

April 2006



PROJECT OVERVIEW

*A Project of Research and
Implementation of a Private Third-Party
Organization Dedicated to Electronic
Product Stewardship in the Pacific
Northwest*

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PHASE ONE PROJECT OVERVIEW

*A PROJECT OF RESEARCH AND IMPLEMENTATION
OF A PRIVATE THIRD-PARTY ORGANIZATION
DEDICATED TO ELECTRONIC PRODUCT STEWARDSHIP
IN THE PACIFIC NORTHWEST*

EXECUTIVE SUMMARY

Historical and Current Context

The 20th century experienced a revolution in the way people communicate, store and process information. Landmark technologies such as the cathode ray tube and the semiconductor enabled this revolution, and were manufactured on a mass scale in the years following World War II. These and more recent technologies allowed the extension of information and entertainment to nearly everyone, improved quality of life and changed the world. Growth of this technology markedly accelerated in the late 1990s.

One impact of this revolution was the rapid antiquating of some electronic products as new products with greater function replaced them. New electronic equipment is comprised of hundreds of different materials gleaned from thousands of natural and recycled sources. These materials are expertly crafted and assembled at component and product manufacturing facilities, then distributed globally at ever-decreasing prices to *billions of people each year*. Once these electronic products become obsolete by primary and secondary users, what once was a functional information/communication device inevitably becomes, once again, merely a composite of basic materials like glass, aluminum, steel and copper. This project examined how a private third-party organization could assist in managing a process for collection and reuse and/or recycling of used electronic devices that consumers and business no longer need.

The environmental challenge posed by used electronics is a challenge of re-assembling a highly distributed set of materials scattered concurrently with human settlement patterns around the globe. It is thus a challenge of capture (i.e., collection) and reuse of those materials. Not only are current use and disposal patterns wasteful, they also increase environmental stress on natural systems. Capturing and recycling electronic waste offers a way to reduce the burden from mining and drilling to produce raw materials.

Northwest TPO Project Leadership

The Northwest TPO Project was performed under the guidance and direction of a Steering Committee of national/international electronics manufacturers. The project focused on the feasibility of a private Third Party Organization (TPO) dedicated to electronic product stewardship in the Pacific Northwest, specifically in the states of Washington and Oregon. This project explored the form, function and feasibility of using a private not-for-profit TPO serving the interests of consumers in order to deliver electronic scrap collection and recycling services.

The project was originally conceived by the Northwest Product Stewardship Council (NWPSC, a group of government agencies in the Northwest U.S.) and was organized by NWPSC members with assistance from the Polymer Alliance Zone, Rifer Environmental and the U.S. EPA. The project work was performed throughout by a Support Team chaired by a representative from the Washington Department of Ecology.

Project Steering Committee Members (January, 2006)

David Thompson (Panasonic)	Tim Mann (IBM)
Frank Marella (Sharp)	Ed Nevins (JVC)
Butch Teglas, Ric Erdheim (Philips)	Mike Moss (Samsung)
Doug Smith (Sony)	Shelby Houston (Epson)

Project Support Team Members (January, 2006)

David Nightingale (PM/Washington DOE)	Lisa Sepanski (King County)
Tamie Kellogg (facilitator)	Norm England (RBRC)
Jan Whitworth (Oregon DEQ)	Saskia Mooney (RBRC)
R. V. "Buddy" Graham (Polymer Alliance Zone)	Scott Klag (Metro Regional Government, Oregon)
David Weinberg (RBRC)	Sego Jackson (Snohomish County)
Garth Hickle (Minnesota)	Signe Gilson (City of Seattle)
Jeff Hunt (U.S. EPA Region X)	Steven Johnson (Garvey, Schubert, Barer)
Jason Linnell (NCER)	Vicky Salazar (U.S. EPA)
Walter Alcorn (Alcorn Consulting/NCER)	Wayne Rifer (Rifer Environmental)
	Jay Shepard (Washington DOE)

Funding for the project came from a combination of industry funds and governmental grants. The TPO project was focused in the Pacific Northwest, but the process engaged national participants, and is intended to inform both the policy considerations in Washington and Oregon as well as the national challenge to develop an effective electronics end-of-life management system.

A New Approach


Business and government stakeholders have indicated support for third party oversight and management of an electronics reuse and recycling system. Stakeholder support for third party services and related infrastructure development stems from multiple interests, including the desire to relieve the government of recycling program administration responsibility and a push for industry to assume a management role as part of a shared responsibility approach.

In the context of electronics recycling systems, an industry-led TPO could efficiently fulfill one or more roles that otherwise would be borne by government, individual companies or other stakeholders. For example, once authorized by one or more states (or by Congress), a primary TPO function could be to provide a mechanism of delivering electronic waste (e-waste) management services that engage electronics manufacturers and other stakeholders to help achieve statewide and/or regional program objectives. Such a TPO could, but would not necessarily have to, collect and disburse government-sanctioned revenue. States and/or Congress could create or designate a TPO to operate a recycling system under government oversight.

At the onset of this project, this complex set of possible TPO roles and structures raised numerous legal, business and policy questions. Thus, the project explored several key legal questions using outside counsel and other legal expertise. To illustrate how a TPO could provide practical value on a business and policy basis, the Steering Committee developed a TPO Business Plan based on a series of assumptions about TPO responsibilities and the broader, legislated electronics recycling system. The NW TPO project explored concerns expressed by other stakeholders outside of the Steering Committee about the TPO concepts and implementation impacts. Analysis was also performed regarding the viability of a TPO using alternative assumptions from those included in the TPO Business Plan.

Overall Findings

- An electronics recycling system utilizing a privately-managed, regional multi-state TPO provides an efficient alternative to state-by-state recycling administrations.
- While there are several legal issues that could limit the function of a regional TPO, any new recycling system will require legislative authorization at the state and/or federal level. Thus, legal restrictions on TPO establishment, operation and financing are limited to a relatively narrow set of constitutional issues.
- A base level of “free and convenient” service managed by a regional TPO could be implemented with a cost-per-new unit sold of under \$6. The Steering Committee selected financing of these services through an Advance Recycling Fee (ARF) model.
- A hybrid recycling system model combining government collection and oversight of a government-mandated Advanced Recycling Fee and private sector TPO management of the collection/recycling system offers the best guarantee of fee assessment on all product sales, as well as privately-run collection and recycling. Providing service through contractors guarantees that costs will not escalate and



prevents the need to create a new government bureaucracy. In addition, a privately functioning TPO is flexible enough to operate in any state that wishes to participate.

- A “wholly-private” TPO that did not have a legislatively-authorized fee-collection authority could only accept ARF money on a voluntary basis, which would not guarantee full market participation.

Availability of NW TPO Documents

The Northwest Product Stewardship Council in coordination with the Washington State Department of Ecology has published the results of this project. The TPO Business Plan, legal analyses, project overview and related documents are available at <http://www.productstewardship.net/> and www.electronicrecycling.org/TPO.

PHASE ONE PROJECT OVERVIEW

1. INTRODUCTION

This report summarizes a project to research the form, function and feasibility of using a private third-party organization (TPO), or a not-for-profit entity that engages product distribution channels, recyclers, manufacturers and others to deliver electronic scrap collection and recycling services. The project was led by representatives of electronics manufacturers working as a Steering Committee. It was organized and supported throughout by a technical Support Team that included other stakeholders and interested parties whose views are not necessarily reflected in this report. The project was funded by a combination of industry funds and governmental grant funding.

Phase One of the TPO project was focused in the Pacific Northwest, but it engaged national participants and is intended to inform the national challenge to develop an electronics end-of-life management system. Primary consideration was given to identifying a possible TPO solution that would complement existing and developing localized infrastructure. Many approaches and options were reviewed and analyzed, and this report reflects an approach identified as reasonable in the Pacific Northwest.

1.1 Why a TPO?

The strengths--as well as some of the weaknesses--of a TPO are laid out in detail in the Business Plan. A TPO prevents the necessity of forming a substantial new bureaucracy to deliver collection and recycling services, and engages the private sector in organizing and providing those services. In addition, by consolidating diverse collection and recycling efforts under a TPO, a greater and more consistent level of service can be provided to consumers at a lower cost.

This general TPO approach has precedents in other industries (e.g., rechargeable batteries, thermostats) in the U.S. and strong support in many other countries where product stewardship programs are implemented for the end-of-life management of products, primarily Europe and Canada. Applying this approach to used electronics is a new concept in the U.S., where by tradition, local governments are generally the default agent for organizing or delivering waste services. ***This project was intended to outline the financial, organizational and legal basis for a private electronics product stewardship TPO in the United States.***

Ideally a TPO would provide a flexible mechanism for managing e-waste collection and recycling as needs evolve. Given the rapid changes in new product technologies, recycling technologies, industry business models and localized collection/recycling infrastructure, the challenges facing the TPO are a moving target. Thus, the TPO functions assumed in this report and project Business Plan may also evolve as needs change over time. Electronics industry stakeholders are accustomed to this dynamic environment and will bring unique experience and perspective to managing the evolving recycling challenge.

1.2 A TPO and the Funding System

A TPO cannot generate the funds to pay for collection and processing. The TPO would act as the agent authorized to disperse funds that are legislatively authorized to run the system. Both this report and the Business Plan are based on the premises of an advance recycling fee funding the system. This is a set fee on the sales of new products, and would be collected from consumers at the retail point of sale or at the first sale into the state.

1.3 A Two-Phased Project

This overview and the Business Plan summarize the work during Phase One. At this point, it has not been decided if Phase Two will be undertaken. The project proposal described the two phases as follows:

Phase One will undertake background research, including legal research, and engage the participants in answering critical questions and developing a draft TPO implementation plan. If the project leadership group determines that implementation is feasible (a go/no-go decision), then Phase Two will be initiated.

Phase Two will implement a pilot TPO to support electronics collection programs in Oregon and Washington for a limited period.

The Steering Committee decided to produce the Business Plan as a part of Phase One, even though it was originally projected for a third phase.

1.4 Description of NW TPO Business Plan

This report is a companion document to the Electronic Product Stewardship TPO Business Plan and serves as a summary of Phase One project activities. The Business Plan incorporates the substantive assumptions and decisions made by the Project Steering Committee during the course of the project.

The Business Plan provides the basis for the formation of a TPO, and the delivery of recycling services, operating within a legislatively authorized funding mechanism. The Plan assumes that the funding mechanism is a fee on the market sales of electronic products for which the funds are dedicated to providing end-of-life management services. The Plan analyzes the feasibility of this approach on single-state and multi-state bases.

2. BACKGROUND ON THE PROJECT

2.1 Project purpose

The following text from the original proposal summarizes the project purposes.

The purpose of this project is to investigate what is needed to establish a TPO and then, if feasible, to implement a limited-duration simulated TPO pilot program. This will be a means for manufacturers, local governments and recyclers to gain experience with the use of a TPO, and it is hoped this will eventually result in the permanent establishment of such an organization. The project overview and TPO Business Plan will provide answers to many key questions regarding legislative adoption and implementation of a TPO.

Though attractive in principle, a private TPO poses many practical challenges. A type of TPO approach has been implemented in other industries in the U.S. and in other countries, including Europe and Canada, but for electronics the same approach may require a new kind of institution in the U.S. Some of the questions that need to be answered are:

- *Is a private TPO operated at the state/regional level feasible?*
- *How would one be established?*
- *What roles could/should it play?*
- *What are the administrative costs and how can they be kept at a minimum?*
- *What are the benefits and difficulties of a private versus public entity?*
- *Assuming costs are involved, how can they be spread fairly across products and brands?*
- *How to allow for brand operated recycling centers to compete on fair level with other recyclers?*


The organizational structures, functions and costs associated with the administration of the infrastructure through a private TPO have not been demonstrated for electronics management. In the first phase, this project will address these, and other, questions through research and dialogue. In the second (optional) phase, it will take them on in practice.

2.2 Initial Project Partners

Initial project partners organized the startup seed funding, solicited manufacturer input and participation, and prepared the initial framework for the project. Partners included U.S. EPA Region 10, Oregon Department of Environmental Quality, King County Solid Waste Division (SWD), Snohomish County Solid Waste Division, Metro (Portland), City of Seattle, City of Tacoma, the NW Product Stewardship Council (NWPSC), and the MARCEE project. This group is referred to hereinafter as the “project organizers.”

2.3 Project Steering Committee

In order to ensure that electronics manufacturers participating in the project were able to guide the process in a way that would represent their interests in forming a TPO, the project organizers decided that exclusively participating manufacturers would comprise the project’s Steering Committee. Because Phase Two included the option of the



manufacturers actually establishing a TPO, the project organizers determined that it would be more appropriate if manufacturers were able to control the process.

The Steering Committee's purpose was to direct the research and writing and have control over the final recommendations and decisions. The Steering Committee served as the voting members in Phase One. After soliciting manufacturer participation in late 2004 and early 2005—including submission of a collaborative action proposal at the EPA National Meeting on March 1st and 2nd—the following manufacturers agreed to serve on the Steering Committee:

- Epson America, Inc.
- IBM
- JVC
- Panasonic
- Philips
- Samsung
- Sharp
- Sony

The Steering Committee provided direction on the initial TPO models, decision points in the TPO Business Plan, and the priority legal research questions over the course of conference calls and meetings described in Section 2.6.

2.4 Project Support Team

The TPO Support Team coordinated the execution of Phase One and provided technical and advisory support to the Steering Committee. The TPO Support Team participated in all project activities, calls and meetings, predominately taking a back seat to the discussions and decisions conducted by the Steering Committee. Support Team members were the primary drafters of documents requested by the Steering Committee, and arranged the logistics for each meeting and conference call. The Support Team did not vote in decision items, but its members did provide input as needed to assist the Steering Committee.

Members of the Support Team were comprised primarily of government representatives from the Northwest Product Stewardship Council, with David Nightingale at the Washington Department of Ecology serving as the primary project manager. The National Center for Electronics Recycling also participated on the Support Team and coordinated stakeholder input (see Section 3). At the request of the Steering Committee, the Rechargeable Battery Recycling Corporation (RBRC) was invited to join the Support Team, along with the RBRC counsel at Wiley Rein & Fielding, who joined to provide support on legal issues. Kellogg Consulting Services was selected to provide independent facilitation services for the Steering Committee and Support Team meetings. Organizations represented on the Support Team were:

- City of Seattle
- EPA Region 10, Office of Air, Waste & Toxics
- King County (WA) Solid Waste Division
- MARCEE (Mid-Atlantic Recycling Center for End-of-Life Electronics) Project
- Metro (Portland, OR)
- National Center for Electronics Recycling
- Oregon Department of Environmental Quality
- Polymer Alliance Zone
- Rechargeable Battery Recycling Corporation
- Rifer Environmental
- Snohomish County (WA) Solid Waste Management Division
- Seattle Public Utilities
- Washington State Department of Ecology
- Wiley Rein & Fielding LLP

The Polymer Alliance Zone of West Virginia (PAZ), a 501(c)3 non-profit, provided fiscal agent services by invoicing and collecting manufacturer payments, and paying for approved project expenses from a designated fund. PAZ provided similar services for manufacturer contributions during the 2001-2002 U.S. EPA Region III eCycling Pilot.

2.5 Project Funding

Several sources of direct and in-kind funding from the government and private sector were obtained for this project.

2.5.1 Government Sources

Washington State Department of Ecology secured seed funding from EPA Region 10 of \$12,250 to hire a facilitator. U.S. EPA also provided additional funding to continue facilitation services through the end of the project. The MARCEE Project, a grant program funded by the Department of Energy and the U.S. Environmental Protection Agency via a cooperative agreement with West Virginia University, provided in-kind contributions.

2.5.2 Manufacturer Sources

Manufacturers who were solicited to participate in the project were asked to provide up to \$7,000 each. After the initial meeting of the Steering Committee, committed manufacturers decided to allow additional companies to participate at a lower contribution level. One company joined the project at this level and contributed \$1,400. In all, eight manufacturers contributed at the \$7,000 level, and one contributed at the \$1,400 level for a total of \$57,400 in manufacturer funding.

2.5.3 In-Kind Contributions

Numerous other organizations provided either direct contributions for meeting expenses or in-kind project resources. The in-kind resources come in the form of staff participation, travel, and/or professional assistance. Generous in-kind support was provided by the MARCEE project, RBRC, and all of the state and local governments represented on the Support Team.

2.6 Project Activities

The Pacific Northwest Third Party Organization (TPO) project held 13 Steering Committee meetings over a 7 month period following the Steering Committee formation conference call on May 25, 2005:

- June 15 (conference call)
- June 29 (conference call)
- July 13 (meeting in Federal Way, WA)
- July 27 (conference call)
- September 7 (conference call)

- September 20 (meeting in Tacoma, WA)
- October 12 (conference call)
- October 26 (meeting at E-Scrap conference in Orlando, FL)
- November 9 (conference call)
- November 30 (conference call)
- December 7 (meeting in Olympia, WA)

These meetings provided the opportunity for the Steering Committee to discuss project direction, prioritize research questions and draft assumptions for inclusion in the Business Plan. Phase One project activities focused on development of several key documents and draft working papers, including:

- The Business Plan
- A detailed spreadsheet model reflecting the assumptions in the text of the Business Plan
- A report from the project attorney hired to review several key TPO legal questions
- A summary of concerns about the TPO concept as articulated by various stakeholders in the U.S. during various electronics recycling discussions
- A list of questions about the TPO concept raised by manufacturers and other stakeholders
- A Steering Committee Charter document, including a set of Guiding Principles and a schedule for Phase One
- Several “strawmen” and model documents used to identify research questions and make assumptions underlying in the Business Plan

Phase One attempted to accommodate different financing approaches and was not initiated as an advocacy effort for any particular approach to financing an electronics recycling system. Project activities and deliverables were developed independently of any particular system financing assumptions until late in Phase One when the Steering Committee prioritized the delivery of free and convenient services financed by current sales of electronic products.

2.7 Legal research

The law firm of Garvey, Schubert & Barer was hired to identify and describe the principal legal constraints that would affect the formation and operation of conceptual models in the states of Washington and Oregon. Additional legal analysis was also provided by Wiley Rein & Fielding LLP, including the outlining of legal issues associated with a hybrid organizational governance structure ultimately selected as the assumed governance model by the Steering Committee in the Business Plan.

Appendix D presents the results of legal research conducted during Phase One of the Pacific Northwest TPO Project.

3. RELATED STAKEHOLDER ACTIVITIES, ISSUES AND CONCERNS

To facilitate communication with other stakeholders (other governments, non-participating manufacturers, NGOs, etc.), the National Center for Electronics Recycling (NCER) organized a Multi-State TPO Project Committee and an additional committee for recyclers. The project committee was organized to provide input and comments on the progress of the NW pilot and to develop plans for expanding the effort into other states or regions. The recycler committee was organized to provide targeted recycler input and comments.

3.1 Report on stakeholder committee meetings

The NCER held 4 conference calls with the multi-stakeholder committee to report progress on the NW TPO project and TPO discussions in others states/regions, and to gather stakeholder comments and concerns. Out of these discussions, several documents were produced:

- TPO Fact Sheet
- Possible Roles for TPO in Existing/Proposed Programs Matrix
- TPO Survey
- Specific comments from the multi-stakeholder committees are addressed in Appendix E: Stakeholder Concerns. In general, stakeholders focused on the following topics when discussing an electronics recycling TPO:
 - Strong preference for TPO that would work across state lines—inefficiencies in multiple TPOs in different states noted.
 - Desire to resolve legal precedent issues—TPO structure, voluntary/mandatory TPO, fee collection issues, setting producer responsibility shares while ensuring no free-riders, operating in multiple states, etc.
 - Need for outreach to other states/regions to educate about TPO roles, possible models.
- Recyclers voiced the following comments and concerns regarding their potential interaction with a TPO:
 - There must be certainty that the TPO would be more efficient than government.
 - TPO must maintain a high-level of transparency, particularly with auditing.
 - Preference is for a TPO that would operate across state lines.

- A summary of the comments provided by various stakeholder groups from the NCER TPO Survey is provided in Appendix E.

3.2 Stakeholder issues from Washington 2488 process

The Washington State Legislature directed the Department of Ecology to conduct research and develop recommendations for implementing and financing an electronic product collection, recycling and reuse program within the state (“2488 process”). This parallel, but separate, process managed by the Department of Ecology, included recommendations for a state electronics recycling program incorporating a TPO or “Materials Management and Financing Authority.” Since a TPO was included in the draft of the recommendations, several stakeholder concerns were gathered during this process. A summary of these concerns is provided in Appendix E. In most cases, these concerns were addressed in the NW TPO Business Plan. A description of how these concerns are addressed in the Business Plan is also included in Appendix E.

Note that the financing approach assumed under this study differs from the recommendations from the 2488 process. The Steering Committee decided that the TPO should focus on a comprehensive free and convenient system financed by current sales and assume the advance recycling fee funding method.

4. UNFINISHED ISSUES


4.1 Marketing/Public Education Plan & Recovered Materials Market Development Plan

Due to time and resource constraints, the final version of the Business Plan developed for the TPO project does not include an approach for two important functions of the TPO: the development of a Marketing/Public Education Plan and a Recovered Materials Market Development Plan. Plans for these activities could be developed during Phase Two or during other TPO efforts initiated in a different geographic region of the United States.

4.2 Other Questions Not Studied during Phase One

At the initiation of Phase One, the Project Support Team assembled a list of TPO-related questions for study by this project. While many of these questions have been explored and discussed thoroughly by the Steering Committee, several questions were not explored—or at least not explored in depth—during the course of the project due to time and resource constraints. These questions include:

- How does this TPO work with other states or regions that may want to participate? (explored to some extent)
- What mechanisms, if any, are available at both the pilot and permanent TPO phase to eliminate “free rider” products?

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- What are the constraints on the TPO to act in the public interest in its programmatic responsibilities or in establishing requirements in the absence of notice-and-comment rulemaking?
 - Are the anti-trust implications different under a system that allows for multiple TPOs?
 - How could the TPO be structured to allow individual manufacturers or groups of manufacturers to provide an equivalent level of service without participating in the primary TPO?
 - What access would the public have to the TPO's records and actions?
 - Are there issues regarding shipment to different states with different regulations? Can we realize efficiencies despite different state laws? (explored to some extent)
 - How can the TPO encourage improved design for the environment and/or recycling? (explored to some extent)
 - Can a TPO establish responsibility (return share, etc) under producer responsibility systems?
 - What are the specific documentation and reporting needs to be borne by service providers in a TPO-run recycling system?

Depending on the responsibilities and scope assumed by a TPO, answers to these questions may provide important insight into the smooth functioning of a TPO in a multi-state electronics recycling system.