

CFL Recycling Project

Meeting Two Summary

The second meeting was held December 12, 2002. The aim of the meeting was to confirm which recycling model would serve as the basis for the pilot, and further discuss financial flow models and potential funding options. Participants in CFL recycling programs from Indiana, Minnesota, and Seattle were invited to join by teleconference and give their perspective, including the basics of their program, and the benefits and challenges. Confirming or rejecting the notion to expand the pilot to include tubes was also put to the Group.

Perspectives on Recycling Programs

- Waste District perspective of Indiana recycling program (Allen County)
Stacie Perkowskie: The program was created and initiated by the Governor in 1998 with the intent to make a safer environment for kids. It has been an award-winning program and created much positive PR as an example of government (public) and private enterprise cooperating for the benefit of all. Six solid waste districts are involved, with Allen County (population 330,000, major city is Fort Wayne, IN) as the hub. The program is funded 75% by the State of Indiana, and 25% by each of the solid waste districts. They aligned with Sears as their retail partner. She pitched the idea to Sears corporate in Chicago and they agreed. Now there are 10 Sears stores involved state wide, and the advertising has shifted from specific to Allen County to a more generic and consistent advertising campaign for all of Indiana to participate. All the advertising and promotional literature and bin signs, etc., consists of the same graphics and colors in all stores for consistency. She has had calls from several other major retailers (Home Depot, Lowe's, Menards, etc) expressing interest and also hinting to favoritism for Sears, however upon follow-up they have all been slow to respond and did not show up for initial meeting. She has very close working relationship with Sears and all the Sears dock workers that handle the recycled bulbs.

Benefits: It is a shining example of a public-private partnership. Sears is an excellent partner because they are open 363 days a year. Sears appreciates the increase in foot traffic of shoppers as they drop off bulbs. They receive 1100 bulbs/month.

Challenges: There have been some instances of abuses – the program is targeted at consumers in Allen County. However there have been consumers coming from Ohio (20 miles away) to recycle bulbs, but they usually accept those also. And there have been instances of businesses dropping off office bulbs. So they are working to educate businesses of alternative recycling options.

- Recycler perspective of Minnesota CFL recycling program (Mercury Technologies)
Sue Yarusso: Fluorescent bulbs were banned from all Minnesota landfills in 1993, no exceptions. Customers pay an end-of-life recycling fee to the retailers when customers bring in a burned out CFL. Mercury Technologies does not receive any government money. They have developed a statewide program with hardware stores and electric utilities. There are currently 200+ hardware stores participating in the program. Retailers serve as receivers of the bulbs from the consumers, and then Mercury Technologies picks up the bulbs from the hardware stores and recycles them. The state law declares that no business can hold more than 1000 bulbs in one location without a special permit. Hence it is important to pick up the bulbs from the hardware stores before they get 1000. Retailers have the freedom to set their own rates that consumers pay for recycling. And most consumers are returning bulbs with a coupon for 50 cents redemption provided by the electric utilities. Utilities are able to contribute coupons through their conservation programs.

Challenges: Initially it was difficult to convince the hardware stores to dedicate floor space for this program. Also it is challenging to coordinate the timely pickup of bulbs from the stores, which number 200 around the state. Each pickup involves picking up 2 bins, one for 4 foot tubes, one for 8 foot tubes and replacing them with 2 empty bins of same size whether the bins are completely full or not.

Benefits: It is convenient for the consumer. Local stores are used so it benefits the local economy and small businesses, and their hours of operation are more convenient than a government agency. There was some concern that going into Hennepin County (where the Twin Cities are located – the major population center for MN) that the smaller stores would not work out, but this has not been the case. The Minnesota Household Hazardous Waste Dept (by county) also collects bulbs for free from residential customers. However retail hardware stores prove to be more convenient for the majority of consumers than driving to the hazardous waste facilities.

- Large retailer perspective of Washington CFL recycling program (IKEA Seattle)
Betty Stauch: The IKEA representative was unable to call in for the meeting, though a brief description of the program was given to facilitate discussion. IKEA is a European company (with European culture and philosophy) and are a “Natural Step” company. They kicked off their recycling program by giving away 35,000 CFLs to customers. They have created a neatly designed kiosk that is unobtrusive and does not take too much retail floor space. CFLs are put into individual plastic bags and then into bins for transporting. They accept 4 and 8-foot tubes and CFLs, though they only sell CFLs. IKEA views this program as an additional service they can offer their customers. IKEA also has a free Christmas tree recycle program, which again correlates to their environmental ideals.

Aims of the Pilot Project

The Group raised several relevant issues concerning the aim of the pilot project and the need to clarify goals, for example: What should the Group pilot? What is the Group trying to achieve as far as volume of recycling in the pilot program? Should the pilot test rural and urban areas? What does the Group want to measure? The Group recognized that all participants might have varied views concerning the purpose of the pilot project but that through consensus a favorable outcome could emerge. In general it was felt that a main aim is to set up a generic model that can be applied/duplicated throughout the region. A generic model however, may not apply or work in each region without some modifications.

Confirming Retail Option

The Group came to a consensus that collection of CFLs through retail would be the model for the pilot. Many favored retail because it had worked in other programs in country. Retail would offer a unique approach in the Northwest because recyclers and government are already using special events and household hazardous waste to collect CFLs. The retail option was thought to be more convenient and would reach more people than the current methods.

Expanding the Pilot to include Tubes

The Group agreed to expand the pilot project to collect tubes as well, though this would be an option for participating retailers. Reasons supporting this decision were as follows:

- Expandability is in-line with project principles
- Recyclers are equipped to accept tubes
- Tubes are a greater source of mercury
- Tubes are also household generated
- Accepting tubes would raise the need to recycle all fluorescents
- Collection of tubes was successful in case studies

However, there were some concerns about collecting tubes, including the additional storage space required and the unknown cost to the project. Although the project was initiated in response to the promotion of CFLs during the 2001 energy crisis, it was felt that collection of tubes was within the scope of the project and that fewer tubes would be returned than CFLs.

Example Recycling Models

The Group began discussions on CFL material and financial flow, though it was decided later that focusing on financial flow (setting up a pay structure and method for administering the system) in the pilot would not be practical considering the relatively short 12-month collection period. If a regional program is put in place it is assumed that the consumers will ultimately be responsible for covering recycling costs through a recovery fee. The models leading that discussion are included below.

The CFL material/product flow is essentially the same in each model: new CFL purchaser, CFL user at end of CFL life, collection center (retail, HHW, event, etc), transporter/recycler. The primary variation from model to model is in the funding chain or financial/money flow. There are eight basic models (not including the Indiana and Minnesota models) representing various financial flows. It is important to note that the models can be varied in many ways and it is likely that a hybrid with variations may be determined to be most effective.

The concept of a Collective Fund has been briefly discussed at the meetings. Generally defined, a Collective Fund could represent an administrator of funds or an account made up of contributions from various project funders. Potential roles for the Collective Fund are included in the example models flowcharts in the next section. At the time of this writing, funding options for the project have been identified though not confirmed. An explanation of example models follows. (See Appendix for flowcharts for the models)

Example Model A: Solid Waste Financing (curbside)

The general public pays a tax or monthly fee (bill) to the waste hauler. The waste hauler picks up CFLs with curbside recycling. The waste hauler then transports (or funds transport of) CFLs to a recycler. The waste hauler also pays recycling costs.

Indiana Model: State grants and waste districts with participating Sears stores split collection, transport and recycling costs. CFL users drop-off burned out lamps at participating Sears stores. Waste districts manage and administer the program.

Minnesota Model: CFL users pay an end-of-life recovery fee to retailers that take-back burned out lamps for recycling. A utility provides coupons to reduce the financial burden on CFL users. Retailers charge various prices to take back burned out lamps, and then pay recyclers for transporting and recycling the CFLs.

Example Model B: End-of-life recovery fee

Similar to the Minnesota model, the CFL user pays an end-of-life fee to the retailer. The retailer then pays the transporter/recycler; and the utility could potentially provide coupons.

Example Model C: Advanced recovery fee (ARF)

In this model the CFL purchaser pays an advanced recovery fee to the retailer that is then passed on to a collective fund. The collective fund then pays the retailer for the number of actual burned out lamps returned to the store. A portion of this payment

will be used by the retailer to pay transport and recycling costs; or alternatively, the collective fund could pay the retailer and transporter/recycler separately.

Example Model D: Advanced recovery fee with deposit

The CFL purchaser pays an ARF with deposit fee to the retailer. The ARF with deposit will be passed from the retailer to the collective fund. Similar to Example Model C, the collective fund pays the retailer for the number of actual burned out lamps returned to the store. The retailer will refund the deposit to the CFL user upon return of CFLs at end-of-life. A portion of the payment from the collective fund will be used by the retailer to pay CFL transport and recycling costs; or alternatively, the collective fund could pay the retailer and transporter/recycler separately.

Example Model E: Group financing of retail collection

In this model, the Collective Fund supports collection of CFLs at retailer, and transport and recycling of CFLs. Funders contribute to the collective fund that administers and manages the program.

Example Model F: Group financing of retail collection with deposit

The CFL purchaser pays a deposit to the retailer at the time of product purchase. The deposit is passed from the retailer to the collective fund. The collective fund pays the retailer for the number of actual burned out lamps returned to the store. The retailer will refund the deposit to the CFL user upon return of CFLs at end-of-life. Funders contribute to the collective fund that administers and manages the program. A portion of the payment from the collective fund will be used by the retailer to pay CFL transport and recycling costs; or alternatively, the collective fund could pay the retailer and transporter/recycler separately.

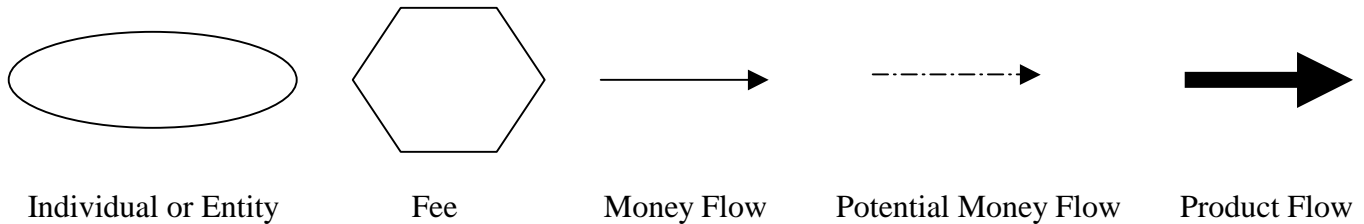
Example Model G: Group financing of household hazardous waste and recycling events

Funders contribute to the collective fund that administers and manages the program. The collective fund supports the increased use of household hazardous waste and recycling events, and the transport and recycling of CFLs.

Example Model H: Producer paid (Internalized fee in product price)

In this model, the producer internalizes the collection, transport and recycling costs into the price of CFLs sold to retailers. The producer then passes this internalized fee on to the collective fund that administers and manages the program.

Model Key



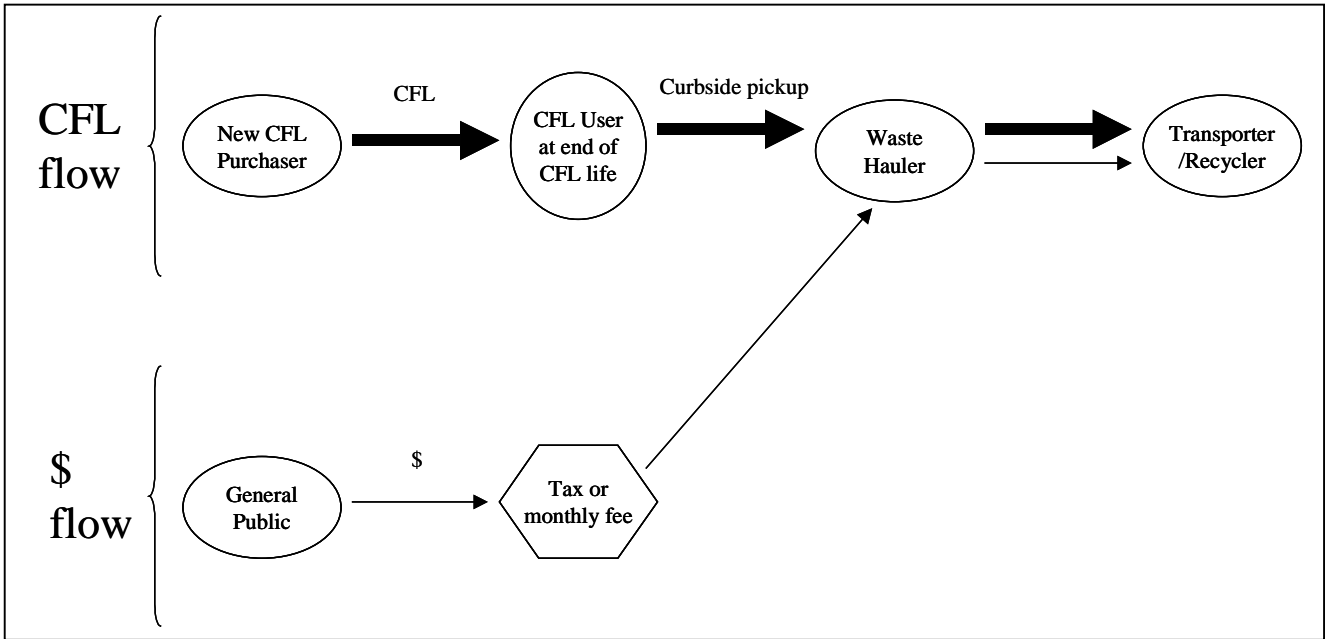
Principles for Evaluating Example Models

Would the model meet the project principles below?

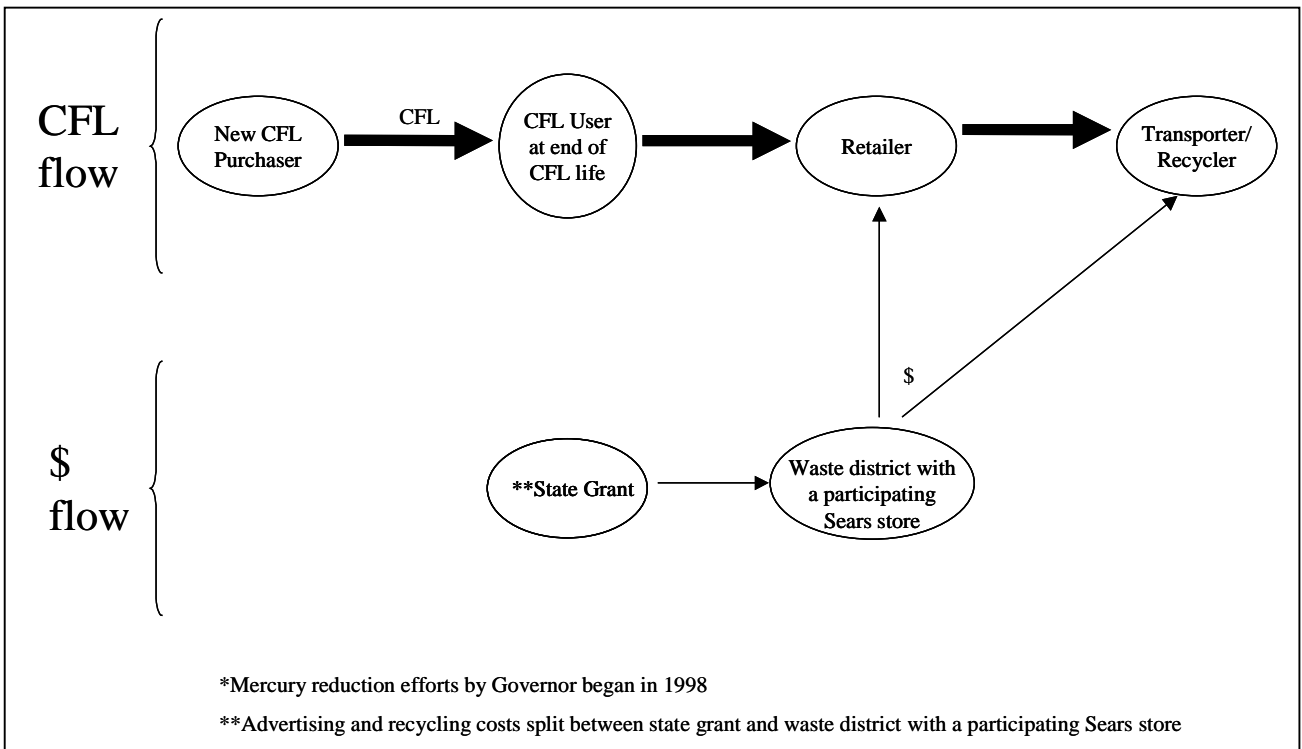
- **Environmental Protection:** Primary goal is to avoid mercury buildup in the environment associated with the use of CFLs. A specific project goal is to avoid mercury emission during the collection, transportation and recycling of the CFLs.
- **Easy Access:** The recycling system should allow the public to easily recycle their CFLs by providing the most convenient recycling opportunities possible
- **Low Cost:** The costs of the recycling system, such as collection, transportation and recycling, should be minimized.
- **Fair Cost Allocation:** The costs of the recycling system should be allocated fairly so as to minimize impacts to manufacturers, retailers, waste handlers, state and local government and other involved in the collection, transportation and recycling of CFLs.
- **Compliance:** The recycling program must provide for compliance with all applicable regulations, such as RCRA, CERCLA, state solid waste regulations and the Universal Waste Rule.
- **Education:** Education and public outreach are vital components of a successful CFL recycle program. They should point out that CFLs are safe in the home and provide an overall environmental benefit, but if not handled and recycled properly can create environmental and human health impacts.
- **Replicable:** To the extent possible, the program will be designed so that after its implementation in Oregon, it can be easily replicated in other areas, especially in the Western United States.
- **Expandable:** CFLs are only one of several sources of potential mercury emissions. To the extent possible, this program should be expandable so that it may later include the collection and recycling of other mercury bearing items, including increased recycling levels for fluorescent light tubes.
- **Recycling System:** The participants are committed to developing a pilot project to test CFL collection and recycling methods with the intent that it will lead to a sustained recycling system.
- **Sustainable:** the group as a whole should design the system so that it can sustain itself without ongoing involvement.

Example Recycling Models – Flowcharts
 Meeting Two: Compact Fluorescent Lamp Recycling Project

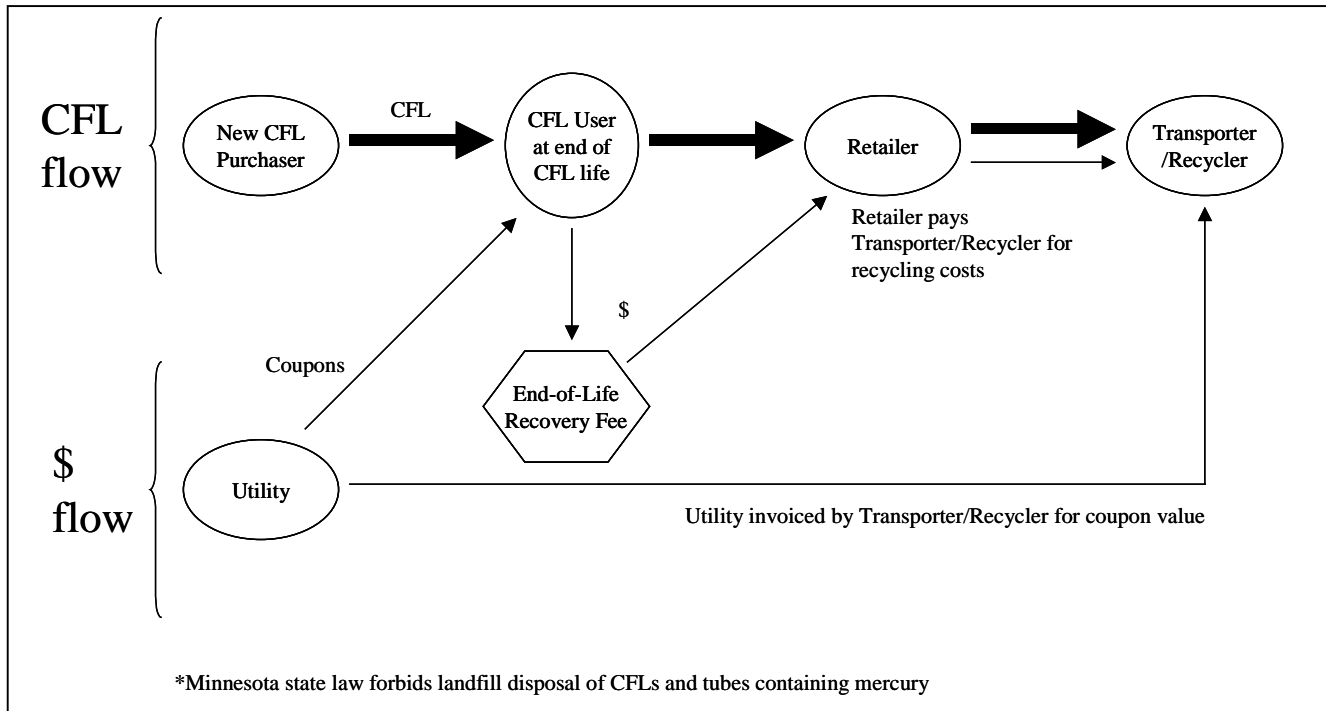
Example Model A: Solid Waste Financing (curbside)



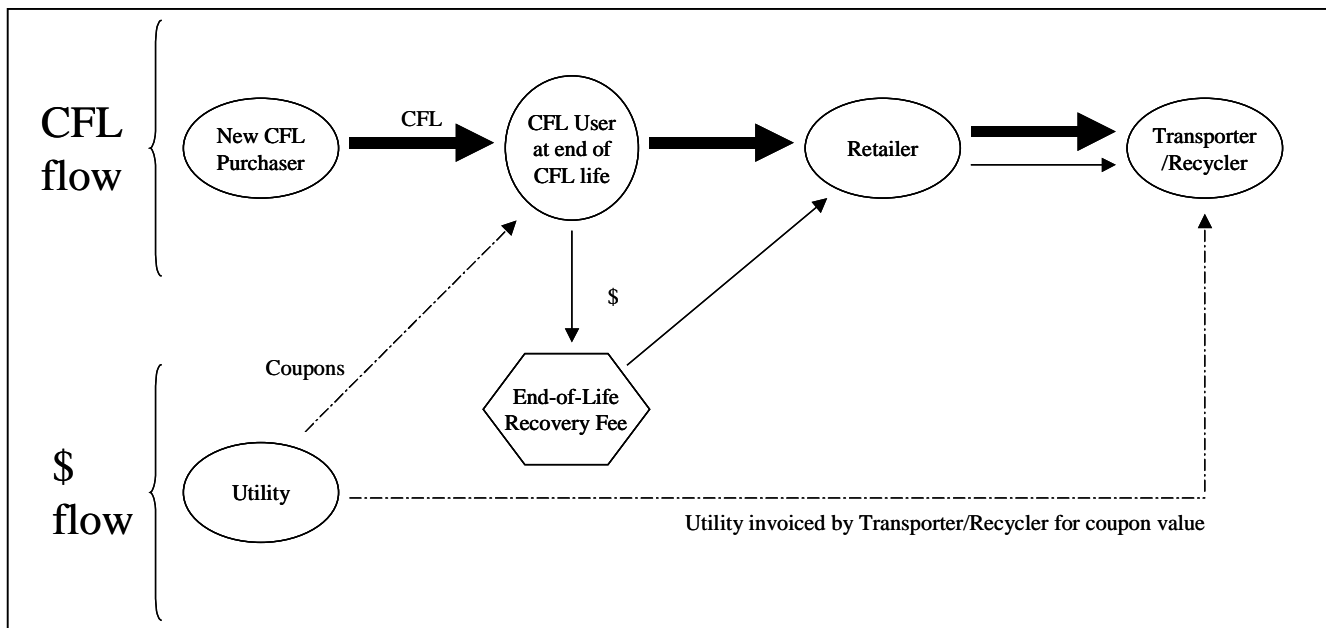
***Indiana Model**



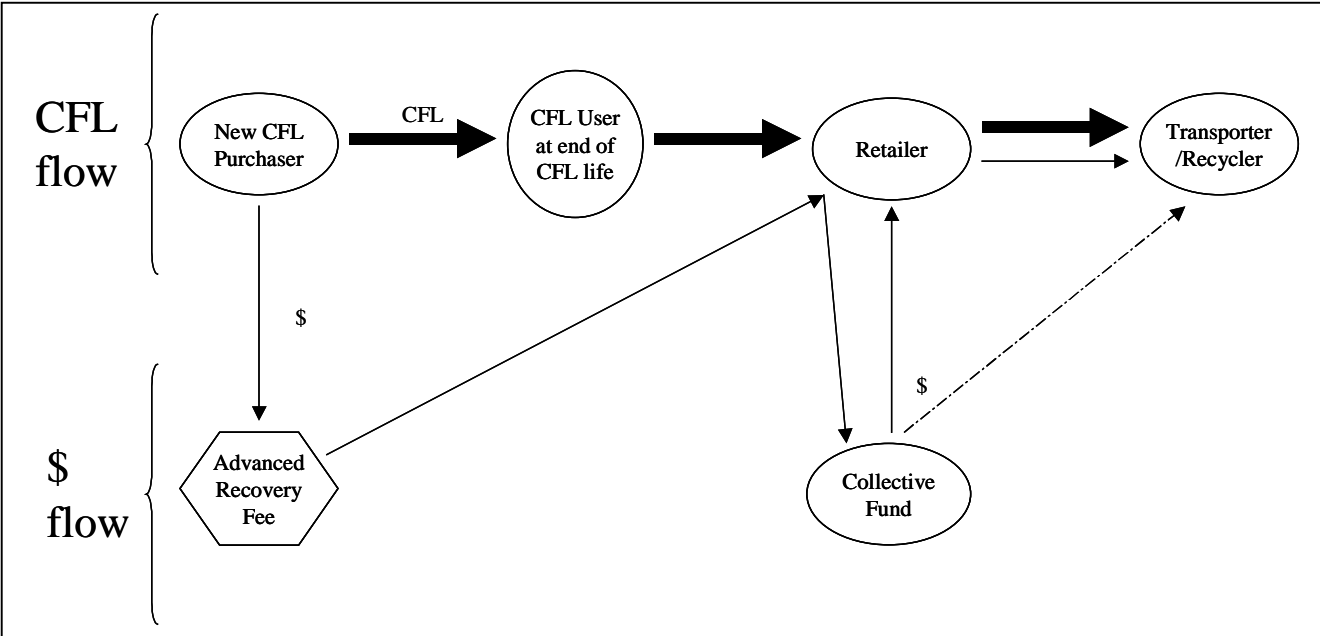
***Minnesota Model**



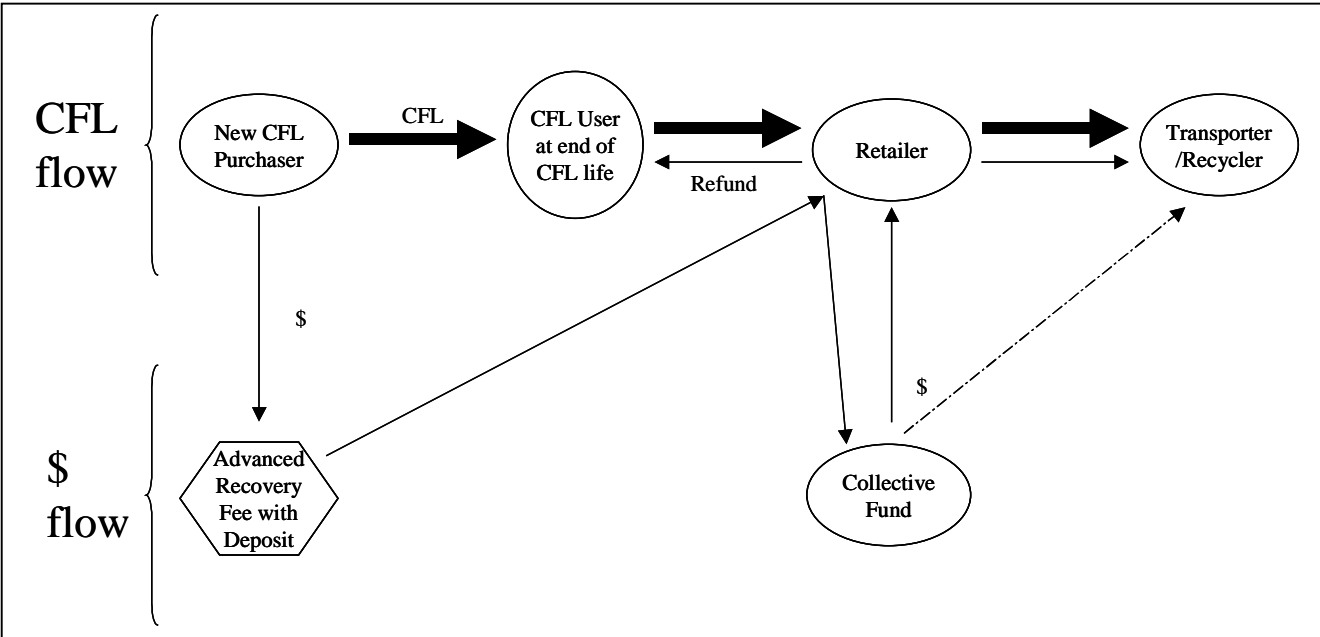
Example Model B: End-of-Life Recovery Fee



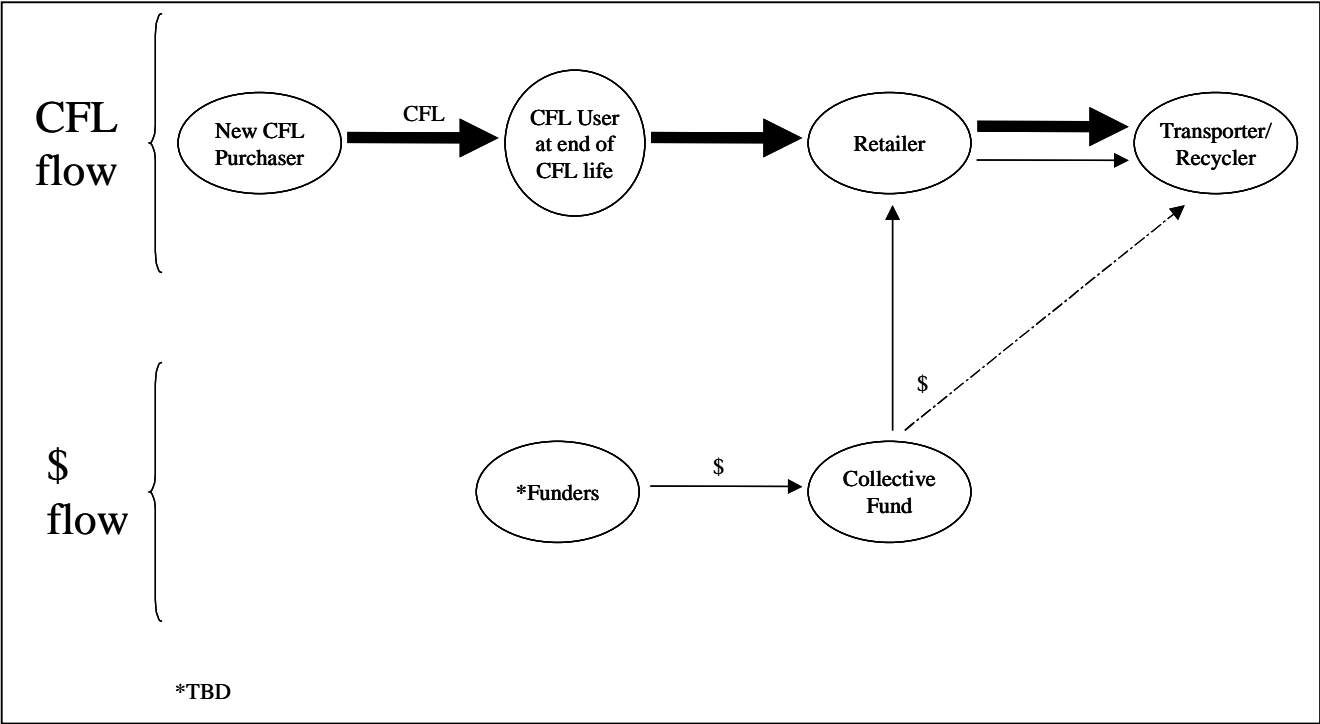
Example Model C: Advanced Recovery Fee



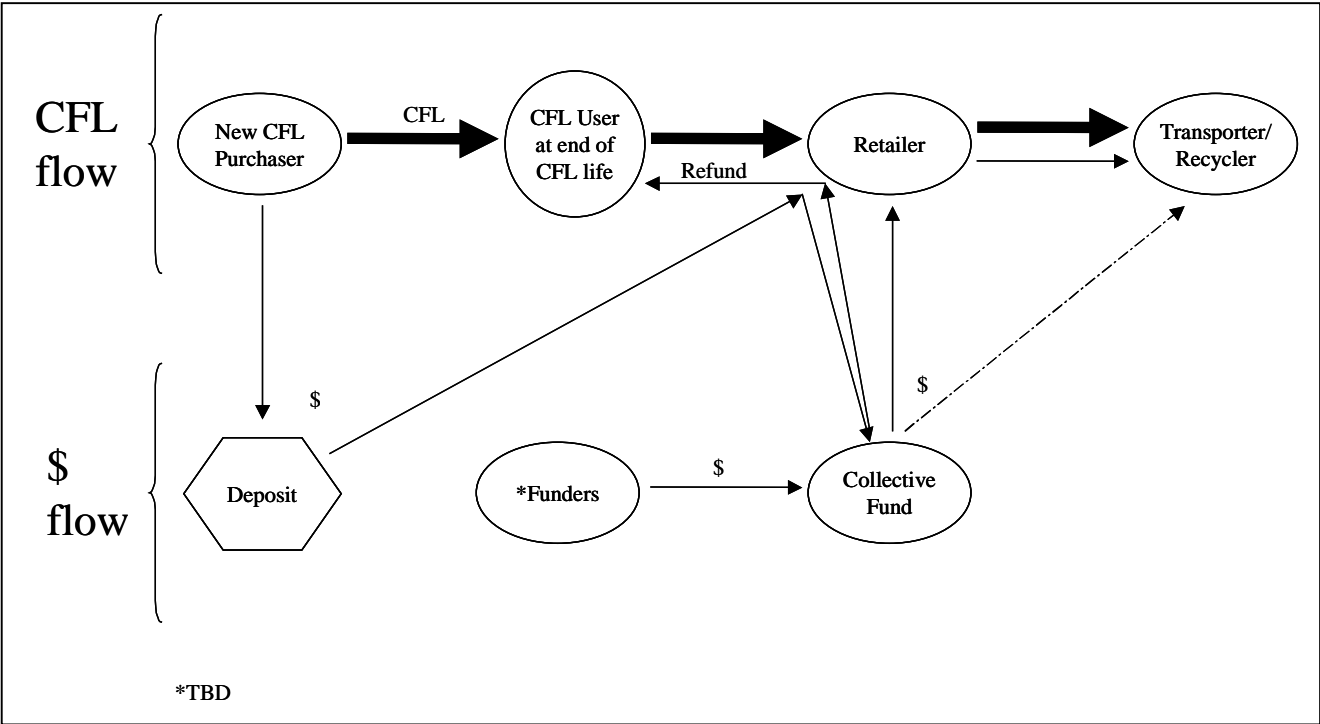
Example Model D: Advanced Recovery Fee with Deposit



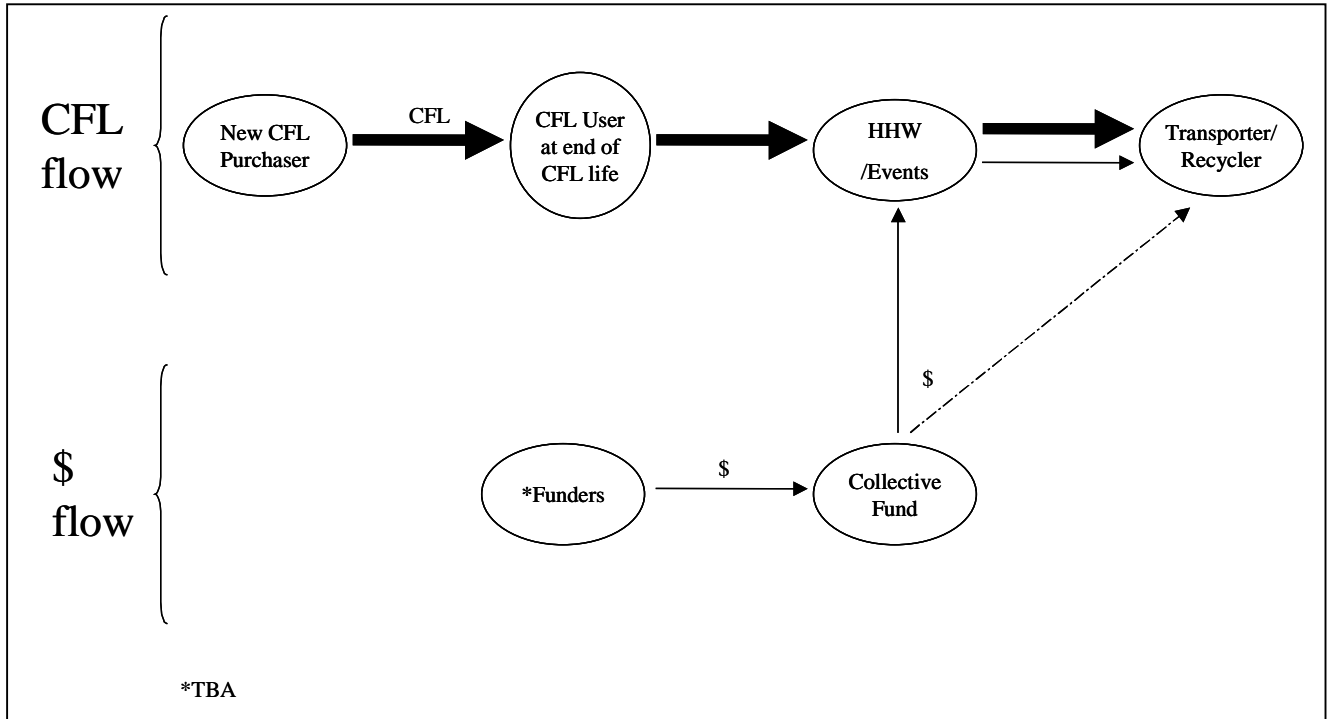
Example Model E: Group Financing of Retail Collection



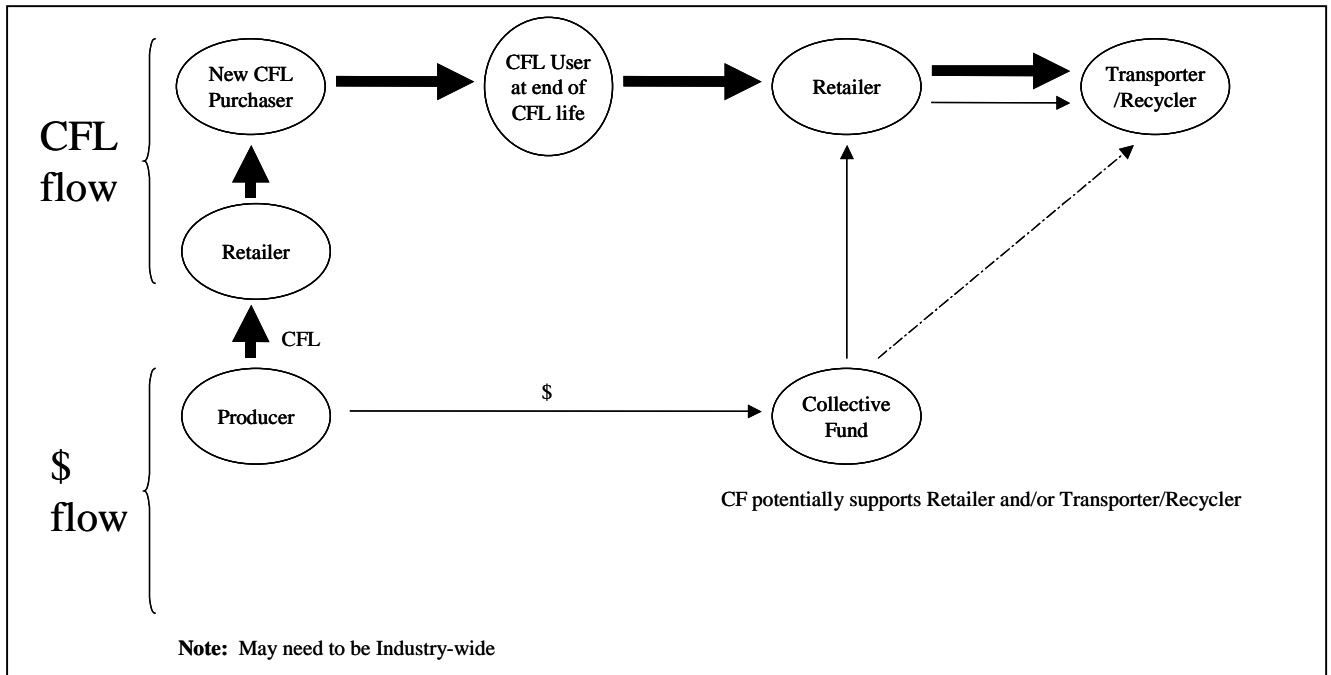
Example Model F: Group Financing of Retail Collection with Deposit



Example Model G: Group Financing of Household Hazardous Waste / Recycling Events



Example Model H: Producer Paid (Internalized fee in product price)



Others?