

SUMMARY OF NEPSI STAKEHOLDER COMMENTS ON FINANCING MODELS

This document represents a summary of comments received from NEPSI stakeholders as a result of a request for additional comments on the various electronics collection, reuse, and recycling models presented at the June 21-22 meeting in San Francisco. Comments were solicited through July 30 from stakeholders in writing; follow-up “interviews” were held with many of the stakeholders to gain additional feedback. This summary incorporates comments from approximately 38 stakeholders; all stakeholder groups are represented in the comments.

As discussed in San Francisco, stakeholders were initially asked to reflect further on the two particular models (4 and 9) from the list of 12 that were selected for more in-depth discussion during the second day of the San Francisco meeting (the description of the models is attached). Stakeholders were also invited to provide comments on any of the other models in the list and any new models or modifications of the ones on the list of 12. Follow-up interviews were used to gather more input and to focus the input on the “financing” portion of the models. Financing models about which questions were asked were as follows:

1. General tax base funding
2. Back-end fee (end-of-life fee)
3. Front-end fee
 - a. Advance Recovery Fee
 - b. Product Licensing Fee
 - c. Deposit/Refund
4. Other Models

The charts with these financing models are also attached. The summary of the comments received is organized in the same way that the “interview” questions were organized.

1. Current Situation for Electronics Recycling

Stakeholders were asked to describe the current situation for electronics recycling in their state, municipality or company. A summary of these descriptions is being compiled as a separate document. In general, the current situation was described as a growing but inadequate infrastructure for addressing the expected flow of discarded electronic products into the municipal solid waste stream. Collection and recycling rates are low as compared with the volume of end-of-life products.

2. General Tax Base Funding

- 2.1. Most stakeholders felt that this practice was inappropriate and inequitable. Shifting end-of-life costs to consumers of products, as opposed to taxpayers, is one of the desired attributes of a product stewardship model for electronics.

- 2.2. On the positive side, general tax base funding was seen as simple and easy to implement. Some stakeholders noted the potential to make electronics recycling part of residents' monthly waste collection fees.
- 2.3. Some government stakeholders supported a limited role for government tax base funding, such as providing public education about electronics recycling or financing a supplemental collection system.

3. End-of-Life Fee

- 3.1. There was limited support for an end-of-life fee for managing waste electronics. Some felt this was the simplest financing mechanism to implement, and would definitely target the consumer as opposed to the taxpayer. This mechanism would be transparent and could lend itself well to consumer education and outreach. Also, the model provides a direct source of funding. Some thought it would provide a good way for recyclers to compete for providing the lowest-cost, most efficient recycling of materials.
- 3.2. Drawbacks to an end-of-life fee included the fact that many consumers will not want or be willing to pay an end-of-life fee, which can lead to reduced consumer participation, illegal dumping, and greater environmental costs at a future date. An end-of-life fee, some said, would require a massive consumer/public education campaign to gain adequate participation at the end-of-life and provides no signal to consumers about costs or impacts at purchase.
- 3.3. It might also be a problem for charities, which may find themselves as recipients of a larger quantity of unusable equipment.
- 3.4. An end-of-life fee might require a disposal ban to help drive the appropriate behavior.

4. Advance Recovery Fee

- 4.1. There was a great deal of support for continued exploration of an ARF, although many potential drawbacks were noted. Most stakeholders felt an ARF, if properly structured, could fulfill the majority of the desired attributes identified for an ideal NEPSI system. In particular, the comments reflected the benefits of an ARF that placed the costs at the point of purchase, so that they are internalized into the cost of the products. Most felt that a reasonable fee placed on the initial purchase would be relatively insignificant in comparison with the costs of the products. An ARF could also be set at a reasonable rate to cover both historic and new waste (there was less consensus on this last point).
- 4.2. An ARF could be used to generate a pool of funds for jumpstarting the recycling infrastructure and taking care of the stockpile of historic products.
- 4.3. There were a number of caveats provided by stakeholders supporting this model. First, several comments reflected on the possibility of an ARF

being industry-managed, as opposed to government managed. The reasons for this consideration were multiple: the political difficulties that legislatures may have in passing a fee that might be viewed as an additional tax on their constituents; the potential for a government-managed fund to be “co-opted” for other government uses; and the possibility that an industry-managed ARF might better drive DfE initiatives. If it were to be a government-set/managed fee, several stakeholders suggested that the fee would need to be set at the federal level. However, many stakeholders also expressed concern that an industry-managed ARF might pose anti-trust problems.

- 4.4. Second, there was concern that a flat ARF placed across all products in our scope of products would be unfair and would do nothing to stimulate DFE—an ARF should be somewhat related to the costs to manage different components and electronics. Further, several stakeholders commented that perhaps some adjustment to the ARF would be appropriate as the costs of recycling went down over time.
- 4.5. Third, questions were raised about who would pay—would it be only the individual consumer, or would corporations, institutions, etc., also pay the ARF?
- 4.6. A very few stakeholders felt that an ARF would be equivalent to a “sin tax,” and that an ARF might be viewed as a disincentive to purchasing certain products.

5. Model #4, as described at the NEPSI meeting in San Francisco (advance fee collected at retail covers collection, transport; producers responsible for recycling, with potential for advance fee to cover recycling costs), as a specific example of an ADF or ARF.

- 5.1. See above.
- 5.2. Several comments expressed concern about splitting the different cost components (collection, transportation, and recycling), particularly with transportation being separated from recycling costs. Most felt that the system should be handled as a whole to incorporate various economies of scale, though there were still mixed statements about whether this type of financing structure provides any incentive for efficient collection, transportation, and processing systems to develop. Others supported producer responsibility for recycling, as compared with collection and transport, and pointed out that responsibility for recycling is where incentives for DFE would be created and that producers could utilize an advance fee system or a licensing fee system themselves to cover these costs.

6. Product licensing fees

- 6.1. A few stakeholders expressed strong support for a system based upon a product-licensing fee, similar to the RBRC model for batteries. Reasons

for this support included the potential for the fee to be internalized in the cost of the product, the ability to set the fee at different rates for different types of products, and the possibility that such a fee would drive DfE. Such a fee could be considered the industry-equivalent of a government-managed ARF without the necessity of retailer collection. Several stakeholders liked the idea of potentially working with a third-party organization to implement the goals of a system.

- 6.2. A few stakeholders also felt that it would be very complicated to set the fees at a correct level to manage the system and the materials. Many felt that it would be difficult for this system to efficiently handle historic and orphan wastes. This type of system does not necessarily drive innovations to develop more cost-effective recycling options or to increase participation.
- 6.3. Other concerns about this model related to the additional costs of establishing and administering a third-party organization, and the necessity for some type of enforcement mechanism to discourage free riders. These added costs could increase the level of the fees that would ultimately be passed on to the consumer.
- 6.4. There was a concern expressed by some stakeholders that such a system should be accountable to the public, particularly for meeting collection and recycling goals.

7. Deposit-refund systems

- 7.1. There was considerably less support for deposit-refund systems than for ARFs. Most stakeholders felt that a deposit-refund system would be very difficult to track, complex to administer, and that it would be difficult to ensure that the deposits with such a system would actually cover the costs of collection and transportation. This system would require substantial participation of retailers to administer deposits and refunds, as well as to store used products; while fees could be set to provide funding to offset their efforts, stakeholders expressed concern about the level of willingness retailers would have towards this model. Many felt that this model was poorly suited to management of historic waste that would have high potential to bankrupt the fund. Many comments also stated concerns that this mechanism would also require legislation, which may be politically difficult. Most stakeholders felt that deposit-refund systems are much better suited to less durable products (beverage containers, oil filters) or products that are likely to be more universal (auto batteries). It also might be quite difficult to apply a deposit-refund approach to Internet sales. There is also a potential issue of fraud/free riders from across state borders if the deposit amount is not set nationally.
- 7.2. Despite the general lack of support for a deposit-refund model, there were still several stakeholders that provided positive comments. Benefits noted included: less likelihood of illegal dumping; increased participation by scavengers and collectors; potential of using a “coupon” towards purchase

of new equipment as opposed to a cash refund; the shifting of costs to the consumer; possibility of being administered by manufacturers or retailers; potential to drive DfE by having producers responsible for recycling. A deposit-refund system was also stated as possibly attracting consumers to retail outlets. Several stakeholders felt that the experience of consumers in dealing with other deposit-refund systems might lead to higher participation rates. There would be the possibility that the time lag between collection of the deposit and payment of the refund might allow enough time for the float on funds to generate enough funds to cover historical materials.

- 8. Model #9**, as described at the NEPSI meeting in San Francisco (deposit at point of purchase to cover collection and transport, refund at time of delivery of product; producers responsible for recycling with potential for advance fee or other funding mechanism to cover costs), as a specific example of a deposit refund system.

8.1. See above.

8.2. As with the structure of Model # 4, there was concern about breaking the system into different cost components.

9. Other models

- 9.1. A few stakeholders listed #12 (producer administered advance recovery fee, with tracking of costs and potential for refunds if costs less than payments) as a possible option for continued discussion. Stated benefits included potential to reduce government bureaucracy and administration, while providing flexibility for manufacturers to adjust the amount of their payments as program costs are reduced. The model would probably not require any legislation, and government would not be involved in the flow of funds. Could potentially be administered by a third-party organization.
- 9.2. Model # 6 (end-of-life fee by mail in) was cited as providing opportunities for collection for rural communities or for the elderly or disabled. The mail-in program was specifically listed as a potential way to augment another financing system, and not as a stand-alone system. One concern stated in connection with Model # 6 was that it does not support local processing, and could be quite expensive unless there were regional recycling facilities.
- 9.3. Another stakeholder suggested an ARF-model that would be tweaked to drive DfE and to encourage the development of a free-market infrastructure to handle all materials. A consumer would pay an ARF at purchase—this fee could be lowered over time to reflect increased efficiencies in the system. The fee could also be structured in two tiers; a lower fee could be set on products that meet certain DfE standards, which would provide manufacturers with incentives to produce more environmentally-friendly products. The fees could be managed by a joint

public-private organization with a board of directors. The fees could be used to cover costs of collection, transportation, and recycling through existing infrastructure and the infrastructure that develops to serve the needs of the system. Funds would be dispersed to government-sponsored programs (direct or through contract with private entities) for the collection and recycling of waste electronics.

- 9.4. One stakeholder suggested that an ARF model could be utilized for multiple purposes, including providing some financial incentive for consumers to return used products (like a refund), financing for the costs of collection and transport, and a labeling program that would provide incentives for DFE.
- 9.5. Finally, another stakeholder suggested the possibility of separating the systems for new and historic waste. For historic waste, one option might be to have an agreement from manufacturers on how much they would provide towards management of historic and orphan waste, and then to distribute these funds, on a competitive basis, to whomever can recycle the materials most efficiently (either with or without a third-party organization). When those funds are expended, government could decide whether or not to continue funding the collection and recycling of historic waste. If funds were left over, they could be refunded the difference or it could be used for new product recycling.

10. Other Comments About Financing Models

- 10.1. There were several comments stating the need for any financing structure to address the system as a whole, as opposed to breaking out different duties for collection, transportation, and recycling.
- 10.2. Many stakeholders referenced the need to develop meaningful goals, environmental standards, and definitions regardless of what type of financing system is ultimately selected.
- 10.3. There was overall support to move away from any system that allows the general taxpayer, as opposed to the consumer, to cover costs of management of used electronics.
- 10.4. Some stakeholders felt that we may need to look at two different types of financing structures in order to better transition from managing historic materials to current waste electronics.
- 10.5. Minimize direct government responsibilities for financing whatever type of system is developed. That being said, there was recognition that some government entities have already decided to commit to some level of responsibility regarding waste electronics.
- 10.6. Government has limited expertise for transporting materials; while some local governments may have very limited capabilities in their own jurisdictions, state governments have no experience to warrant involvement in this part of the system. Many suggested a reverse distribution model for transporting electronics.

- 10.7. Many stakeholders referenced the need to be mindful of possible price-fixing or anti-trust implications of any financing model that we discuss.
- 10.8. Some stakeholders felt that incorporation of DFE criteria into setting of advance recovery fees, for instance, would result in a more expensive model, because sorting of products by design and/or name brand would be required.

Questions for Feedback to MN

1. What is the current situation for electronics recycling for your (city, state, company)?
2. Describe how you feel about electronics recycling being paid out of the general tax base.
3. Tell me how you feel about **end-of-life recovery fees**. Describe what you think are the advantages and disadvantages of such programs. (Examples include white goods collections, OEM mail-in collections, some dropoff collections)
4. Tell me how you feel about **advanced recovery fees (ARF)** that are paid at the point of purchase. Describe what you think are the advantages and disadvantages of such programs. (Examples include tires, used oil (9 states), SWICO, eco-fees for e.g. paint in Canada)
5. **Model #4**, as described at the NEPSI meeting in San Francisco, is a specific example of an ADF. Under Model #4, an ADF that covers collection and transportation would be assessed at the time of purchase upon the consumer. Producers would be responsible for covering the cost of recycling. What do you feel are the specific advantages and disadvantages of this model?
6. Tell me how you feel about **product licensing fees**. These costs could be passed down to the consumer. Describe what you think are the advantages and disadvantages of such programs. (Examples include RBRC and German Green Dot packaging program)
7. Tell me how you feel about **deposit-refund systems**, where consumers would pay a deposit when a new product is purchased and receive a portion back when the product is returned. Describe what you think are the advantages and disadvantages of such programs. (The classic example is bottle bills)
8. **Model #9**, as described at the NEPSI meeting in San Francisco, is a specific example of a deposit refund system. Under Model #9, a deposit that covers collection and transportation would be assessed at the time of purchase upon the consumer. Producers would be responsible for covering the cost of recycling. What do you feel are the specific advantages and disadvantages of this model?
9. What other models do you believe merit further research and discussion? Why?
10. Do you have any other comments about financing models?

MODELS OF COLLECTION, TRANSPORT, RECYCLING AND FINANCING
From San Francisco NEPSI Meeting 6/22/01

| Model | Who Collects/Pays | When pay | Who Transports/Pays | When pay | Who recycles/pays | When pay |
|---|--|-------------------------------------|---|---|---|---|
| 1. Public Pays | Governments/ taxpayer | tax or monthly fee | Governments/ taxpayer | tax or monthly fee | Government contractor/ taxpayer | tax or monthly fee |
| 2. Governments Collect, Transport, Producers Recycle | Governments or contractor/ taxpayer | tax, monthly fee or drop-off fee | Governments or contractor/ taxpayer | tax, monthly fee or drop-off fee | Producers or contractor/ producers | fee on sale of new products or pay at time of recycling |
| 3. Governments collect; retailers collect, producers transport, recycle | governments, retailers, contractor/ taxpayer, consumer | tax, monthly fee or drop-off fee | producers or contractor/ producers | fee on sale of new products or pay at time of transport | producers or contractors/ producers | fee on sale of new products or pay at time of recycling |
| 4. Governments collect, retailers collect, ADF for collection, transport, producers recycle | governments, retailers/ consumer | ADF on purchase of new products | governments, retailers/ consumer | ADF on purchase of new products | producers or contractors/ producers | fee on sale of new products or pay at time of recycling |
| 5. Consumer Pays Disposal Fee | Governments, retailers/ consumer | at collection site | contractor/ consumer | at collection site | contractor/ consumer | at collection site |
| 6. Consumer Mail-in Program | Producer, contractor/ consumer | at time of mail in | producer, contractor/ consumer | at time of mail in | producer, contractor/ consumer | at time of mail in |

MODELS OF COLLECTION, TRANSPORT, RECYCLING AND FINANCING
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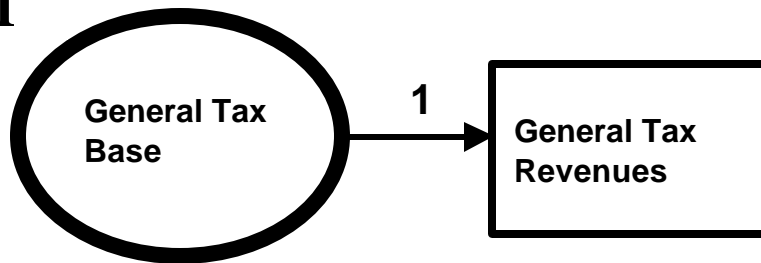
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| Model | Who Collects/Pays | When pay | Who Transports/Pays | When pay | Who recycles/pays | When pay |
|--|---|---|---|---|--|---|
| 7. Consumer ADF Pays for All | governments, producers, contractors/ consumer | ADF on purchase of new products | governments, producers, contractors/ consumer | ADF on purchase of new products | governments, producers, contractors/ consumer | ADF on purchase of new products |
| 8. Deposit/ Refund System–full pay | governments, retailers/ consumer | deposit on purchase of new product, refund when return less than deposit | governments, retailers/ consumer | deposit on purchase of new product, refund when return less than deposit | governments, retailers, contractors/ consumer | deposit on purchase of new products, refund when return less than deposit |
| 9. Deposit/ Refund System–pay for collection, transport, producers pay for recycling | governments, retailers/ consumer | deposit on purchase of new product, refund when return less than deposit | governments, retailers, contractors/ consumer | deposit on purchase of new product, refund when return less than deposit | producers, contractors/ producers | fee on purchase of new products or pay at time of recycling |
| 10. Producer Pays All | governments, retailers, contractors/ producers | fee on purchase of new products or pay at time of collection | producers, contractors/ producers | fee on purchase of new products or pay at time of collection | producers, contractors/ producers | fee on purchase of new products or pay at time of collection |
| 11. Retailer Collection, Shared Costs with producers | retailers, contractors/ retailers, producers consumer | consumer at time of drop-off, retailers, producers as fee on new products | retailers, contractors/retailers, producers, consumer | consumer at time of drop-off, retailers, producers as fee on new products | producer, contractor/ retailers, producers, consumer | consumer at time of drop-off, retailers, producers as fee on new products |
| 12. Producer Administered Advance Pay | governments, retailers/ producer fund | producer pay to fund at time sell product | producers, contractor/ producer fund | producer pay to fund at time sell product | producer, contractor/ producer fund | producer pays extra or gets refund |

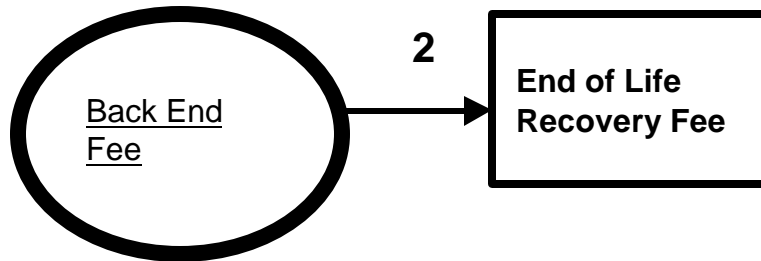
Payment Methods

General Program Models

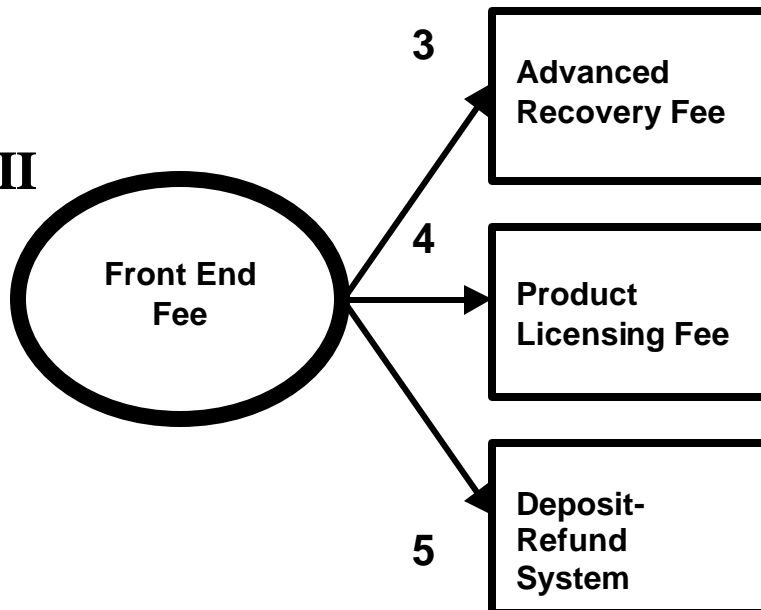
I



II



III



Implementation Issues

(After deciding on general program model)

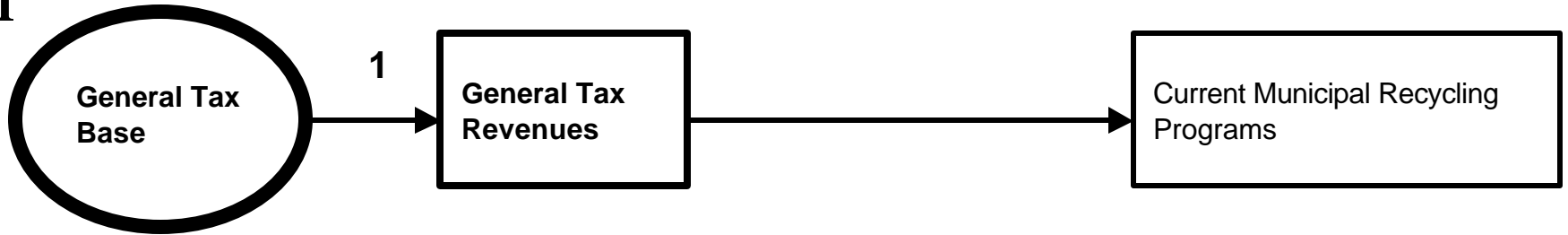
- 1) Is the fee visible or invisible?
- 2) How will this system recognize historical waste?
- 3) How will this system recognize orphan products?
- 4) How can this system address environmental standards for recovery?
- 5) Can this system account for regional and geographical differences?
- 6) Can this system allow for high levels of consumer education, convenience, and participation?
- 7) Can this system provide for a design for environment incentive?
- 8) How does this system allocate costs (e.g. for collection, transportation, recycling, education)?
- 9) What type of oversight system is needed?
- 10) Is there a need for backdrop legislation to implement the system?
- 11) Is the system managed publicly or privately?
- 12) How will the system distribute funds to state and local governments (e.g. market or per capita)?

Payment Methods

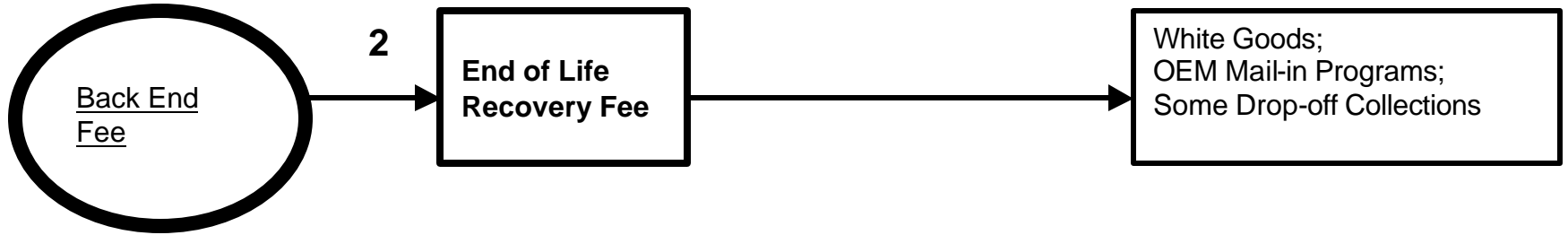
General Program Models

Specific Examples

I



II



III

