

This is a draft document produced by the NEPSI Performance Measures Workgroup and last reviewed by NEPSI stakeholders on February 10-11, 2004. It has not been agreed upon by the full NEPSI membership.

**WORKING DOCUMENT
GUIDELINES FOR PERFORMANCE GOALS AND MEASURES**

The primary purpose of a performance goal is to measure whether a system’s performance is meeting expectations and whether intervention to achieve improvements is warranted.

The two main parts of the NEPSI product recovery system – collection and processing/recycling – will operate relatively independently, may be provided by different kinds of entities, and have different factors that will make for success.

	Factors Making for Success	Entities Primarily Responsible for Providing Service
Collection Functions	<ul style="list-style-type: none"> • Service convenience for the public • Public education/promotion • Lack of public disincentives (e.g. EOL fees) 	Local businesses, organizations and agencies
Processing/ Recycling Services	<ul style="list-style-type: none"> • Processing technology effectiveness • Operations management • Materials markets • Transportation Costs 	Regional or national businesses under NEPSI contract

Based on these factors, it was decided that separate performance goals should be established for collection and processing/recycling.

- A collection/processing goal will measure how effectively product is being recovered from the public in different areas and whether local services to the public should be enhanced.
- A reuse/recycling goal will measure how effectively the recovered product is being managed for reuse or recycling and whether NEPSI contractors should increase their processing effectiveness.

Three main questions need to be addressed for each performance goal:

- What should be measured?
- How should data be collected and the measurement done?
- Who is responsible for assuring that the goal is met?

COLLECTION GOAL

What should be measured? Two main options were evaluated for a collection goal:

1. A percent of the available product
2. A weight in pounds per person per year

The percent of available product goal requires a determination of the amount of product that is available to be recovered. That can only be estimated by means of a model that uses historic sales figures, makes assumptions about the life cycle of products – time in use, possible reuse, and time in storage – and the ultimate fate of products – recycling or disposal. And then estimates must be made of how rapidly the public will release product that is in personal storage. While a number of past models have attempted to gauge these variables, these estimations are highly uncertain.

A pounds/capita/year goal can be set based on the actual experience of existing collection programs in the US. Unfortunately no collection programs in the US have existed for a long period of time that are similar to a NEPSI-type system. However, from a few ongoing collection efforts some good approximations can be made. See the document “NEPSI Collection Goal: Basic Numbers from Performance Measures Subgroup Discussion.”

According to the existing data, and the models that have been developed, the percentage goal produces a much higher estimate of the amount that will be collected, by a factor of 3 or 4. This seems to indicate that existing collection programs are not capturing a large share of the available product.

Recommendation: A pounds/capita/year goal should be set for collection based on the achievement of the better-performing, long term collection programs in the US. However, it should be recognized that this method may underestimate what the most effective collection programs may achieve. Therefore the collection goal should be set at the upper end of the range of existing programs, and, following implementation of NEPSI collection efforts, it should be reviewed periodically to determine if it should be adjusted.

Initial NEPSI Collection Goal: Based on data from US collection programs up through 2003 and analysis of the programs to correct for the NEPSI Scope of Products¹, the following, tiered goals are recommended by NEPSI:

<p style="text-align: center;">NEPSI Collection Goal:</p> <p style="text-align: center;">1.5 lbs/capita by December 31, 2005</p> <p style="text-align: center;">2.0 lbs/capita by December 31, 2007</p> <p style="text-align: center;">2.5 lbs/capita by December 31, 2010</p> <p style="text-align: center;">3.0 lbs/capita by December 31, 2012</p>
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These goals are based on rates that are likely achievable, based on current collection rates of some of the best collection programs in the country. However, they are set to require continuously improving results as the collection and processing infrastructure in the US expands. It is recommended that the NEPSI NCE/TPO be given the authority to revisit the goal structure as experience and data collection from collection events improves, but certainly no later than after passage of NEPSI legislation, to ensure that the goals are still relevant.

¹ For purposes of initial calculations, the NEPSI Scope of Products covered by the system was assumed to include all TVs and monitors, CPUs, and laptops. While keyboards and mice are also included, they are not factored into estimates of units collected due to a lack of average weight estimate, and printers are not included because NEPSI has not made a final decision on whether they are included in the NEPSI scope. *(Restate/recalculate when final decision is made on the Scope of Products.)*

How Should Measurement Be Performed?

NEPSI contractors who receive product from collection programs shall track and report to the TPO the amount collected by region. Thus the TPO could report annually a per-capita collection rate.

Who Should Be Responsible for Meeting the Goal?

The responsible party should be whoever locally assumes responsibility for assuring that collection is convenient to the public, and that collection opportunities are well promoted.

Review and Evaluation Process (including transparent reporting requirements)

--to be determined

RECYCLING / PROCESSING GOAL

What should be measured?

The percentage of the weight of collected product that is recovered into products and materials that is reused or marketed.

Initial NEPSI Recycling/Processing Goal

No known research has been performed regarding feasible recycling/processing goals for computers or televisions in the U.S. The WEEE directive established the following goals:

- Recovery goal (includes incineration): 75%
- Component, material and substance reuse and recycling goal: 65%

However, based on NEPSI subgroup discussions, a processing goal, set into the future at a date certain after passage of NEPSI legislation, was felt to be the most realistic starting point. The format of the WEEE goals was used as a template, concentrating on goals for reuse and recycling, as opposed to also including a "recovery goal" which, under the European system, specifically includes incineration.

The following definitions are proposed for the purposes of understanding the NEPSI Processing goals:

Reuse shall mean any operation by which waste electronics or components thereof are used for the same purpose for which they were conceived, including the continued use of equipment or components thereof that are returned to collection points, distributors, recyclers or manufacturers.

Recycling shall mean the reprocessing in a production process of materials for the original purpose or for other purposes, but excluding energy recovery, which means the use of combustible material as a means of generating energy through direct incineration with or without other materials but with the recovery of heat.

Proposed NEPSI Processing Goal:

For NEPSI products collected for processing, the signatories (or whomever we designate as the responsible entities) shall ensure that the following targets are met:

- The required rate of component, material and substance reuse and recycling within one year of passage of the NEPSI legislation will be 60%.
- The required rate of component, material and substance reuse and recycling within five years of passage of the NEPSI legislation shall be 70%

- No contribution to the required reuse and recycling rate will be allowed for energy recovery that comes from:

--Whole products or components of products sent to waste-to-energy facilities

--Shredder fluff sent to smelters for recovery of precious or other metals *

(* The metals recovered for recycling through smelting will apply to the reuse and recycling rate.)

Define process for addressing future changes to the goals

How Should Measurement Be Performed?

NEPSI contractors will arrange or contract for processing services. NEPSI contractors could be held contractually responsible to obtain data from their internal operations and downstream processors for the percentage of product that is recycled, and report that data to the TPO.

Who Should Be Responsible for Meeting the Goal?

NEPSI contractors, that is, the TPO.

An Eco-Efficiency Goal for Processing

Percentage goals are a crude measure of the environmental benefits of reuse and recycling, because they fail to acknowledge that some materials found in very small amounts in electronics (e.g. precious or heavy metals) have a substantially greater environmental burden than other materials that are in greater amounts (e.g. ferrous metal). Nor does it consider the amount of energy or money that must be spent to achieve a given recycling rate. In the future a set of processing goals should be developed that account more accurately for the net environmental efficiency of reuse and recycling.

CONSEQUENCES IF GOALS ARE NOT MET

To be determined

INDIVIDUAL RESPONSIBILITY TRACK

How should goals be applied to those companies choosing the alternative track? Do we want to specify what they report to the TPO on an annual basis?