

HRC's Annual Report on Foreign Affairs in 2014 and Work Plan for 2015

**Hangzhou Regional Center (Asia-Pacific) for Small
Hydropower (HRC)**

National Research Institute for Rural Electrification, MWR

In 2014, led by the Ministry of Water Resources (MWR) and its affiliated Nanjing Hydraulic Research Institute (NHRI), and supported by the Ministry of Commerce (MOFCOM) and the Ministry of Science and Technology (MOST), HRC carried out and implemented the decisions and arrangements of the Central Committee of CPC on speeding up the reform and development of water resources. HRC staff earnestly studied the documents of the 18th National Congress of CPC and worked with high spirits, strict attitudes and in a practical way. They have actively undertaken international training projects, widely carried out international exchanges, successfully implemented multilateral and bilateral S+T cooperative projects, and strived to expand the international market thus attained fairly good achievement and created impressive social and economic benefits.

I International Training

In order to strengthen the foreign-aid human resources development, deepen the south-south cooperation, popularize Chinese SHP technology and equipment, while promoting exchanges and cooperation among the developing countries, HRC has successfully organized 5 international training workshops (seminars) in 2014, three of which are foreign-aid training programs of MOFCOM, and the rest are ASEAN-China Cooperation Fund (ACCF) project and Perez-Guerrero Trust Fund (PGTF) project respectively, with the participation of 78 officials or engineers in the field of SHP and rural electrification from 37 countries in total.



Regarding the three foreign-aid training programs sponsored by MOFCOM, the first was the Seminar on Rural Electrification for Francophone African Countries, a 28-day training with the participation of 23 officials from 13 francophone African countries; the second was the Seminar on Rural Electrification for Asian Countries, a 28-day

training with 15 officials from 8 Asian countries; and the third was the Training workshop on SHP Technology for English-speaking African Countries, a 42-day event with 17 officials and engineers from 9 African countries.

HRC, for the first time, also held two international training programs for ASEAN member countries in 2014.



One was an ACCF (ASEAN-China Cooperation Fund) sponsored program called “ASEAN-China Training Workshop on Small Hydropower and Solar Energy System for Rural Electrification”, with 9 officials from 7

ASEAN countries meeting in Hangzhou for this 7-day activity; the other one was a UNDP-PGTF program, called “Technical Seminar on Small Hydropower among ASEAN Countries”, which was the first multilateral training program of HRC held out of China, and also HRC’s first UNDP-PGTF sponsored program. This 3-day seminar was held in Bandung, Indonesia with the involvement of 14 officials from 8 ASEAN member states. The “Initiative on China-ASEAN SHP/Solar Energy Cooperation” and the “Cooperative Initiative on Small Hydropower and Other Renewable Energies between China and ASEAN States” were concluded respectively during the programs, both building a solid foundation for further cooperation in the fields of SHP, solar power and other renewable energies.



Meticulous guidance and great support were offered from the concerned governmental authorities to the international training programs. Mr. Li Ge, Deputy Director General of the Department of International Cooperation, Science and Technology of MWR attended the closing ceremony of “2014 Training Workshop on Small Hydropower Technology for English-speaking African Countries”; Mr. Fan Aihua, Division Chief of the Department of Commerce of Zhejiang Province, delivered a speech at the closing ceremony; Mr. Zhang Jianyun, Academician of the Chinese

Academy of Engineering, President of NHRI and international fellow of the Royal Academy of Engineering of UK, made a lecture entitled “Water Resources in China and Impacts of Climate Change”; Mr. Li Yun, Vice President of NHRI, was also present at the closing ceremony of “2014 Training Workshop on Small Hydropower Technology for English-speaking African Countries”. Mr. Sun Yan, Counsellor of the Mission of China to ASEAN, delivered a speech at the opening ceremony of “Technical Seminar on Small Hydropower among ASEAN Countries” held in Bandung, Indonesia.



During the seminars/training workshops, HRC invited Mr. Shen Jiangkuan, the former Chinese Ambassador to Rwanda and Djibouti, and Mr. Fang Zhimin, the former Economic & Commercial Counsellor of several Chinese Embassies in African, Caribbean and South-pacific countries, to give keynote presentations respectively in French and English, i.e. “60 Years of China’s Aid to Foreign Countries”, and “China’s Poverty-alleviation Policies” in order to make the participants well understood about the history, policies, financing, management etc. of China’s foreign-aid undertakings.



The rare pictures and vivid presentations from the two diplomats have attracted every participant.

In 2014, the international trainings have been improved constantly, and HRC optimized lectures and study tours, and enriched cultural exchanges, which increased the participants’ satisfaction rate dramatically. “Seminar on Rural Electrification for Francophone African Countries” scored 96 points, “Seminar on Rural Electrification for Asian Countries” got 98 points and “Training Workshop Training workshop on SHP Technology for English-speaking African Countries” touched 97 points. The other two ASEAN training programs have also been highly evaluated.

II Foreign Exchanges

1. Conferences and Meetings

(1) From February 23rd to 25th, HRC delegates attended the “2014 Seminar/Review Meeting on Foreign-Aid Training” hosted by AIBO (Academy for International Business Officials) of MOFCOM in Jinhua, Zhejiang Province. HRC delegates joined the group discussion and came up with the suggestion of making full use of the foreign-aid trainings, deepening the international influence of China’s SHP technology and equipment, and suggested that MOFCOM should strengthen the post-training support to training organizers, i.e. providing back-up fund for visiting trainees, helping to track follow-up projects and coordinating between organizers and the Economic and Commercial Counsellor’s Offices of Chinese Embassies, thus maximizing the benefits of foreign-aid trainings.

(2) From June 16th to 17th, HRC delegate attended the second “International Off-Grid Renewable Energy Conference & Exhibition” which was held in Manila, the Philippines. Our expert emphasized the importance of SHP in solving the power shortage as well as the rural electrification, elaborated the policies and measures for rural electrification (RE) in China in different periods, and introduced the features and modes of current operation



& management of SHP grids.



(3) From November 23rd to 25th, entrusted by the Department of International Cooperation, Science and Technology of Ministry of Water Resources (MWR), HRC has successfully organized “2014 Conference of Liaisons of Foreign Affairs of MWR”, with the participation of 83 officials, experts or scholars from different departments of MWR, local water resources departments and secretariats of international organizations. Ms. Cheng Xialei, Director General of HRC, was invited to attend the opening ceremony.

2. Foreign Guests Visiting HRC

In 2014, HRC received 12 delegations with 32 foreign guests in total, respectively from Benin, Nepal, Cuba, Italy, Pakistan, Kenya, Turkey, Uganda, Mexico and India, etc. (as per Appendix I). A number of cooperative agreements have been reached.

(1) From April 10th to 11th, Dr. Grodfrey Nzamujo, Director of Songhai Center in Benin visited HRC, and had a meeting with HRC discussing the development of renewable energies in African countries. Songhai Center planned to establish a long-term cooperative partnership with HRC for the development of rural renewable energies, and popularize advanced technology and electromechanical equipment in Benin and other West African countries.

(2) From June 1st to 15th, the GM and his delegation of Energoimport of Cuba visited HRC, discussing the technical proposal of Mayari SHP Project with HRC. The guests also had a field trip to manufacturers for supplying the electro-mechanical equipment of Mayari project in Cuba.

(3) On November 5th, a delegation of six officials from Uganda paid a visit to HRC. The delegation included Ms. NABUGERE Munaaba Flavia, Minister of Environment, Mr. SHINYABULO James Anthony, Minister of Trade, Industry and Cooperation, and Mr. ARIDRU Ajedra Gadison, Minister of Financial Investment and Economic Development, etc. The guests spoke highly of the technical capability of HRC and advised to sign a MOU to jointly carry out potential projects ASAP.



(4) On November 9th and 14th, Mr. José, President of Mexico Federal Electric Commission, and Mr. Armando, GM of Mexico Tratamiento de Agua Hydrotech, visited HRC twice respectively, discussing cooperation in hydropower development. The guests briefed on the hydropower development and its implementation procedures in Mexico, and would offer the detailed information on potential projects for further cooperation. Additionally, the guests hoped to send personnel to HRC for training, and invite HRC experts to Mexico for delivering hydropower expertise and technical training.

(5) On November 28th, Prof. A. Kumar from Roorkee University of India paid a visit to HRC along with his wife. In 1986, Mr Kumar attended HRC's international training on small hydropower and now becomes a renowned professor of SHP and RE in the university. Both sides exchanged



opinions on SHP training, scientific research and international cooperation, hoping to strengthen SHP cooperation between India and China.

3. Outbound Missions

In 2014, HRC dispatched 6 delegations of 17 staffs respectively to Turkey, Macedonia, Ethiopia, Kenya, Philippines, Indonesia, etc. for E/M equipment installation, technical consultation, contract negotiation and China's foreign-aid training.

(1) From March 11th to 17th, Mr. Xu Jincui, Deputy Director of HRC, paid a visit to Ethiopia together with Mr. Dong Dafu, GM and Mr. Meng Ke from HRC's affiliated Hangzhou Yatai Hydro Equipment Completing Co., Ltd. for cooperation on renewable energy projects. The delegation visited Vice Prime Ministerial Coordinator and Minister of Communication and Information Technology, Minister of Water,



Irrigation and Energy, Minister of Science and Technology, Chief Executive Officer of Ethiopian Electric Power Corporation etc., and both sides exchanged extensively on renewable energy planning, technical transfer and talent training. The delegation signed an MOU with the Sector Support and Capacity Building Directorate of Ministry of Water, Irrigation and Energy for comprehensive utilization of water resources and the regional power grid planning of a river basin in Ethiopia, and discussed the possibility of establishing African Training Center for Renewable Energy (ATCRE) with a senior policy officer of the Department of Infrastructure & Energy of African Union.

(2) From March 18th to 21st, Deputy Director of HRC, Mr. Xu Jincui, headed for Kenya

with GM Mr. Dong Dafu and Mr. Meng Ke from HRC's affiliated Hangzhou Yatai Hydro Equipment Completing Co., Ltd. for undertaking SHP cooperation. The delegation met with Principal Secretary of Ministry of Energy & Petroleum, and also paid a visit to two former participants of HRC's training workshops respectively from Ministry of Energy & Petroleum and Ministry of Environment, Water and Natural Resources. The delegation was informed of the development of renewable energy in Kenya, including hydropower, solar energy and wind energy.

(3) From October 23rd to November 4th, HRC delegation paid a visit to Turkey and Macedonia for negotiation of the E/M equipment export project. HRC and the Turkish side reached an agreement on E/M equipment supply for two SHP stations in Turkey, and signed a Letter of Intent.

(4) From December 4th to 14th, HRC delegation went to Indonesia for carrying out the UNDP-PGTF program called "Technical Seminar on Small Hydropower among ASEAN Countries". 14 officials from 8 ASEAN member countries, i.e. Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Thailand and Vietnam attended this significant event. The seminar aimed at providing a platform for ASEAN

member countries and China to fully share technologies and experience for the development of small hydropower, solar energy, and wind power, so as to promote in-depth exchange and extensive cooperation among China and ASEAN



member countries in the field of rural electrification and renewable energy. Following the training conducted by HRC in July of this year with the support of ASEAN-China Cooperation Fund (ACCF), this technical seminar is another one funded by the international organization.

4. Information Dissemination

In 2014, HRC edited and published 6 issues of *Small Hydropower* in Chinese and the *SHP News of 2014* in English. Besides, the training alumni database has been updated, and the website released over 100 pieces of news.

III International Scientific and Technological (S & T) Cooperation

1. Inter-governmental S & T Cooperation

(1) Having continually implemented the foreign-aid program on science and technology for developing countries called “China-Pakistan Joint Research Centre for Small Hydropower” which was sponsored by the Ministry of Science and Technology of China, HRC cooperated jointly with the Pakistan side to make research on the hybrid system of hydropower, wind power and solar energy, as to promote the demonstration and popularization of containerized hydropower equipment and the automatic control technology. Currently, the related equipment delivered to Pakistan is being installed on site by technical staffs of HRC.

(2) Having continually implemented the long-term exchange research program on science and technology cooperation between Chinese and Vietnamese governments called “Emergency-supporting Technology for Rural Hydropower against Disasters Caused by Climate Change”, HRC has provided a set of container-type micro hydropower equipment to Vietnam, launching jointly the technical research on “black start”.

(3) The APEC-funded program called “Research and Experience-sharing on Rural Electrification Modes Based on Clean Energy” has got the approval, and the contract also has been signed. At present, the preparation for “Training Workshop on Rural Electrification Based on Clean Energy” is initiated. Meanwhile, on the basis of the training workshop, HRC plans to do research and popularization on rural electrification technology based on clean energy with Indonesia and Vietnam.

(4) Having begun to undertake the project of 948 Plan of MWR called “Introduction and Development of Key Technology on Canal Turbine System”, HRC plans to introduce the technology and equipment of canal turbine system from America, digest and assimilate the advantages of materials, the technique, the flow-passage characteristics, the relationship between flow and output, and other key technologies, and conduct trial-manufacturing in China. So far, HRC has signed the procurement agreement with the foreign side, and will dispatch a 3-person delegation to America for attending technical training and workshop inspection.

(5) Having applied to the Ministry of Foreign Affairs for the China-ASEAN Offshore Cooperation Fund project called “Assessment on Island Energy Resources of ASEAN Countries and Research on Development Modes”, which will take Dioman Island in Malaysia as the major research for the fulfillments, i.e. to conduct the evaluation on water resource and power demand on the island, and compile related plan; to carry out the investigation on ocean energy (tidal energy and ocean current energy etc.), solar energy and wind energy, and to make research on development modes; to put forward

the decentralized power supply mode of island with complementary energy sources, and carry out the simulation and experimental study. This project is to promote the exchange and cooperation in the field of ocean energy and ocean environment between China and ASEAN countries, accelerate the development and utilization of island energy resource in ASEAN countries, thus gathering experience in jointly developing the “Maritime Silk Road” for countries concerned.

In addition, under the framework of governmental cooperation, HRC has carried out all-around cooperation with Ethiopia, Tanzania, South Africa, the Philippines, Bulgaria, Serbia and Venezuela etc. in terms of technical research, equipment manufacturing, and project demonstration and so on.

2. Setting-up of International S & T Cooperation Base

In 2014, HRC accomplished a large amount of work in international training, cooperative research, equipment introduction and promotion, based on which, HRC got the approval from the Department of Science and Technology of Zhejiang Province for awarding HRC as “Zhejiang International S & T Cooperative Base of Renewable Energy and Rural Electrification”.

IV Electromechanical Equipment Supply and Technical Services

In 2014, much progress has been achieved by HRC in export of SHP technology and equipment, technical consultation provided for developing countries, and further exploring of international market, which mainly included the following.

1. Electromechanical Equipment Supply, Installation and Commissioning

(1) In Turkey, HRC has finished the equipment supply, installation and commissioning of automatic control system for SENA hydropower plant, accomplished the E/M equipment supply for the additional unit of GARZAN hydropower plant and for IKILER hydropower project. Now these two projects are under installation and are planned to be put into production in 2015. The E/M equipment supply for SIRVAN hydropower project is now being carried out smoothly.

(2) HRC has supplied the E/M equipment and finished its installation for TOPLEC micro hydropower station in Macedonia, which is also in production now. At the same time, the owner plans to develop other SHP stations recently.



(3) HRC had finished the E/M equipment supply and installation for GIKIRA SHP station in Kenya, which was successfully put into production. The owner has been extremely gratified by the equipment and our technical services. Both sides have been making a joint effort to promote the implementation of other hydropower and renewable energy projects.

(4) HRC has finished the equipment supply, installation and commissioning for GANGELAS hydropower project in Angola, which is just put into operation now.



(5) HRC has finished the equipment supply, installation and commissioning for eight solar pumping systems of AMANTANI Island in Peru. All the pumping systems have been successfully put into operation and gained high appraisalment from the owner. This is the first solar-energy project HRC undertook oversea.

(6) Cooperating with AVIC International, HRC took charge of design, E/M equipment supply, installation, commissioning and training for MAYARI hydropower project in Cuba. Currently, most of the equipment has been supplied, and on-site installation will be started in the second half of 2015. Together with Lishui Engineering Company Ltd. in Hunan Province, HRC won the bid for DIVUNE hydropower project in Papua New Guinea. The EPC contract has been signed between Lishui Engineering Company Ltd. and the owner, and next HRC is going to sign the sub-contract in terms of design, E/M equipment supply, installation, commissioning and other services.

Moreover, HRC has made a breakthrough in Nepalese market. Through the Agent in Nepal, HRC won the bid for TARA KHOLA containerized mini hydropower project. HRC will provide two sets of containerized micro hydropower units and carry out on-site technical services including installation, commissioning, testing and so on. Meanwhile, HRC's subordinate company has signed with WaterGen Power Co., Ltd. in Italy a cooperative agreement, and both sides will take joint efforts in further promoting the containerized micro hydropower unit and other micro hydropower systems in Italy and other designated European countries, which has already got a great progress.

2. Hydropower Project Planning, Design and Consultation

HRC has successfully implemented the planning, design and consultation for numbers of hydropower projects for Vietnam, Papua New Guinea, Kenya, Indonesia, Malaysia, etc., which achieved favorable economic benefits.

So far, HRC has accomplished planning, design, consultation, equipment supply, installation and other technical services for hundreds of small hydropower projects in over 30 countries and regions, with the total contract of about hundred million US dollars. Nearly 50 small hydropower stations have been put into operation with the total installation of over 800MW.

V Work Plan for 2015

1. With the supports of the Department of International Cooperation, Science and Technology of MWR, HRC will apply to the Ministry of Commerce for “National Foreign-aid Training Base for Small Hydropower and Rural Electrification”. Meanwhile, taking its advantage, HRC will undertake 5 foreign-aid training programs, i.e. “2015 Seminar on Rural Electrification for Asian Countries”, “2015 Seminar on Rural Electrification for English-speaking African Countries”, “2015 Seminar on Rural Electrification for Francophone African Countries”, “2015 Ministerial Seminar on Water Resources Management & Planning for Developing Countries”, and “2015 Training Workshop on Small Hydropower Technology for Rwanda”. By highlighting the characteristics of ministerial seminar and the overseas training workshop in Rwanda, HRC will fully demonstrate the abundant experience in foreign-aid program and its excellent capability of training implementation and organization.

In addition, HRC will undertake the technical training for developing countries sponsored by the Ministry of Science and Technology of China, which is called “Training Workshop on Small Hydropower & Rural Electrification Technology for South Asian Countries”. Meanwhile, HRC will continue to apply and undertake the programs sponsored by the PEREZ-GUERRERO Trust Fund and the China-ASEAN Cooperation Fund, thus developing a long-term mechanism for training/seminar on small hydropower and rural electrification in the ASEAN region.

2. HRC will continue to implement the foreign-aid program on science and technology for developing countries called “China-Pakistan Joint Research Centre for Small Hydropower” which is sponsored by the Ministry of Science and Technology of China, and carried out the follow-up application for further cooperation; to complete the long-term exchange research program for inter-governmental cooperation on science and technology between China and Vietnam called “Emergency-supporting

Technology for Rural Hydropower against Disasters Caused by Climate Change”; to implement “Research and Experience-sharing on Rural Electrification Modes Based on Clean Energy” with Vietnam and Indonesia.

In addition, HRC has got the approval for “Zhejiang International Science & Technology Cooperative Base of Renewable Energy and Rural Electrification”, by taking advantage of which, HRC will take on tasks as the international cooperation base and actively follow the strategy of “One Belt And One Road” developed by China, as to enhance the research on the ocean energy and the decentralized development of renewable energy on island, to cooperate with national research institutes of neighboring countries as Malaysia, Indonesia and the Philippines in implementing the “China-ASEAN Offshore Fund Program”, to cooperate with Eastern European countries including Bulgaria, Serbia, Macedonia in conducting SHP demonstration projects, and to cooperate with African countries such as Ethiopia, South African in building up African training center of renewable energy.

3. To actively apply for the Poverty-relief Cooperation Fund for Indo-China Peninsula Countries as well as the China-ASEAN Offshore Development Fund, HRC plans to establish a simulation & demonstration platform of hybrid system of small hydropower, wind power and solar power in the countries with rich resources, to conduct researches on complementary system and storage technology of multi-renewable energies, and to popularize the technology and equipment of containerized micro hydropower, and demonstrate, aiming at rationally promoting the development of small hydropower and effectively stimulating the development of rural electrification in ASEAN countries.

4. HRC will vigorously expand its business on SHP consultation, design and E/M equipment supply by taking the advantages of the platform of foreign-aid training. HRC is going to sustain the Turkish market and carry out the maintenance and spare parts supply for the built hydropower stations, to further develop African market on the basis of the finished Angolan and Kenyan projects. Based on the marketing preparations in Serbia and the demonstrations in Macedonia, HRC will increase its market share in East Europe, and on the basis of training workshop on small hydropower technology conducted for ASEAN countries, HRC will expand its market in Southeast Asia. With the reference of hydropower plants and the establishment of China-Pakistan Joint Research Center for Small Hydropower in Pakistan, as well as the implementation of training workshop on small hydropower & rural electrification technology for south Asian countries, the markets in Pakistan, Nepal and other South Asia countries shall be explored.

5. To fully take the advantage of HRC as the “Family of Small Hydropower in the World”, the intensive and extensive exchange and cooperation shall be strengthened and promoted between HRC and other governmental departments or counterparts in SHP field worldwide. Meanwhile, the wide links with World Bank, Asian Development Bank and other international financing organizations shall be further enhanced, thus expanding the scope of business and extending international influence of HRC itself.

6. Much attention shall be given to the full play of HRC’s leading role in formulating and revising national and industrial standards, so as to popularize the standards related to project design, consultation and civil works construction, and translate the standards concerned, and finally popularize these standards abroad.

7. The foreign affairs management shall be improved, so as to streamline and standardize the work concerning the official outbound visits and the reception of foreign guests.

8. Measures shall be taken to improve the editing, translation and promotion of the two magazines, *SMALL HYDRO POWER* in Chinese and *SHP NEWS* in English, as well as HRC’s website.

Appendix I

Foreign Guests Visiting HRC in 2014

No.	Date	Delegate(s)/Organization/Country	Objective & Achievements
1	10-11 April	1 delegate from Benin, Dr.Grodfrey Nzamujo, Director of Songhai Center	Establishing a long-term cooperation with HRC for development of rural renewable energies, and popularize the related technology and electromechanical equipment in Benin and other West African countries
2	25 April-1 May	2 delegates from Nepal, Mr. Raju Rimal, Managing Director of IDC, and Mr. Sudip Paudel, Executive Director of BDA	Exchanging proposals with HRC regarding project design, E/M equipment supply, project financing and technical training and signing an

HRC's Annual Report on Foreign Affairs
in 2014 and Work Plan for 2015

			exclusive agency agreement with HRC
3	1-15 June	7 delegates from Energoimport of Cuba	Discussing the technical plan of Mayari SHP project in Cuba, and visiting the equipment manufacturer
4	11-13 June	4 delegates from WaterGen Power S.R.L of Italy	Visiting SHP manufacturers and establishing a long-term cooperation
5	23-28 June	2 delegates from DCEME, Nepal, including GM	Establishing cooperation with HRC and Linhai Machinery Works Co.,Ltd of Zhejiang
6	19-30 June	1 delegate from Union Electric Corporation Pvt. Limited of Pakistan, Mr. Sajid	Negotiating project technical plan
7	17-20 July	2 delegates from Power Technology Solutions Co.,Ltd. of Kenya	Consulting technical issues of Gikira SHP project in Kenya.
8	29 Aug.- 8 Sept.	1 delegate from FERNAS, Turkey, Mr. Taskin	Workshop inspection for Garzan and Sirvan hydropower projects
9	18-30 Sept.	2 delegates from ISKELER, Turkey	Discussing on the follow-up work for Ikiler hydropower project and visiting the manufacturer
10	5 Nov.	6 delegates from Uganda, including Minister of Environment, Minister of Trade, Industry and Cooperation, and Minister of Financial Investment and Economic Development.	Carrying out bilateral exchanges as to proceed mutual cooperation
11	9&14, Nov.	2 delegates from Mexico Tratamiento de Agua Hydrotech	Exchanging opinions and seeking for cooperation
12	28 Nov.	2 delegates from Roorkee University of India	Exchanging on SHP training, scientific research and international cooperation, and hoping to strengthen SHP cooperation between India and China

Appendix II

HRC's Outbound Missions in 2014

No.	Date	Delegate(s)	Country	Objective & Achievements
1	13-26 March	3	Turkey	Negotiations on cooperation, and signing the LOI on two hydropower projects, with the working scope specified

HRC's Annual Report on Foreign Affairs
in 2014 and Work Plan for 2015

2	6 April-4 July	2	Macedonia	Fulfilling installation and commissioning for Toplec micro hydropower project in Macedonia
3	23 Oct.-4 Nov.	2	Turkey & Macedonia	Negotiations on the electro-mechanical equipment supply for the projects in Turkey and Macedonia
4	4-14Dec.	6	Indonesia	Undertaking the UNDP-PGTF program called “Technical Seminar on Small Hydropower among ASEAN Countries” held in Indonesia, and signing the “Cooperative Initiative on Small Hydropower and Other Renewable Energies between China and ASEAN States”; Visiting PLN PUSHARLIS, a center for electricity maintenance under the leadership of the State Electricity Company of Indonesia, and signing an MOU