21 to 24, entailed 1,076 successful interviews with individuals age 15 years and above, with a 95% degree of confidence and a sampling error of plus or minus 3%.

The results showed that of the 1,076 persons interviewed, 55.4% knew of the recycling mark and 44.6% did not. Questions to test the ability of the public to recognize recyclable items showed the highest levels of awareness for paper (74.6%), PET

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bottles (66.6%) and aluminum cans (66%).

With respect to collection of recyclables, 54.9% of the respondents used municipal recycling trucks and of these 69.3% expressed "strong satisfaction" or "satisfaction" with the service. Only 10.2% of the respondents expressed "strong dissatisfaction" or "dissatisfaction" with recycling trucks. Dissatisfaction was mostly due to: difficulty accommodating the scheduling of the truck visits, infrequency of truck visits, or trucks failing to stop long enough.

Of those polled, 38.2% used the recycling truck to dispose of PET bottles, while 27.4% used the local supermarket. When asked about the refund for recycling PET bottles, 91.3% of those that did not recycle PET at the supermarket responded that they were aware of the refund, while 8.7% stated that they were unaware. Of those that were aware, 28.8% had taken PET bottles to the supermarket for recycling and collected the refund, while 70.3% had not. In total, 85.4% of those that recycled PET at the supermarket expressed that they would still be willing to continue recycling PET bottles if the refund were canceled, while 10.9% stated that they would not be.

In terms of information channels about recycling,

of the 1,076 respondents 71.9% stated that they had read or heard information about recycling, while 25.6% had not. Of those that responded positively, 43.2% felt the amount of information about recycling was sufficient, while 51.9% felt it was insufficient. The respondents who felt that information was insufficient hoped that they could see or hear information about recycling at the supermarket (20.8%), on television (15.8%) and at local government offices (14.8%).

When asked about the "per-bag trash collection fee," a volume based trash collection fee recently instituted by the Taipei City Government, 81.4% were aware of this policy. Of those that were aware of the policy, 68.2% felt that it was useful in reducing trash volumes while 24.3% felt it was not. Many Taipei City residents included in the poll expressed extreme satisfaction or satisfaction with the policy (57.5%), while a smaller portion (32.5%) expressed dissatisfaction. Respondents that were dissatisfied mainly felt that the special trash bags were too expensive (54%). Also, 74.3% of non-Taipei City residents polled expressed that they would be willing to follow a "per-bag trash collection fee" policy, while 14.4% said they would not be willing. The main reason stated for not wanting to follow the per-bag trash collection fee policy was that the bags were too expensive (61.6%).

Recycling of Industrial Styrofoam to Begin in 2002

Styrofoam. It can't be incinerated, doesn't biodegrade and is generally a government's waste disposal nightmare. The EPA recently announced steps to progressively limit use of disposable tableware and also confirmed that industrial foamed-plastic packaging – i.e. foamed polystyrene — would be listed as a mandatory recyclable in early 2001 with regulations taking effect in 2002. As a result, styrofoam packaging for televisions, washing machines, microwaves, computers, printers, etc. will soon be recycled.

There are two major types of styrofoam, polystyrene paper (PSP) and expandable polystyrene (EPS). In Taiwan, only PSP is currently listed as a mandatory recycling item. PSP is generally used in smaller quantities, for non-washable (disposable) tableware and fresh food containers. EPS, not yet a listed recyclable, is used to make foamed-plastic packaging – industrial styrofoam – and accounts for 90% of total styrofoam use. The EPA's Bureau of Solid Waste

Management recently stated that industrial styrofoam will be listed as a mandatory recyclable in early 2001, however they also stated that recycling measures would not go into effect until the beginning of the year 2002.

The Bureau of Solid Waste Management stresses that the one year transition period is designed to give businesses a chance to get ready. During this time the EPA will enact a string of preparatory measures, such as promoting packaging that displays the recycled polystyrene logo, establishing recycling points, transfer stations, recycling stations, cooperation with recycling plants and setting clearance and shipment fees, subsidy rates, as well as inspection and certification guidelines.

This year's listing will include foamed-plastic packaging, insulating materials, containers and construction materials, etc. Examples of products that would be included in the listing are

styrofoam boxes used for fish markets, vegetables, or pastries and packaging for computers or televisions. The listing mainly targets fabricators and end-users and includes commonly used materials, such as EPS, expandable polypropylene (EPP), expandable polyethylene (EPE) and expandable polyolefins (EPO).

Data shows that over 16,000 tons of foamed-plastics were disposed of last year in Taiwan. Of this, 42.1% was incinerated, creating an incredible burden on local incinerators. The main source of these wastes were fish markets, wholesale supermarkets, electronics manufacturing, information-products manufacturing, households and styrofoam fabrication. Although fresh food containers and disposable tableware

have been listed as recycling items, styrofoam used for packaging and construction materials is not yet included. Each year nearly 4,000 tons of these materials slip into domestic landfills and incinerators, creating a serious environmental problem.

The Waste Bureau points out that in the future the public will be able to return items such as cold storage and pastry boxes or electronics packaging materials directly to retailers. The retailer will then send them on to a government recycling station or a heat compression and recycling plant. The wastes will then be used in a recycled product or the heat value recaptured. Retailers may also ship the waste styrofoam directly to a recycling plant. ♻️

News Briefs

EPA Invites International Representatives to Discuss Sustainable Development Indicators

On December 1-2, the EPA convened the "International Symposium on Sustainable Development Indicators." In his opening remarks, EPA Administrator Edgar Lin stated that in 1992 the United Nations issued Agenda 21, which became each country's blueprint for sustainability. In 1996 the UN released "National Sustainable Development Indicators Framework and Methodology," further raising the importance of sustainability policy. Lin stated that after absorbing the experience of other countries, Taiwan should move to develop a set of sustainability indicators tailored to its national character, and to measure progress to-

wards meeting Taiwan's sustainability goals.

EPA Implements Energy Conservation for Buildings

On December 5, the EPA held a conference to promote the new Energy Star for Buildings program. Over 100 representatives from department stores, hotels, medical facilities and other energy intensive business sectors participated. EPA Administrator Edgar Lin stated that energy conservation in buildings is useful for business and also benefits the environment. The Administrator hopes that the business sector will embrace conservation efforts and help promote energy efficiency.

A Talk With "Factor Four" Author, Dr. Ernst Ulrich von Weizsäcker

At the urging of Administrator Lin, on December 10 the EPA held the "Factor Four Seminar – the Resource Efficiency Revolution" at Taipei's International Conference Center. At the event, keynote speaker Dr. von Weizsäcker, author of "Factor Four" and member of the German Parliament, addressed domestic industry leaders, public representatives and top academics. The discussion revolved around raising Taiwan's resource efficiency, environmental quality and international competitiveness.

Natural resources are not inexhaustible and how we consume them now impacts the wealth of future generations. The critical question then becomes, how can industry create business opportunities out of raising resource efficiency and "making more with less?" To help Taiwan prepare

to meet the challenges of the new millennium, EPA Administrator Edgar Lin invited the author of worldwide bestseller "Factor Four," Dr. Ernst Ulrich von Weizsäcker, to visit Taiwan. Lin organized a discussion session between Dr. von Weizsäcker and legislators, renowned experts and industry leaders from Taiwan.

"Factor Four" is a report by the Club of Rome, to which Dr. von Weizsäcker belongs. During his speech, Dr. von Weizsäcker discussed another Club of Rome book, "The Limits to Growth," which was published in 1972. The book used computer models to show that continued growth under the current industrial model would lead to

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