November 30, 2012

Environmental Policy Monthly

Environmental Protection Administration, R.O.C. (Taiwan)

ISSN: 1811-4008 GPN: 2008600068

The EPM is available at http://www.epa.gov.tw/environmentalpolicymonthly

Feature Article

Supervision and Tracking of EIA Commitments

The EPA conducts follow-up supervision of development projects to ensure that developers implement their environmental impact assessment (EIA) commitments. This fulfills the primary objectives of the EIA system by preventing pollution and protecting the environment.

Environmental impact assessments (EIA) are conducted during the planning of development projects to ensure that investigations, predictions, analyses and evaluations are carried out and to assess the potential degree and scope of impact on the environment before any changes are made. Public briefings are also held to assure citizen participation and the formulation of integrated environmental management plans. Plans are then reviewed to determine whether the development project is worth carrying out. The system thus provides a proactive and progressive way to solve environmental problems.

Developers Required to Carry Out Plans According to Review Conclusions

The *Environmental Impact Assessment Act* stipulates that developers should adhere to the content of environmental impact statements when carrying out development projects. Industry competent authorities are in charge of following up on projects while competent authorities are responsible for supervising the status of implementation. This supervisory mechanism ensures that development activities do not have a detrimental impact on the environment or cause unnecessary damage.

An important aspect of planning hinges on whether the developer complies with its environmental impact statement and heeds the content of the environmental impact assessment by taking environmental factors into consideration once their project has been permitted. This is the deciding factor as to whether the environmental impact assessment is able to achieve the intended effect of preventing environmental damage or pollution.

In This Issue

Design, implementation and commencement of operations are thus based on the environmental impact assessment. For this reason a systematic supervision and follow-up system has been established to allow suggestions and measures for improvement upon discovery of a problem with a certain development project. This raises the credibility of the environmental impact assessment system and makes for a complete system that provides all of its intended functions.

Public Authority Effectively Exercised through Supervision and Follow-up of EIA Commitments

Public authority is effectively exercised through the supervision and follow-up of the implementation of EIA decisions, and by keeping tabs on how developers are implementing their commitments and reviewing conclusions formulated during the environmental impact assessment review process. In this way environmental impact assessments work to achieve environmental protection objectives.

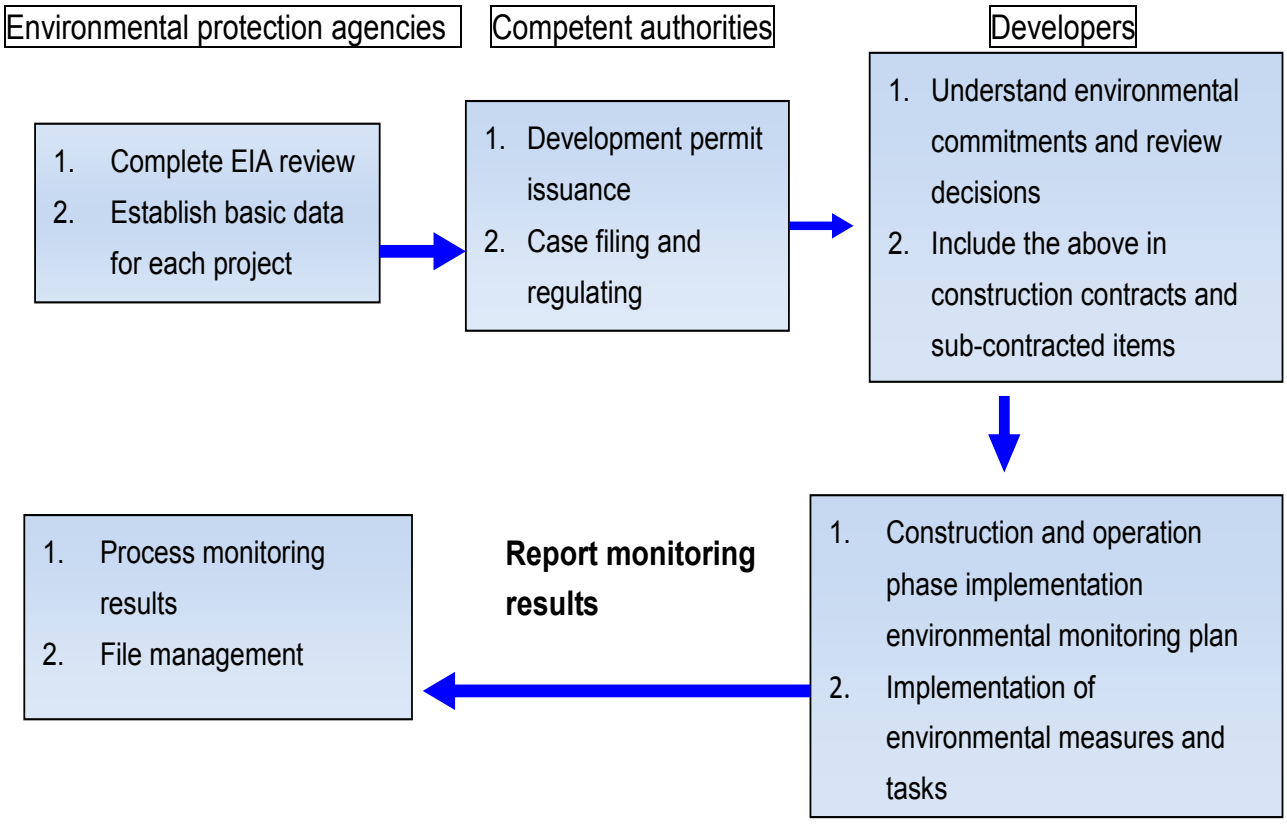
Supervision and follow-up of the implementation of EIA decisions is carried out by the EPA Bureau of Environmental Inspection and the competent authority according to the *Environmental Impact Assessment Act* (環境影響評估法) and the *Environmental Impact Assessment Act Enforcement Rules* (環境影響評估法施行細則). Items included for the supervision by various competent authorities are based on the different jurisdictions of each agency as follows:

I. Competent authorities supervise developers in the following areas according to regulations:

1. Implementation status according to content and review decisions of environmental impact statements and EIA reviews

2. Implementation status of environmental impact investigation report and response measures

3. Items related to Articles 28 and 29 of the *Environmental Impact Assessment Act*



Flow chart for supervision and follow-up of implementation of decisions

4. Status of improvements made when development activities violate *Environmental Impact Assessment Act* regulations

II. Competent authorities supervise development activities in adherence to Article 18 of the *Environmental Impact Assessment Act* for the following items:

1. Specific items that are required of developers upon issuance of permits

2. Developers' implementation of environmental impact statement content or assessment review content, as well as items included in competent authority investigation conclusions

3. Other affairs pertaining to environmental impacts

Implementation results of the above items should be reported to the competent authorities.

The EPA sees to the supervision and follow-up of the implementation of EIA decisions concerning development activities that have been listed under regulatory control. This year for example, from January to the end of August 2012, a total of 266 environmental impact statements have been supervised for adherence to commitments regarding environmental policies. For other major development projects listed under regulatory control, scholars and experts have been invited to join relevant organizations, local representatives and civil organizations in convening supervisory committees. From January to the end of August 2012, these committees have convened 14 times and have made 23 on-site supervision trips. The committees have also dispatched personnel 20 times to join with developers in environmental supervision and make sure they adhere to the EIA commitments stated in their environmental supervision plans.

Some of the EIA supervision and follow-up cases in the last decade included: the Taipei-Yilan Highway; the High Speed Rail Bid Projects S220, S295, and T240; the High Speed Rail Yanchao maintenance station; the Kaohsiung Mass Rapid Transit Bid Project CR7; and the Kaohsiung MRT northern maintenance station.

Climate Change

Hong Kong Newspaper Publishes Minister Shen's Appeal for Taiwan's Inclusion in Climate Treaty

A letter written by EPA Minister Stephen Shu-hung Shen was published by a Hong Kong newspaper on 30 October 2012. In the letter, Minister Shen urged the international community to give a fair hearing to Taiwan's requests to join the United Nations Framework Convention on Climate Change (UNFCCC) and be included in its mutual assistance system.

EPA Minister Stephen Shu-hung Shen's letter was published on 30 October in the "Opinions" section of the South China Morning Post. The letter was entitled "Taiwan has a role to play in combating climate change. "Minister Shen pointed out that climate change mitigation has a direct bearing on humankind's survival and poses a challenge that the global community must face together. Consequently, despite Taiwan's special status in international politics and its exclusion from the UN Framework Convention on Climate Change (UNFCCC), the government has joined the global movement to try to reduce carbon emissions.

For instance, Taiwan voluntarily pledged in 2010 that it would cut greenhouse gas emissions by at least 30 per cent below business-as-usual levels by 2020. This is not only in line with the principles of the convention, but is also a clear declaration of Taiwan's determination to cut emissions.The Committee for the Promotion of Energy Conservation and Carbon Reduction, established by the Executive Yuan, has

drawn up a master plan to fulfill its mandate. The plan calls for action in such areas as energy, transportation, architecture and lifestyle.

This year, the Taiwan government also approved adaptation guidelines covering eight major domains - disasters, essential infrastructure, water resources, land use, coastal areas, energy supply and the energy sector, agriculture and biodiversity, and health. The guidelines call for the impact and challenges of climate change to be studied, for adaptation strategies to be proposed, and for an implementation and evaluation mechanism to be established.

In addition, the Taiwan government is continuing to promote the passage of a bill to reduce greenhouse gases. Minister Shen pointed out that President Ma Ying-jeou said in his inauguration speech following the 2012 election that "developing an environment characterized by low carbon emissions and high reliance on green energy" is one of the five pillars of Taiwan's national development. It is hoped that green industry will become a new economic bright spot that brings employment and growth, so that Taiwan can gradually become a low-carbon green-energy island. Confronted with the daunting challenges that climate change presents, Taiwan's public and private sectors are joining forces towards that goal.

In his letter, Minister Shen wrote that energy saving and carbon reduction are not just abstract concepts in Taiwan. Indeed, they have become part of everyday life. Confronted with the severe challenges of climate change, the international community should take seriously Taiwan's bid to meaningfully participate in. the UNFCCC and include Taiwan in its mutual assistance system.

Minister Shen also emphasized that Taiwan is willing to share the fruits of its hard work in environmental protection with the international community, particularly with those countries that need Taiwan's help the most.

Water Quality

Effluent Discharge Standards Announced for Phototronics Industry and Science Parks

On 12 October 2012, the EPA announced new effluent discharge standards for manufacturers of materials and components for the phototronics industry and for polluted water drainage systems in science parks. Ammonia nitrogen will be newly regulated in two stages, and acute biotoxicity will be regulated in the *Water Pollution Prevention Measures and Testing and Reporting Management Regulations.*

If ammonia nitrogen is discharged into aqueous environments it will consume the dissolved oxygen, leading to a decline in water quality and eutrophication that will harm water-borne organisms. According to the results of studies, the ammonia nitrogen discharged by the phototronics industry and science parks accounts for 34% of the total volume of ammonia nitrogen discharged by Taiwan's industries, hence the need for the new restrictions.

The new controls also include the high-tech industry items listed in the current effluent standards, bringing the total number of controls for the phototronics industry to 33, and for science parks to 34. Acute biotoxicity can easily undergo regular monitoring and management, and can be measured to ensure that toxicity is reduced. Thus, requiring enterprises to improve water quality is relatively easier than exacting control through effluent standards, and the drive to make improvements can push enterprises to implement controls over raw materials or manufacturing processes, and upgrade the functions of treatment facilities. Thus acute biotoxicity regulations will be transferred into the *Water Pollution Prevention Measures and Testing and Reporting Management Regulations.*

The ammonia nitrogen restrictions for the phototronics industry and science parks will involve different maximum values and grace periods being adopted

for new enterprises compared to those for existing enterprises. The maximum limit for new businesses has been set at 20 mg/L, taking effect from the day of promulgation. For existing businesses, the maximum limit for the first stage is 75 mg/L, which will take effect from 1 July 2013; they will have until 1 January 2015 to submit ammonia nitrogen reduction plans and obtain approval by the competent authority. The second stage will see a reduction to 30 mg/L, which for most operators will involve upgrading wastewater treatment facilities. The grace period will thus be longer, extending until 1 January 2017.

The EPA estimates that once the new standards come into effect, there will be a reduction of up to 16,000 kg per day in the volumes of ammonia nitrogen being discharged into Taiwan's rivers. This should make an observable improvement to the river pollution index (RPI), and lead to cleaner rivers and increased recreational activity in freshwater environments. Since effluent discharge standards are a tail-end control mechanism, the EPA is also urging enterprises to ensure that their wastewater treatment facilities are operating properly and at maximum efficiency. They are also being asked to strengthen control over the creation of waste solvents at their source. These measures are all designed to reduce the amounts of chemicals entering wastewater treatment facilities and hence make treating final-stage wastewater less complicated.

Table: Items and Values for Effluent Discharge Standards for Phototronic Material and Component Manufacturers and Wastewater Drainage Systems in Science Parks

Item to be controlled	Value (mg/L)	Explanatory notes
Ammonia nitrogen	10	For enterprises and science parks in water quality/ water volume protected zones
	20	For new enterprises and science parks outside of water quality/water volume protected zones. Took effect from date of promulgation
	75	For existing enterprises and science parks outside of water quality/water volume protected zones, to take effect from 1 July 2013. Enterprises that submit a reduction plan that is approved by the competent authority will be permitted to adopt this standard from 1 January 2015.
	30	For existing enterprises and science parks outside of water quality/water volume protected zones, to take effect from 1 January 2017.
Others	Same values as current effluent discharge standards	Took effect from date of promulgation.
Total		33 items (phototronic material and component manufacturers) 34 items (science parks)

Water Quality

Control Standards for Dioxins in Effluent Upgraded

In addition to setting individual effluent control standards for different categories of industry, the EPA has formulated controls for industries that may potentially discharge effluent containing dioxins.

On 12 October 2012, the EPA announced revisions to effluent standards based primarily on the principle of enhancing risk management. New dioxin controls aimed at industries that have the potential to create dioxin pollution – such as paper pulp manufacturers, chemical factories that manufacture polyvinyl chloride (PVC), and enterprises that use wet or semi-dry scrubbing waste incinerator facilities – were also added.

According to survey data from EU nations, of the total volume of dioxins emitted in the EU annually, only 0.25% is water borne. Surveys done in Taiwan have also shown that, after treatment, the effluent from industries that have a relatively high potential for causing dioxin pollution has a dioxin content well below the US and Japanese effluent standard of 10 pg I-TEQ/L.

However, abiding by the principle of enhancing risk management, dioxin controls are added aimed at industries – such as paper pulp manufacturers, chemical factories that manufacture PVC and enterprises that use wet or semi-dry scrubbing waste incinerator facilities – that have the potential to create dioxin pollution during manufacturing or treatment processes. New and existing enterprises now have different control values: 5 pg I-TEQ/L for new enterprises, and 10 pg I-TEQ/L for existing enterprises. The new standards took effect from the date of announcement.

The EPA points out that pulp mills can switch to using non-chlorinated bleach and operate wastewater treatment facilities in a more stable fashion to reduce the amounts of dioxins produced. Manufacturers of PVC or enterprises that use incinerators should improve their management of raw materials and improve their pollution prevention facilities in order to reduce the complexity of treating tail-end wastewater. The EPA will be conducting rolling reviews of the effluent standards for other industries in order to protect environmental water quality.

Soil and Groundwater

Environmental Impact and Health Risk Assessment Management for Polluted Sites

In order to strengthen the administration of health risk assessments for soil and groundwater polluted sites, the EPA has drawn up a draft of the *Management Regulations for Environmental Impact and Health Risk Assessments for Soil and Groundwater Polluted Sites* in accordance with the provisions of the *Soil and Groundwater Remediation Act.* The draft was preannounced on 29 October 2012.

Article 24 Paragraphs 2 and 3 of the *Soil and Groundwater Remediation Act* state that health risk assessments must be carried out before remediation can take place. In order that assessment procedures and methods are consistent, the EPA has formulated the *Management Regulations for Environmental Impact and Health Risk Assessments for Soil and Groundwater Polluted Sites.* The main points include: Administrative criteria for health risk assessments; administrative methods and regulatory scope; criteria for content of assessment reports; guidelines for establishing health risk assessment work teams; and risk communication measures.

The EPA points out that health risk assessments follow a scientific method that has been widely adopted around the world. Advanced nations in Europe and North America take risk assessment

results into account when making decisions concerning the remediation of sites with polluted soil and groundwater to ensure that the remediation brings environmental and economic benefits without affecting human health. Implementation of the new management regulations will lead to greater administrative consistency in conducting health risk assessments and facilitate flexibility in the management and remediation of polluted sites.

Air Quality

All Diesel Buses Planned to Be Replaced by Electric Buses in Ten Years

Following the EPA's subsidies to a Taipei City Government electric bus test run, two electric buses officially started carrying passengers on 12 October 2012. The EPA also announced that it would immediately start working closely with the Ministry of Transportation and Communications (MOTC) to formulate an electric bus development plan that should lead to all of Taiwan's 6,000 plus urban diesel buses being replaced by electric ones in ten years. Eliminating the dirty exhaust fumes caused by diesel buses will help to protect public health and enhance the quality of life for urban residents.

In June 2012, the World Health Organization (WHO) announced that exhaust fumes from diesel vehicles contain carcinogens. The EPA has since been looking to reinforce controls over diesel vehicle exhaust pollution. To this end, the EPA has been pushing for tighter exhaust emission standards and cleaner diesel fuel for vehicles, and has also been conducting more roadside inspections to find polluting vehicles, as well as encouraging the public to report such vehicles. In addition, the EPA has been actively promoting the replacement of diesel buses by electric ones to reduce the occurrences of Taiwan's citizens being directly exposed to noxious diesel exhaust fumes.

Electric buses have zero emissions while in operation, and are hence far more worthy of being promoted as green transportation than traditional petrol or diesel engine vehicles. In the past, it was the lack of technological breakthroughs in battery design that caused the cost of manufacturing electric vehicles to be very high and the range of the vehicles very limited. However, concerted efforts by those involved in the R&D of electric vehicles has brought the manufacturing costs for electric buses down to a level comparable with those for low-floor diesel buses. Electric bus manufacturers have also overcome one of the limitations of their business model by designing batteries that can be easily swapped. This makes them attractive to bus transportation companies, who can rent the batteries and not have to worry about maintaining or exchanging them. Electric buses are thus now cost-effective and functional enough to be put into regular service.

In addition to subsidizing Taipei City Government's electric bus test run, the EPA is working closely with the MOTC to formulate an electric bus development plan that should lead to all of Taiwan's 6000 plus urban diesel buses being replaced by electric ones in a decade.

Air Quality

Draft of Indoor Air Quality Standards Preannounced

In order to facilitate the paromotion and administration of the *Indoor Air Quality Act*, the EPA has formulated a draft of the *Indoor Air Quality Standards.* The standards set concentration values for fugitive indoor air pollutants that can directly or indirectly affect public health and living environments if exposure occurs over a long period of time.

The *Indoor Air Quality Standards* have been drawn up in accordance with Article 7 Paragraph 2 of the *Indoor Air Quality Act*. Nine items have been prioritized: CO_2, CO, formaldehyde, volatile organic compounds (VOCs), bacteria, fungi, suspended particles with a diameter under 10 micrometers (PM_{10}), suspended particles with a diameter under 2.5 micrometers ($PM_{2.5}$), and ozone. So that the indoor air quality of announced premises can uniformly meet the new standards, air quality determination principles have also been added that take into account the category and any special functions of different indoor areas in order to reduce the number of air pollutants that have to be controlled. The EPA intends to eventually remove some of the above nine pollutants from the list to reduce the monitoring costs for announced premises and to alleviate any conflict caused by promulgating regulations.

The EPA recently completed the discussion meetings and public hearings for drafts of the *Enforcement Regulations for Indoor Air Quality Management,* the *Regulations Governing the Establishment of Personnel Dedicated to Indoor Air Quality Maintenance*, and the *Indoor Air Quality Testing and Monitoring Management Regulations*. In the future, announced premises will also be required to submit indoor air quality maintenance management plans. Thus, the EPA is building an online reporting system that will provide announced premises with all the information that they need, both simplifying government administration and making life easier for the public.

Eco-community

Experts Reach Consensus on Promoting Low-carbon Sustainable Homeland

On 6 October 2012, the EPA held the World Cafe for Experts on Low-Carbon Sustainable Homeland Assessment and Validation Action Plans. Almost 400 local experts were invited to have coffee at 50 tables in a large hall and engage in specialized discussions on feasibility assessments, creative thinking, and "cycles of review and action," relating to the Low-carbon Sustainable Homeland Program. The aim was to build consensus on how to promote the project and implement the follow-up action programs.

The 2009 National Energy Conference specifically set out targets and a timetable for the establishment of a low-carbon homeland. But achieving this goal will require enormous social and economic changes. It is hoped that within a decade the design and scope of four low-carbon living spheres will take shape and that during the same period all systemic obstacles to implementation can be removed so that the necessary personnel – from government, business, and society – can be quickly mobilized. Mobilizing such a large personnel force will not be possible for any single development project or government agency, but needs to be done in step with the requirements of national development and as part of a thorough and comprehensive plan, so that each type of measure and administrative plan can be gradually drawn up. Such an approach will also allow for better coordination between central and local government agencies in building the public support that is crucial for the project's success.

The EPA has already conducted research and drawn up a draft of the Low-Carbon Sustainable Homeland Program, which is structured around ten major operational functions. These are: green ecosystems; energy-saving buildings; energy-saving facilities; renewable resources; green transportation; resource recycling; low-carbon lifestyles; disaster prevention, relief, and adaptation; legal and economic/financial tools; social/ behavioral science and evaluation tools. Fifty Information and Technology Teams will flesh out the ten major operational functions into 190 attainable targets and specific action programs.

In order to clarify action program content, operational methodology, and financial planning, the EPA will be allowing government agencies, corporations, citizen groups, and the general public to choose which programs should be given priority. The "experts' World Cafe" format was adopted by the EPA for the first stage of discussions between the heads of local government environmental protection bureaus and the 50 Information and Technology Teams from 7-8 August 2012, and again for the second stage on 6 October

2012. The October conference was a larger event to which personnel from central and local competent authorities, members of the ten major operational functions' 50 Information and Technology Teams, heads of villages, and representatives from academia, industry, and citizen groups were invited.

For the October conference, the 50 tables were divided into 10 discussion groups – one for each of the 10 major operational functions – and each table discussed two action programs related to their designated major operational function, giving a total of 100 action programs. Each delegate was also asked to assess each action program and rank them in order of implementation priority from 1 to 10, based on the criteria of administrative and technological feasibility, the self-liquidation potential of program financing, and ease of disseminating replication. Each delegate was also asked to explain why their top two choices should be given priority, information that the government will use to prioritize action programs and thus achieve effective policy focus.

The EPA has already achieved one of its aims in holding the World Cafe of experts: 20 action plans have been given top priority for the current stage of the Low-Carbon Sustainable Homeland Program. The next stage will be to hold interdepartmental meetings, complete important research papers, outline the essential goals when implementing the action programs, and draw up related administrative procedures and methods so that all stakeholders involved have a clear administrative framework on which to base their decisions. At the same time the first steps will be taken at the community and urban levels to begin the process of forming the low-carbon sustainable living spheres and achieving the vision of a low-carbon sustainable homeland.

Recycling

Foreign Experts Arrive to Learn from Taiwan's Recycling Successes

From 15-20 October, the EPA in conjunction with the US EPA held the 2012 International Workshop on Waste Electrical and Electronic Equipment Recycling Management in Taipei. The participating delegates were government officials and academic experts in the field of resource recycling from 18 nations in the Asia Pacific region, Central and South America, and Africa.

Taiwan's success at establishing effective resource recycling systems has attracted so much attention from around the world that the EPA decided to join forces with the US EPA and hold the 6-day workshop in Taipei. The workshop was designed to promote the recycling of waste electrical and electronic equipment, and to strengthen regional international partnerships.

The lecturers at the workshop were academics and EPA personnel from Taiwan as well as experts from the US and Japan. They talked to the foreign attendees about Taiwan's system of recycling waste electrical and electronic equipment and related management measures and technologies, and inspired discussions to share knowledge and experience. Naturally, Taiwan's excellent results in formulating and executing waste electrical and electronic equipment recycling was also mentioned, another "Taiwan miracle" that is winning plaudits around the world.

This year's workshop is a continuation of a cooperative relationship that started a number of years ago with the signing of the Taiwan-USA agreement on technical cooperation in the field of environmental protection. The main focus of the lectures was Taiwan's 4-in-1 resource recycling policy. Experts and government officials from Japan, South Korea, Singapore and the USA also gave presentations on the resource recycling systems in their respective nations and discussed some of the results and experiences of running the systems. The lectures had three main themes:

1. Resource recycling policy and management

2. Resource recycling fund management

3. Techniques for treating waste electrical and electronic equipment

The EPA is keen to point out that the workshop was the first time that Taiwan's successful experiences in resource recycling have been systematically communicated to an international audience. The workshop was useful for building resource recycling working relationships and environmental partnerships, and was a great opportunity for Pacific Rim and Southeast Asian nations to exchange environmental knowledge and information. It also acted as a launch pad for Taiwan's successes in recycling waste electrical and electronic equipment to be transmitted to neighboring nations. The EPA hopes that the workshop will lead to the establishment of mutually beneficial assistance agreements on the management of waste electrical and electronic equipment recycling.

Eco-community

British Experts Visit Taiwan to Discuss Low-carbon Sustainable Homeland

On 1 November 2012, the EPA, in conjunction with the British Trade and Cultural Office and the Taiwan Institute for Sustainable Energy (TAISE), held the "2012 Taiwan-UK Low-carbon Sustainable City Forum – Experience Sharing on Low-carbon Building and Transportation Development."

The EPA started planning the forum in August 2011, and sent out invitations to construction experts involved in the 2012 Olympics to come to Taiwan to explain how the design of facilities for the 2012 Olympics incorporated the concepts underpinning low-carbon sustainable cities. The delegates who came to the forum are experts in the fields of low-carbon sustainable city development and central and local government policy formulation and structural planning. They also have many years of hands-on experience in promoting low-carbon construction and transportation. The topics discussed at the forum mostly focused on policy planning and the actualities of on-site work.

Specific topics that were discussed at the forum included the UK's low-carbon transformation plan and accompanying policies; support and coordination for urban planning policies; urban planning in coastal cities; ecological engineering in use; low-carbon cooling systems; green transportation planning; construction and overall planning in environmental design; the development of alternative energy ventilation systems; and promotion of carbon neutral environments. A number of successful case studies were also shared with the representatives of city and county governments, NGOs, corporations, and other civilian groups from Taiwan. Taiwan's delegates came away with new ways of thinking about low-carbon construction and transportation, and the nation's ability to implement the Low-carbon Sustainable Homeland Program has surely been enhanced. EPA Minister Stephen Shu-hung Shen, British Trade and Cultural Office representative David Campbell, and Taiwan Institute for Sustainable Energy (TAISE) chairman Eugene Chien all attended the forum.

Minister Shen pointed out in his speech that low-carbon sustainable city development in the UK is already well advanced: National carbon reduction targets are enshrined in law and the government has successfully designed policies and measures concerning sustainable energy, and climate change mitigation and adaptation. For example, in 2015 the British government will start to regulate vehicle carbon emissions, and has already formulated stricter carbon emission regulations for new buildings and for renovating old buildings. The London Olympics was also a successful example of an eco-friendly combination of transportation, construction, and community building. Even though many of the carbon reduction techniques and facilities used in the UK were not developed there, by taking full advantage of the UK's pool of talented professionals, new techniques have been integrated in systematic ways that have created many green job opportunities.

Minister Shen went on to mention how Taiwan is currently pressing ahead with the Low-carbon Sustainable Homeland Program, using the experience gained from evaluating the Low-carbon Model Communities and Low-carbon Model Cities schemes but with the addition of the concept of sustainability. The seven effective carbon-reduction approaches that the EPA previously used have now become ten major operational functions with the addition of three evaluation tools. Recognized experts from government, industry, academia, and research institutes have been invited to work with central and local government agencies to establish 50 technical consulting teams that will formulate plans of action and specific projects. The task of building the structure for the Low-carbon Sustainable Homeland Program will involve interaction between every level of government – central, city, county, township, village, and community development associations – and the citizen groups involved. The UK's success in both planning and implementing the development of low-carbon cities – and strategies for a low-carbon economy, transportation system, and alternative energy infrastructure – makes it a good model for Taiwan to learn from.

David Campbell also expressed his happiness at witnessing the knowledge exchange on low-carbon sustainability between Taiwan and the UK. He said that the sharing of environmental protection techniques and experiences at the forum would act as a catalyst for both nations to work together to promote new low-carbon sustainable approaches to build low-carbon sustainable cities.

Air Quality

Subsidies for Electric Scooter Battery Swapping System Extended for One Year

On 30 October 2012, the EPA preannounced revisions to the *Electric Scooter Battery Swapping System Subsidization Regulations* that will extend subsidies for another year, to 31 December 2013.

The EPA has already approved applications from two operators – one in New Taipei City and one in Kaohsiung City – to each establish a network of 30 battery swapping stations and conduct trial operations. The network of stations will make life a lot more convenient for electric scooter owners by allowing them to quickly exchange their scooter batteries when they run out of power. This also alleviates them of the burden of battery maintenance and greatly increases the range of the scooters.

The promotion of the *Electric Scooter Battery Swapping System* has not only involved subsidizing operators who establish their own networks: On 14 June 2011, the EPA drew up the *Electric Scooter Battery Swapping System Subsidization Regulations* that allow for subsidies of up to NT$10,000 each for the first 5,000 electric scooter owners who join the scheme. It is hoped that these subsidies will speed up the spread of battery swapping systems.

News Briefs

Automobile Gasoline and Diesel Composition Standards Tightened

On 29 July 2009, the EPA announced amendments to the *Standards for the Composition of Automobile Gasoline and Diesel Fuels*. The new standards came into effect on 1 July 2011, and 1 January 2012 respectively, with permissible sulfur content lowered to 10 mg/kg for both.

Previously, fines for violating the standards – as laid out in the *Criteria for Penalizing Transportation Vehicle Violations of the Air Pollution Control Act* - were calculated according to whether the values for sulfur in the fuel were over 2 times, 10 times, or 20 times the standard. This regime was not pragmatic enough from an administrative standpoint, and so the EPA decided to revise the *Criteria*

for Penalizing Transportation Vehicle Violations of the Air Pollution Control Act: Progressively larger fines will now be levied when sulfur content exceeds 50 mg/kg, 350 mg/kg, and 500 mg/kg. An addition to Article 2 of the standards also allows for greater fines when the recovery of illegal gains made by importers and vendors of substandard oil products is necessary.

Draft Revisions to Air Pollution Prevention Fund Regulations Preannounced

The EPA is currently actively promoting the Low-carbon Sustainable Homeland Program, a long-term plan that will require a massive amount of revenue. The EPA is therefore working toward establishing a dedicated source of funding to cover all of the administrative costs and possible low- or zero-interest loans to corporations or even central and local government departments, to carry out the necessary measures. In order to put the money in the Air Pollution Control Fee Fund to effective use in promoting the Low-carbon Sustainable Homeland Program, the EPA has amended Article 5 Paragraph 1, items 1, 3 and 12 of the *Regulations Governing Air Pollution Control Fee Fund Revenues, Expenditures, Safekeeping and Utilization*: the words "loan-related matters" have been added to widen potential uses of the fund. As with all amendments to existing regulations, the EPA's primary responsibility is to protect public health and living environments while still trying to raise living standards.

Violators of Environmental Agents Control Act Could Have Illicit Gains Confiscated

The amendments to the *Discretionary Standards for Fining Violators of the Environmental Agents Control Act* state that the competent authority must act according to the standards and should also take into consideration the degree of environmental impact and amount of profits obtained from violating administrative law. The financial resources of the offending enterprise should also be taken into account when levying the fine, which will not be limited by legal statute. A method for calculating profits gained from violating the *Environmental Agents Control Act* has also been added.

The EPA points out that violations of the *Environmental Agents Control Act* might also apply to enterprises that neglect to pay for necessary prevention measures or that do not cover other necessary costs. Recovering the illegal gains from this category of behavior is now also part of the consideration criteria laid out in the standards.

Delegates from 13 Nations Attend Soil and Groundwater Conference in Taipei

From 30-31 October, the EPA held the 2012 International Conference on Remediation and Management of Soil and Groundwater Contaminated Sites and an Environmental Exhibition. Experts and academics from 13 nations gathered to discuss issues related to soil and groundwater pollution, such as the latest trends in inspection, remediation, and management for soil and groundwater polluted sites. The conference served as an effective discussion forum for experts from neighboring Asian nations in the field of soil and groundwater pollution site remediation and management.

This particular conference is held biannually, and this year's event was attended by delegates from Europe, North America, Taiwan, and the Pacific Rim nations. The speakers presented the latest research results in the following fields to the delegates:

1. Policy planning for sustainable management
2. Bioremediation
3. Heavy metal remediation
4. Sludge remediation
5. Knowledge and experience gained from remediation cases

Environmental Policy Monthly R.O.C. (Taiwan)

Publisher
Stephen Shu-hung Shen, Minister

Editor-in-Chief
Tsung Yung Liu

Executive Editors
Y. F. Liang; Yu-ling Yang; Li-kuo Hsiao; Shao-wen Chang; Jason Hoy

Translator
Peter Morehead

Editorial and translation support provided by:
Hui-kuo Consulting, Ltd.

For inquiries or subscriptions to the printed version, please contact:
Environmental Policy Monthly
Environmental Protection Administration
Office of Sustainable Development

83, Sec. 1, Jhonghua Rd.,
Taipei 100, R.O.C. (Taiwan)
tel: 886-2-2311-7722, ext. 2211
fax: 886-2-2311-5486
e-mail: umail@epa.gov.tw

Printed with soy ink on recycled paper.

行政院新聞局出版登記證局版北市誌字第1611號
中華郵政北台字第6128號執照登記為雜誌交寄