

**NATIONAL ELECTRONICS PRODUCT STEWARDSHIP INITIATIVE  
DRAFT MEETING NOTES OF THE PLENARY GROUP**

March 11-12, 2002

Washington, DC

The fourth formal meeting of the National Electronics Product Stewardship Stakeholder Dialogue was held March 11-12, 2002, in Washington, DC. A copy of the agenda and a list of the meeting participants and observers are attached.

**March 11**

**WELCOMING REMARKS**

Gary Davis (the meeting facilitator) and Elizabeth Cotsworth (the meeting host) welcomed the stakeholders to Washington. Cotsworth, director of the U.S. Environmental Protection Agency's Office of Solid Waste, told the stakeholders that EPA has high hopes and expectations for the NEPSI process. She said that the NEPSI dialogue is an excellent model for environmental problem solving.

Cotsworth explained that, with regards to solving the problems associated with waste electronics, EPA prefers a collaborative approach to heavy-handed federal intervention. She expressed faith in the NEPSI stakeholders, and she thanked them for the time and energy they have invested in the NEPSI process. She also acknowledged that there are other groups that should be involved in the NEPSI dialogue, and she pledged EPA's help in facilitating the entry of key stakeholders into the dialogue.

Cotsworth went on to say that product stewardship has become increasingly important to EPA. The agency's new Assistant Administrator for Solid Waste and Emergency Response, in particular, considers product stewardship a cornerstone of EPA's strategy for the future. Cotsworth listed some of the priorities in the current strategy: waste minimization, recycling, energy support, and retailing initiative. She said that electronics are a current focus of EPA's product stewardship efforts, but that the agency has interest in targeting other product types in the future. She also mentioned that EPA was on the verge of promulgating its new rule on the management of CRTs. She hoped that the rule would appear in the Federal Register in a matter of weeks.

Cotsworth concluded her remarks by noting the recent media attention given to the export of waste electronics to third-world countries. She said that while EPA recognizes that there are good reasons for exporting used electronics, there is no denying that undesirable practices are occurring. She suggested that the recent attention to this issue provided an opportunity for constructive dialogue, and she highlighted the need for a joint approach and shared responsibility. She said that EPA wants to support and facilitate the process, and she said that EPA is working with the Organisation for Economic Co-operation and Development (OECD) to develop guidelines on acceptable practices for environmentally sound management of electronics waste.

## **APPROVAL OF AGENDA**

Davis asked the stakeholders if there were any comments or objections about the “consent” agenda that had been distributed before the meeting. The consent agenda listed two items for approval:

- The meeting notes from the previous NEPSI stakeholder meeting (January 24<sup>th</sup> and 25<sup>th</sup> in Tampa, Florida).
- The recommended location and timing for the next meeting: June 24<sup>th</sup> and 25<sup>th</sup> in St. Paul, Minnesota.

The Stakeholder Group approved both items without objection.

Davis passed out and quickly went over the agenda for the current meeting (see attached). He also reviewed the major milestones of the NEPSI process to date. He said that the first stakeholder meeting, in San Francisco, had resulted in a list of desired attributes for a nationwide electronics stewardship system. During the second meeting, in Boston, the stakeholders had broken the system into its main elements (a financing system, an infrastructure, and a regulatory environment) and had begun working in subgroups to define each of these elements. Finally, during January’s meeting in Tampa, the stakeholders had tried to achieve consensus on a financing mechanism to carry forward in the NEPSI process.

Davis said that, while no agreement was reached in Tampa, the stakeholders had a good dialogue and left with a better understanding of the major concerns of each stakeholder group. Since the Tampa meeting, the subgroups and sub-subgroups had been working hard, holding conference calls and developing documents. He said that one of the main goals for this meeting was to reach agreement on a financing mechanism.

## **DISCUSSION OF STRAW PROPOSAL**

Davis said that the financing discussions in Tampa had led to questions about what steps needed to be taken between now and September to develop a viable financing system. To address these questions, a “straw man” working group had been assembled, mostly from volunteers from the Financing Subgroup. The working group had held three conference calls and had circulated and commented on draft “straw proposals.” Davis said that the working group was now ready to present to the larger Stakeholder Group a draft proposal that had emerged out of the last conference call.

Two members of the working group—Maureen Hickman of Minnesota and Frank Marella of Sharp—handed out copies of the draft proposal and explained the process used to develop it. They said that the working group had tried to look at the big picture to determine what steps needed to be taken to get from the current stage in the NEPSI process to the point of system implementation. The working group had developed a list of

“commonalities” (points of agreement) and a list of issues that need to be resolved during the NEPSI process in order to create a financing system.

Hickman and Marella read through the five points of agreement, as presented in the straw proposal. Gary Davis stressed that these points represented a consensus that was reached within the straw working group during their March 8<sup>th</sup> conference call. He said that some members of the working group had since submitted comments on the straw proposal, and these had yet to be addressed.

Hickman and Marella invited comments from the Stakeholder Group about the straw proposal. Several stakeholders applauded the working group for their efforts and said that they were pleased with the concepts presented in the proposal. Others said that the proposal set an excellent foundation for future progress.

One stakeholder expressed concern about point #2 in the proposal, which states that existing systems will need to be used to fund the collection, reuse, and recycling of electronic products until the front-end financed system mentioned in point #1 takes effect. The stakeholder said he was worried that the proposal allowed no room for flexibility if it was discovered (during the ramp-up period for a front-end fee) that the existing EOL-fee system works satisfactorily.

Marella replied that, as he understood it, the option of using EOL fees was still on the table. Another stakeholder stressed that the straw proposal was not meant to represent a final NEPSI agreement, but was instead meant to identify how the Stakeholder Group wants to spend its time between now and September.

A spokesperson for the industry stakeholders said that industry supports spending the next several months developing a front-end financed system. She said that industry stakeholders have already begun working to resolve issues that they have with a front-end system.

A member of the government stakeholder group applauded industry’s stance and said that the government group is at the table to work on a front-end system. He mentioned two questions that had arisen within the government group with regards to the straw proposal: 1) Are there alternatives to the federal legislation mentioned in point #4 of the proposal? (For example, is state legislation an alternative?) 2) Is it possible to include a statement on time frame within the straw proposal? The government stakeholders would prefer to see specific dates set for a NEPSI agreement and for implementation. Gary Davis responded that the straw working group was proposing that the Stakeholder Group try to agree on a statement about the time frame.

A representative of the environmental stakeholders then handed out a statement, saying that he could not support the straw proposal as written. The representative explained that the environmental groups had come to the NEPSI process at its outset with a specific platform. He said that the straw proposal, as presented by the working group, doesn’t address any of the five major principles articulated in the platform. He said that, in his

statement, he was proposing language that the environmental stakeholders could support, and he would like to see that language added to the straw proposal.

After reviewing the statement, Davis commented that the five main points in the environmental stakeholder's proposed language all address the question of how to structure a finance system, not structure the whole system of collection, reuse, and recycling. Davis pointed out that the goal of the straw proposal was to address the bigger picture of how to get from the current stage in the NEPSI process to the point of system implementation. He asked whether the environmental stakeholders could support the straw proposal if there was language in it acknowledging that their concerns need to be addressed. Davis encouraged all the stakeholders to look at the straw proposal as a first step, and to remember that there would be opportunities for addressing detailed concerns.

Another stakeholder said that it was important to pause for a moment and acknowledge that industry and government stakeholders are agreeing to pursue a front-end financed system. She said that it would be a shame to see that agreement lost because of concerns over specific details.

Several other stakeholders commented that they didn't think the straw proposal was inconsistent with any of the principles being proposed by the environmental groups. One participant pointed out that the straw proposal explicitly acknowledges that most of the work is still to be done and that most details still need to be hammered out. Another person said that all stakeholders have to trust that their concerns will be addressed as part of the process.

Davis asked the environmental stakeholders if they could support the three main agreements contained within the straw proposal: 1) that NEPSI should work toward developing a front-end financed system; 2) that legislation is needed to address concerns about system implementation; and 3) that an action plan is needed, capturing agreements on how to move forward—both in the interim period before a front-end system is implemented and in the period following implementation.

The spokesman for the environmental stakeholders replied that he was specifically concerned about the language in the straw proposal that talks about optimizing end-of-life financing in the interim period before a front-end system is implemented.

Davis asked if there was general support within the Stakeholder Group for the three agreements he had just named, and most stakeholders indicated their support. However, a few stakeholders did raise additional questions about the agreements, as follows:

- One stakeholder asked why legislation was required. The response was that legislation is needed to ensure that the NEPSI system applies to every manufacturer and every product within the NEPSI scope. The elements of that legislation have yet to be figured out.

- An industry stakeholder said that his company does not support the idea of creating a third-party organization (TPO) to manage the front-end financed system. It was suggested by some in the group that the NEPSI system should be flexible enough to allow individual companies to recover their own products, outside the TPO.
- A participant proposed adding a fourth point of agreement: that a timeframe is needed, setting specific dates for a NEPSI agreement and for implementation. Davis suggested that the timeframe could be defined in the action plan document.
- One stakeholder disagreed with the assumption that NEPSI would not be able to implement a front-end fee system immediately. She said that individual companies could set up their own front-end fee system without delay.
- It was suggested that the straw proposal should clarify that NEPSI has agreed to work on “front-end financing” and not a “front-end fee,” since no agreement on a fee has been reached. The Stakeholder Group supported this suggestion.

## **EDITING THE STRAW PROPOSAL**

After the Stakeholder Group returned from a break, Davis suggested that they talk through the language in the straw proposal and offer specific comments. He said that the Finance Subgroup could then address the comments during the breakout session, wordsmith the proposal, and bring a revised version back to the Stakeholder Group the next morning.

Suggestions for specific edits were made and the following comments were offered:

- The proposal should specify that NEPSI is agreeing to work *toward* a front-end financed system, not agreeing *on* a front-end financed system.
- The proposal should specify what NEPSI is trying to accomplish. In other words, the proposal should mention the original objectives and the desired attributes that were agreed upon earlier in the NEPSI process.
- NEPSI shouldn’t spend much energy optimizing an end-of-life financing system. The straw proposal should focus on the future, which is front-end financing.
- The Finance Subgroup should discuss the specific purposes of the legislation, since there seem to be differing views on this point.

The editing task was then delegated to the Finance Subgroup.

## LIST OF MAJOR ISSUES TO BE RESOLVED

Gary Davis passed out an “issues list,” created by the straw working group, which identified 13 major issues that need to be resolved during the NEPSI process in order to develop a front-end financed system. Davis suggested that the Stakeholder Group discuss the list to identify priority issues or additional issues that should be added. The following comments were offered:

- Regarding issue #4 (which addresses how big a front-end fee would have to be to cover collection, transportation, and recycling costs): one stakeholder suggested that since the level of the fee would depend on how much material is collected, this issue should include establishment of reuse/recycling targets.
- Another stakeholder suggested that issue #7, which addresses the standards and systems needed to ensure environmentally sound processing, should be linked to issue #4, which addresses baseline service under a NEPSI system. In other words, these standards should be incorporated into the base level of service.
- It was proposed that a new issue be added to the list regarding cost-internalization and whether the front-end fee should be visible or invisible.
- A stakeholder identified the export of hazardous waste as another issue for the list. He also suggested that NEPSI should agree to adopt the Basel Convention. A spokesperson from industry supported the idea of adding the export issue to the list, but also suggested that the stakeholders should agree that this issue might not be resolved during the NEPSI time frame.
- Another stakeholder suggested an additional issue be added to the list—data collection/reporting.
- It was suggested that the action plan that comes out of the NEPSI dialogue include the next steps for implementing legislation.
- It was suggested that reuse be added to the study of issue #4.
- A stakeholder proposed adding language in issues #6 and #8 about the need for incentives for participation by producers, consumers, and all other parties, as well as incentives for “greening” designs.

Davis asked if the Stakeholder Group agreed that the listed issues need to be addressed, and there was general agreement.

## **Q&A WITH PETER BORNAND, SWICO**

After the Stakeholder Group broke for lunch, Peter Bornand of the Swiss Association for Information, Communication and Organisation Technology (SWICO) gave a brief presentation, followed by a question-and-answer session.

Bornand described the major milestones in the development of the SWICO electronics-recycling program. Prior to 1990, he said, some individual producers ran their own takeback programs in Switzerland. In 1991, a national program for recycling refrigerators was started, and this led to consumers demanding similar takeback programs for all electronic products. Electronics producers, as a result, decided to form a single system, and in 1994 the SWICO recycling guarantee was created, ensuring that consumers have the opportunity to return equipment for free. This guarantee applied only to IT and telephone equipment.

In 1998, an ordinance was passed on the return, takeback, and disposal of electrical and electronic appliances. The ordinance (called the ORDEA) assigned responsibilities for the environmentally sound management of E waste, requiring (among other things) that consumers return their end-of-life equipment and that manufacturers and importers take back the equipment for recycling. Over the next four years the SWICO program was expanded four times to include cell phones (1999), graphics equipment (2000), telephone equipment (2001), and consumer electronics (2002).

Bornand said that the SWICO program is based on the principle of shared responsibility. The responsibilities under the program are broken down as follows:

- Producers hold overall responsibility for the system and are responsible for organizing daily operations, educating dealers and consumers about their roles in the program, and financing the program through an advance recovery fee.
- End users are responsible for returning old equipment free of charge and reusing equipment where possible.
- Suppliers are responsible for taking back old equipment free of charge.
- Recyclers' responsibilities include disassembling and recycling equipment in a manner consistent with environmental regulations and improving the rate of recovery.
- Logistics contractors/collection agents have the responsibility of managing collection points and transporting material from the suppliers/collection points to the recyclers.

Bornand passed out copies of a flyer provided to end users under the SWICO program. The flyer describes the end user's responsibilities, what types of equipment can be

returned (and where), and the advance fees charged to consumers. Bornand then opened the floor for questions. The following is a summary of the points made:

- The SWICO governing agency issues licenses to recyclers that wish to participate. There are 20 companies who are capable of participating; however, only 15 have the SWICO license.
- Twenty percent of the fee is for transportation and collection (including collection centers); 70 percent covers recycling costs; 5 percent covers administration; and 5 percent covers control (technical aspects of program). There are 250 collection centers for 7 million people. The sources of the material collected are producers (41 percent), suppliers (45 percent), and collection centers (14 percent).
- There was no “ramp up” phase for the program. A start date was chosen for the launch of the program. On that date, producers began charging the advance fee, and end users were immediately able to return end-of-life equipment free of charge.
- At first only 30 companies participated; now there are 200.
- There was never a drop in sales of electronic equipment following the launch of the program and the inception of the ARF. Even after the launch of the takeback program for consumer electronics this past January, there was no drop in sales.
- The Swiss government sets the standards in the ordinance for sound recycling. Guidance documents for recycling are developed with input from the recyclers themselves. The program has built-in flexibility so that it can change with changing conditions. For example, the guidance for recyclers now specifies that CRT glass can be reused, where once this wasn't the case.
- The SWICO organization has two employees working half time and one working full time.
- There were no cash-flow problems when the program began and a lot of historic waste was being returned. From the outset, the program has paid to recycle old equipment with the fees taken in from the sale of new equipment. SWICO has been able to lower the fees charged to consumers at the point of sale twice. However, this reduction in fees is mostly an indication that rates were set too high at the start.
- Recyclers are forbidden to sell parts or whole units. The idea is that reuse should be done by producers and retailers, who reuse 5 to 10 percent of the collected equipment.
- The advanced fee is charged on equipment sold over the Internet. There hasn't been a problem to date.

- The advance fee is collected by dealers and importers, who then transfer the fee to SWICO to pay for recycling.
- The Swiss consider recycling and DfE to be two separate issues. The recyclers in the SWICO program have effective techniques for disassembling and recycling both old and new equipment. Plastics are currently incinerated. The system does not have specific incentives for DfE.

## REPORT FROM COSTS WORKING GROUP

Raoul Clarke of Florida and Maureen Hickman of Minnesota delivered a brief report from the Costs Working Group. This group was formed following the Tampa NEPSI meeting and tasked with researching collection, transportation, and processing costs and estimating materials flows.

Clarke and Hickman said that, given the short time between the Tampa and Washington meetings, the working group had set a goal of coming up with ballpark figures on the costs of collection, transportation, and processing. They found several data sources, including the NERC survey results and reports from Minnesota, Massachusetts, California, and Maine. Waste Management had also provided useful data.

Based on the data from these sources, the working group came up with the following estimated costs:

Phase	Data Sources	Estimated Costs
Collection	MN, NERC	13 to 17 cents/lb.
Transport <sup>1</sup>	Waste Management, MN	7 cents/lb.
Transport and processing	MN, NERC, MA, ME	MN: 12 cents/lb. NERC: 17 cents/lb. MA: 16 cents/lb. ME: 15 to 21 cents/lb.

<sup>1</sup>Most sources combine the cost data for the transport and processing phases.

Clarke and Hickman said that, based on these figures, the working group was estimating that the total cost of collection, transport, and processing would be between 30 and 35 cents per pound.

## DEMONSTRATION OF THE PAZ MODELING TOOL

Walter Alcorn and Corey Lofdahl demonstrated a modeling tool that their company, SAIC, is developing for the Polymer Alliance Zone (PAZ). This software tool will allow users to run simulations showing how product and money flow through a system. Some members of the NEPSI Stakeholder Group had expressed interest in using the tool to model the potential costs of a nationwide electronics stewardship system.

Alcorn explained that they had designed the tool to help PAZ conduct simulations as part of their business planning efforts for regional recycling facilities. They said that the tool estimates the revenues and costs associated with specific operations. It allows the user to look at the flows of physical things (e.g., products, materials); once the flows are defined, the user can run an economic analysis to figure out what subsidy would be needed. By examining different scenarios and changes in scenarios (i.e., salaries, rent, equipment costs, etc.), the tool also allows the user to pinpoint the most efficient way of conducting various recycling operations (i.e., grinding, shredding, etc.).

Raoul Clarke said that the Stakeholder Group needed to provide the Costs Working Group with guidance on what to do next to refine the cost information they have to date. Should the working group gather more data on collection, transportation, and processing costs? Was there support for using the PAZ modeling tool to try to estimate costs?

Gary Davis asked the stakeholders if they still saw value in the following objectives: 1) determining the potential costs of the various elements of a NEPSI system, and 2) determining the potential level of an advance recovery fee.

One stakeholder responded that it would be helpful to identify the key drivers of cost. Another stakeholder said the data already gathered by the Costs Working Group provide sufficient information on cost, and it is likely the per-pound costs would drop as the volume of collected equipment increases. She said that she sees no need for more detailed data.

Davis observed that the Stakeholder Group might be able to answer questions about costs without the help of the modeling tool. But he also said that the tool might reveal information that NEPSI would need to know farther down the road.

Chuck Boelkins, a representative of the Georgia Department of Natural Resources who was attending the meeting as an observer, asked if he could briefly address the group. Boelkins said that his agency had hired an academic to develop a model similar to the PAZ tool. He anticipated that the GA DNR model would be useful to other Region IV states and possibly to states nationwide. He suggested that the two models could be used to validate one another if their results are congruent.

## **INFRASTRUCTURE SUBGROUP REPORT ON BASE SERVICE STANDARDS**

Wayne Rifer of WEPSI passed out a working document that had been developed by the Infrastructure Subgroup, entitled “Concept Proposal for Base Service Standards” (see attached). Rifer explained that, during the Tampa meetings, the Infrastructure Subgroup had been tasked with defining the minimum level of service that would be needed under a NEPSI system to achieve high collection rates. The subgroup developed the base service standards document as an attempt to define the minimum level of service that should be implemented nationwide and paid for under the NEPSI system.

Rifer briefly described the process used to develop the document. He said that Sego Jackson of Snohomish County, Washington, had written a first draft of the document and then turned it over to the subgroup for discussion. Over the course of several conference calls, the subgroup revised the document to the point where it now represented the general consensus of the subgroup members (the text of the document identifies those issues on which consensus was not achieved).

Rifer reviewed the contents of the document (see attached). He stressed that the document was not intended to prescribe specific services for communities; instead, it was designed to define a level of service. He said that a key assumption contained in the document is that the base level of service may be adjusted over time, based on system performance or on any built-in incentives or disincentives that might be created as a result of the financing system.

Sego Jackson added that the base service standards document is meant to simplify things. It does this partly by specifying that a single price-per-pound payment be established for each operation (e.g., collection, reuse, recycling, remanufacturing).

Rifer invited comments from the Stakeholder Group. He said that the Infrastructure Subgroup had gone as far as they could with the document, and they were now hoping to receive guidance for further revisions.

One stakeholder said she was concerned that, by establishing a single price-per-pound payment for each operation, NEPSI would prevent the competitive powers of the free market from driving down costs. Rifer replied that the per-pound payments could be adjusted down over time.

Another stakeholder asked how the base service standards address the issue of overseas export. What prevents a recycler from shipping equipment overseas, where the costs of processing are cheaper? Rifer said that performance standards could be developed to address that issue. Another member of the Infrastructure Subgroup added that, in some of the subgroup's discussions, they had considered the idea of prohibiting all overseas exports.

Rifer was asked if the price-per-pound payment for each operation would be uniform nationwide. It was pointed out that the costs of doing business are very different in areas such as New York City and Maine. Rifer said that the third-party organization would need to address this. He said that the Infrastructure Subgroup had not attempted to define a price for each level of service.

## **REPORT FROM THE REGULATORY SUBGROUP ON THE EXPORT ISSUE**

The Regulatory Subgroup had invited EPA's Bob Tonetti to give a presentation on work being done on the export issue.

Tonetti started by reviewing work that has been conducted internationally to address the overseas export of hazardous wastes. He said that, for the past two and a half years, the Organisation for Economic Co-operation and Development has been working on a program to ensure the environmentally sound management of all recyclable wastes. The OECD is made up of 30 countries, and has been working on waste issues for over 25 years. Tonetti said that the OECD's work on these issues provided a foundation for the Basel Convention, a global agreement (ratified by 135 member countries and the European Union) for addressing the generation, disposal, and uncontrolled "transboundary" movement of hazardous wastes.

Tonetti said that the two main international systems that control international shipment of hazardous waste are the Basel Convention Agreement and the OECD Agreement on the Control of Transboundary Movements of Wastes. Both agreements use "notice and consent" systems wherein exporters of waste must provide notification to, and receive the consent of, authorities in the countries concerned. Tonetti said that, of the two systems, the OECD system is viewed as being more friendly to trade and more streamlined.

Tonetti explained that the purpose of the notice and consent systems is to ensure environmentally sound management of hazardous wastes. However, the systems can't ensure that environmentally sound practices are used at recovery facilities in the destination countries. For this reason, the OECD decided that more assurances were needed.

Tonetti described the OECD's new Environmentally Sound Management (ESM) Program. He said the goals of the program are to ensure the environmentally sound recycling of all wastes (hazardous and other) and to level the playing field in terms of the controls required.

He said that the main focus of the ESM Program is on the recycling facility itself. The program also focuses on destination countries where the recycling occurs, and not on countries that collect and export waste. The program will apply only to OECD member countries, and it is not yet clear whether it will be binding. An idea under consideration at the OECD is that third-party organizations may be used to audit implementation of the program.

Tonetti said that the EMS Program has three components that apply to recycling facilities. First, recycling facilities will need certification under an environmental management system (e.g., ISO 14000). Second, facility performance will be measured according to nine core performance standards. Each facility must:

1. Operate under a regulatory infrastructure.
2. Be authorized for operation in host countries.
3. Have an environmental management system.
4. Use occupational safety and health measures.
5. Provide personnel training.
6. Meet record-keeping and monitoring standards.

7. Develop emergency plans.
8. Develop closure and post-closure plans, and have insurance.
9. Exchange information upstream and downstream to minimize waste and maximize recycling.

Finally, the OECD is developing wastestream-specific guidelines for facility operation (e.g., guidelines on the environmentally sound management of used and scrap personal computers).

Tonetti concluded his presentation by inviting questions and comments from the Stakeholder Group.

One stakeholder asked whether EPA is doing other work on the export issue. Tonetti replied that there has been on-again/off-again talk about ratifying the Basel Convention. He also said EPA has been examining how they might conduct an ESM assessment.

Another stakeholder called attention to a new report entitled “Exporting Harm,” issued by the Silicon Valley Toxics Coalition and the Basel Action Network. The report calls for the United States to ratify the Basel Convention and for the development of an effective recycling system in the United States so that the country doesn’t have to rely on the export of electronics waste. This stakeholder commented that the OECD’s ESM Program would have no applicability to the United States, since it focuses on practices in destination countries.

A stakeholder representing a state government said that the export issue is significant, and that her state would not sign a NEPSI agreement that doesn’t address the issue of where collected wastes are shipped for recycling.

Another observer pointed out that much of the overseas movement of wastes occurs within companies. He said that the term “export” might not apply to this intra-company movement of wastes, so care should be taken in defining the export problem.

Several stakeholders commented that the Stakeholder Group needs to figure out a way to guarantee that environmentally sound recycling occurs under NEPSI. After further discussion, it was decided that the Regulatory Subgroup would be tasked with addressing this issue.

## **UPDATE ON ELECTRONICS PRODUCT STEWARDSHIP ACTIVITIES IN CANADA**

Maria Kelleher of Enviro RIS, a consultant to the Information Technology Association of Canada (ITAC), updated the Stakeholder Group on efforts within Canada to develop an extended producer responsibility program for used electronics. During the November NEPSI meeting in Boston, a representative of Environment Canada had told the Stakeholder Group that the federal and provincial governments were negotiating with ITAC, the major trade association for information technology manufacturers, to develop

an extended producer responsibility program. ITAC had publicly committed to developing a roadmap to establish a full national industry producer responsibility organization (PRO).

Kelleher said that efforts are currently being made to estimate the potential costs of an electronics stewardship program. Cost information is being gathered on a provincial level. Kelleher said that two of the provinces—Manitoba and Ontario—already have electronics stewardship legislation on the table. Manitoba’s legislation is an “industry pays all” model that could bar manufacturers of consumer electronics from selling products in the province unless they have a plan to properly dispose of their products after they are used. On the federal level, research is currently being conducted on the costs of a shared responsibility model.

Kelleher said that the financing model currently under consideration involves a mandatory visible fee paid at the point of sale. The fee would be set to reflect the actual costs of processing and recycling. The fee would also cover orphan and historic products. Kelleher said that a proposal will be presented to the board of the ITAC in April.

Regarding the export issue, she said that Canada is likely to adopt the principle that recovered electronic products should not be exported to countries whose health and safety standards are less protective than those in Canada.

## **March 12**

The stakeholders spent roughly two hours during the afternoon of March 11<sup>th</sup> meeting in subgroups. On the morning of March 12<sup>th</sup>, the Stakeholder Group reconvened in plenary session to hear reports from each subgroup.

### **REPORT FROM FINANCE SUBGROUP**

Raoul Clarke summarized the outcomes from the Finance Subgroup’s discussions on Monday afternoon. He reported that the subgroup examined the recommended changes and concerns of the full Stakeholder Group regarding the draft “straw proposal,” presented by Frank Marella and Maureen Hickman. Based on this feedback and subsequent subgroup discussions, the straw proposal was revised.

He explained that the group made revisions and also reorganized the five major points in the straw proposal. The points were divided into “points of agreement” and “interim steps.” The interim steps are items that the group agreed would assist in the transition period before a front-end financed system was fully functional. These interim activities are not meant to consume a major portion of the NEPSI stakeholders’ time and energy.

With one minor editorial change, the full Stakeholder Group approved the revised proposal as a document that represents agreement on future work. (See attached

document entitled “Agreement for Future Work on NEPSI Finance System,” dated 3/12/02.)

Clarke continued with the report back on the Finance Subgroup’s activities. He described the work strategy that the subgroup developed to address the list of issues that were assigned to them. The issues were prioritized and the group set up a series of conference calls to begin addressing the issues in the order of priority. The issues are:

- How to structure the future front-end financed system (Issue #11)—How would a fee system be structured? Who would pay, and when? Should the fee be invisible or visible?
- Shared responsibility (Issue #9) —What does each stakeholder group contribute to the system?
- Costs (Issue #4) —Use information from the Costs Working Group to help sort out the following issues:
  - The differences in recycling costs when material is processed using environmentally sound practices as opposed to exporting to recyclers using unsafe practices.
  - Try to estimate the potential range of a front-end fee by collecting sales, collection, and recycling cost data; continue to refine cost data with the PAZ model, if appropriate.
  - Explore whether fees can be structured to encourage green design.
  - Explore whether it makes sense to be flexible on how fees are structured by establishing a legislative framework that prohibits undesirable system attributes and then letting the TPO or other governing body develop the fee structure within that framework.
- Retailers (Issue #10) —Establish a mini-group to work on getting more retailers involved in the NEPSI process. Clare Lindsay, Raoul Clarke, and Scott Cassel will begin working on this right away. They will seek to enlist a representative from Computing Technology Industry Association as well.

## **REPORT FROM INFRASTRUCTURE SUBGROUP**

Wayne Rifer described the Infrastructure Subgroup’s strategy for continued work. He said that the subgroup members would revise the document on the base level of service and present the document at the June meeting, at which time they would seek approval from the full Stakeholder Group. He expressed his desire for additional feedback from the full Stakeholder Group as the subgroup finalizes this document.

Rifer said that, over the coming months, the subgroup would also complete the process of developing a matrix tool for analyzing models and their key features (this model is being developed by Reggie Caudill, of NJIT). He also noted that, at the June meeting in Minnesota, the Infrastructure Subgroup will recommend a new item to add to the current list of desired system attributes.

The Infrastructure Subgroup decided to form two mini-groups to address the following two issues:

- Structure of a TPO—If a TPO were to govern a front-end financed system, how might it be structured and how might it implement the system? The goal for this mini-group would be to bring a recommendation to the full stakeholder meeting in June.
- Environmentally sound management (ESM)—Understanding that the Regulatory Subgroup will be working on developing a standard to ensure ESM for recycling, the mini-group will focus on how such a standard might be integrated into the collection, transportation, and recycling system.

One stakeholder suggested that the base level of service recommended by the group be assessed against the NEPSI attribute of shared responsibility. Another requested that in studying the issue of the structure of the TPO, the mini-group examine how the system could allow manufacturers the option of recycling their own equipment outside the system. Another stakeholder reminded the group to consider rural areas when studying the base level of service.

There was some discussion clarifying the fact that the Infrastructure Subgroup's work on the base level of service is focused on the tasks needed after the funds and a governing agency are established. The Stakeholder Group agreed that it is too early in the process to examine, in too much detail, any one specific governing structure, such as a TPO. It was also agreed that the Infrastructure Subgroup should address the logistics of collection, transportation, and recycling by listing the tasks that have to be dealt with to implement any system, regardless of the structure of the governing agency or the financing system. This list of tasks would include how an ESM standard might be integrated into the system. In addition, the Infrastructure Subgroup agreed to complete their revisions of the base level of service document as soon as possible, so that the Finance Subgroup can have this information to work with prior to the June meeting in Minnesota.

The suggestion was made and the group agreed that all subgroup conference call notes would be posted more regularly in the password-protected section of the NEPSI Web site. In this manner, all the stakeholders can stay abreast of how issues are being analyzed and resolved in the subgroup discussions.

There was some discussion about who should address the issue of enhancing existing systems during the interim period before the front-end financed system is fully functioning. Davis asked the group whether a new group should be formed or whether the

Infrastructure Subgroup should add this to their list of tasks. The group agreed that it would be appropriate for the Infrastructure Subgroup to address this issue.

## **REPORT FROM REGULATORY SUBGROUP**

Gordon Hui reported on the Regulatory Subgroup's discussion and started by announcing that Peggy Harris would be the new subgroup leader, since George Lundberg is no longer able to hold the position. Hui explained that the subgroup focused their attention on how to ensure that recycling associated with a NEPSI system be conducted in an environmentally safe manner. They came up with a two-step approach:

### Step 1 – Publicize Information on Good Actors

- Have OEMs, recyclers, smelters, and the IAER identify end markets.
- US Government/EPA communicates with the countries and states identified as locations for end markets and asks if the specific facilities are authorized to receive and process electronic waste.
- List authorized facilities on a Web site that state and local governments can access.

### Step 2 – Performance Standards

- Develop a standard by first benchmarking existing models, such as OECD, IAER, and the Business Recycling Coalition.
- Incorporate information from OEM Due Diligence Assessments, which examine emissions, permits, notice of permit violations, training programs, safety requirements, and shipping.

Stakeholders voiced some concerns regarding the two-step approach:

- Authorization from a host government may not really provide assurance that facilities are practicing ESM.
- Recyclers in the United States may be reluctant to divulge their end markets for competitive reasons. This information is considered proprietary and companies may not want it to be publicized.
- A letter of authorization may not be adequate assurance. May need some type of permitting or certification process.

Ted Smith noted that his organization (SVTC) was going to be asking recyclers to sign a pledge stating that they will not export hazardous waste, use prison labor, etc. He suggested using a similar type of mechanism.

Stakeholders also offered the following suggestions:

- Controls to ensure ESM could be put in place slowly. For example, start with a pledge and then implement performance standards.
- NEPSI could require a pre-certification survey to be completed and submitted along with price bids for recycling contracts. This survey could address due-diligence issues.

It was agreed that a method for ensuring ESM needs further investigation and refinement. The Regulatory Subgroup will continue to address this issue.

## **SCOPE OF PRODUCTS**

### **Categories of Products**

Gary Davis presented the list of products that, as a result of the June 2001 meeting, were initially considered as within the scope of a reuse/recycling system resulting from the NEPSI process:

1. TVs
2. Computer monitors (including CRTs and flat panel displays)
3. Personal computer CPUs (including laptops, but not hand-held computers)
4. Large peripherals (printers, scanners)
5. Small peripherals (mouse, keyboards; needs further definition)

The Stakeholder Group discussed which categories of products should be covered by a front-end financed system. For products within the NEPSI scope, an advanced recycling fee could be collected at the point of sale, and those products would be recycled with the funds collected through the fees. Several issues came up in the discussion:

- It should be simple (not confusing) for the consumer to understand which products are covered.
- Can we reasonably ask recyclers to sort out and exclude products that are not covered by the system?
- Large and small peripherals are needed if systems are to be reused.
- Will the fee be levied on separate components of a computer system (i.e., monitor, CPU, keyboard, etc.) or will there be one fee for the whole system? What happens if you just buy a new monitor?
- We should not give the public the impression that all items in the NEPSI scope are hazardous.

- The public needs to understand that reducing environmental releases of hazardous materials is only one of several goals driving the NEPSI system. Other goals include waste diversion and reducing greenhouse gas emissions and energy usage through recycling.
- We should acknowledge that when communities hold collection events, large and small peripherals will be returned whether or not they are covered by the NEPSI system.
- Industry is concerned that including large peripherals will add a large volume to what is collected and must be recycled.

After some discussion, it was agreed that the following categories of products will be considered within scope:

1. TVs (including projection TVs)
2. Monitors (including CRTs and flat panel displays)
3. Personal computer CPUs (including laptops, excluding hand-helds)

It also was agreed that a small working group will address the issue of peripherals. Heather Bowman will provide to this working group a list of large peripherals that industry representatives are concerned about and therefore would propose as exclusions.

### **Source of Products**

Davis reviewed the consensus to date around the sources of products that would be accepted into a reuse and recycling system set up by NEPSI. In June 2001, the Stakeholder Group agreed that the initial focus would be on households. At the same time it was decided that additional work should be done to consider if and how small businesses and small institutions might participate. The Stakeholder Group discussed the participation of small businesses and small institutions. Several issues were noted:

- The decision could be left to the organizers of individual collection events.
- Those paying the front-end fee should have access to the system.
- A limit on the number of units brought in at any one time could be established.
- Units from businesses and institutions might have higher reuse values.
- Municipalities and school districts that purchase under state contracts may not need the NEPSI system, since these contracts should have provisions for end-of-life management.
- Payment of the fee should be the indicator of who may participate. Is some label or other proof of payment needed?

There was general agreement that large businesses, municipalities, and states have, or should have, mechanisms for dealing with end-of-life equipment in their purchasing contracts. In addition, these purchasers will not be paying a front-end fee at a retail point of sale and therefore should not participate. It was further agreed that the stakeholders need to come to a consensus regarding participation of small businesses and small institutions. This issue is connected to financing issues and was therefore referred to the Finance Subgroup for further consideration.

The stakeholders acknowledged that research should be done to determine whether large institutions, large businesses, and governments routinely make arrangements for end-of-life in their procurement processes. One stakeholder suggested that NEPSI promote procurement processes to address these issues. Scott Cassel mentioned that he is collecting information on this issue. Another stakeholder mentioned that there are security as well as environmental issues associated with end-of-life management of computers for governments and some large businesses. The stakeholders agreed that research and promotion of procurement practices of governments, large businesses, and institutions should be done outside the NEPSI process. Clare Lindsay noted that NEPSI efforts will have an educational component that will address this issue to some extent. She also noted that EPA is willing to assist with outreach associated with NEPSI and other product stewardship initiatives.

## **LETTER OF ENDORSEMENT**

Jim Hull of the Missouri Department of Natural Resources explained to the Stakeholder Group that twelve states have signed a letter of support for the NEPSI process. This letter, from the Upper Midwest Solid Waste Managers, was signed by solid waste officials in North Dakota, Wisconsin, Ohio, Illinois, Indiana, South Dakota, Iowa, Kansas, Michigan, Minnesota, Missouri, and Nebraska. (See attached letter, dated 3/1/02.)

## **METRICS FOR SUCCESS**

One of the items on the NEPSI roadmap was to discuss and develop metrics for success. These are metrics that could be used to measure and report the success of a reuse and recycling system developed as a result of the NEPSI process. Gary Davis suggested that the Stakeholder Group brainstorm metrics for success, using the NEPSI goal statement and the list of desired attributes as points of reference. Davis also suggested that a new working group be formed to consolidate and prioritize the list of metrics.

The following list of proposed metrics emerged from the stakeholders' brainstorming session:

- Collection, reuse, and recycling targets (i.e., rates, dates)
- Reduce environmental life-cycle impacts
- Convenience standards
- Measure what remains in waste stream

- Reduction of stockpiles
- Percent of households participating
- Percent of collected products recycled/reused
- Availability of base level of service
- Percent of total sales (or some other measure) as a target
- Reuse maximized
- Interest in measures by geographic area, categories of equipment
- Cost effectiveness of system (cost per quantity recycled)
- Job creation, capital investment
- Customer satisfaction
- DfE changes
- Percent of exports under established protocol
- Decrease in disposal in incinerators and landfills

## **NEXT STEPS**

Two new working groups were convened:

1. Legislation work group to draft model legislation
2. Action plan drafting group

Gary Davis reviewed the revised roadmap, given the progress to date and the goals for the September meeting:

Mid-March to June, 2000

- Finance Subgroup works on issues for selected finance system.
- Costs Working Group further develops costs for elements of system and develops preliminary estimate of level of advance fee for different products in scope.
- Infrastructure Subgroup develops recommendations on baseline level of service and steps toward creation of infrastructure for front-end financed system.
- Regulatory Subgroup develops recommendations on regulatory environment for national system, including export issue.
- Convene Metrics for Success Working Group and develop preliminary recommendation.
- Convene Legislation Working Group to begin drafting language for federal legislation.
- Convene Action Plan Working Group to begin developing draft language for Agreed Action Plan.

#### June 2002 Meeting (Minnesota)

- Develop consensus on elements of finance system.
- Develop consensus on shared responsibility/baseline level of service.
- Develop consensus on action items for steps toward creation of infrastructure for front-end financed system and steps for improving existing systems.
- Review draft framework for federal legislation; discuss steps for Action Plan for introducing and passing legislation.
- Review draft framework for Action Plan.
- Discuss metrics for success.

#### Mid-June to September

- Draft language for federal legislation or elements thereof.
- Draft language of Agreed Action Plan.
- Circulate draft language to stakeholders for comments from both individual stakeholders and others in their organizations.
- Redraft as necessary.
- Further work on metrics for success.

#### September 2002 Meeting (Seattle)

- Develop consensus on metrics for success and incorporate in Agreed Action Plan.
- Finalize language of federal legislation or elements thereof.
- Finalize language of Agreed Action Plan.
- Discuss implementation of Action Plan.

#### November 2002 Additional Meeting, if Necessary (Location to be Determined)

One stakeholder suggested an additional meeting before the June meeting to allow subgroups and working groups time to address their tasks. The stakeholders agreed that the Core Group should make a recommendation regarding a date and location for an additional meeting. Several stakeholders suggested that recommendations be circulated

prior to the meetings to allow time for review, since stakeholders attending the NEPSI meetings are representing the views of many others.

## **SUMMARY OF ACTION ITEMS**

### **Finance Subgroup**

- How to structure the future front-end financed system (Issue #11).
- Shared responsibility (Issue #9).
- Costs (Issue #4).
- Participation of small businesses and institutions.

### **Infrastructure Subgroup**

- Finalize the base level of service document prior to the June meeting.
- List the logistical tasks required to implement the collection, transportation, and recycling system.
- Make recommendations on how to integrate an ESM standard into the system.
- Make recommendations on how to enhance existing collection and recycling/reuse systems for the interim period.

### **Regulatory Subgroup**

- Develop environmental sound recycling standard.
- Further research how an ESM standard might be implemented.

### **Peripherals Working Group (New)**

- Are large and small peripherals within the scope of the system?
- Members: David Stitzhal, Lynn Rubinstein, Scott Klag, Scott Cassel, Heather Bowman, Jim Hull, Mario Rufino, Merry Rankin, Patricia Franco.

### **Metrics Working Group (New)**

- Consolidate and prioritize metrics for success.
- Members: Scott Cassel, Heather Bowman, Bette Fishbein, Merry Rankin, John McNabb, Frank Marella, Mario Rufino, Gary Davis, Lynn Rubinstein, Gordon Hui, David Thompson, Julie Rhodes, and Karen Palmer.

### **Legislation Working Group (New)**

- Draft model legislation.
- Members: Heather Bowman (Chair), Sherry Enzler, John McNabb, Frank Marella, Clare Lindsay, Scott Cassel, Jim Hull, Larry LaVine, Raoul Clarke, Buddy Graham, Terry Goldberg, Jacque Johnson, Mario Rufino, Scott Klag, Mark Proctor, and Kevin McCarthy.

### **Action Plan Working Group (New)**

- Draft action plan.

- Members: Sego Jackson (Chair), Maureen Hickman, Buddy Graham, Jan Whitworth, David Thompson, Mike Paparian, Scott Cassel, Heather Bowman, Wayne Rifer, Vicky Salazar, Gordon Hui, and Frank Marella.