Environmental Resource Center
Destination Conservation
Profile #82

Executive Summary

Destination Conservation (DC) is a school retrofit program that demonstrates a clever formula for energy and water savings. The program engages school principals, custodians, students, faculties, and their communities in a cooperative effort to gain incremental dollar savings which can then be used for more and more sophisticated retrofit measures. Conceived in Edmonton, Alberta, Canada, by staff at the non-profit Environmental Resource Center, the program is based on a three-year staged approach whereby no and low cost retrofits in Year 1 create savings that can then be applied to progressively more comprehensive efficiency measures in Years 2 and 3. Basic "lifestyle" changes in Year 1, such as turning off unneeded lights, create savings that can be applied to low cost retrofits, such as purchasing and installing occupancy sensors to control classroom lights, which in turn can create revenues for more capital intensive retrofits such as replacing incandescent lamps with compact fluorescents.

The DC "formula" for savings utilizes the abilities of three key players: DC, which facilitates the process and provides the expertise; the school district, which harnesses the collective energy of students and staff alike; and a corporate sponsor, which provides early capital for audits and trainings, and then later provides additional capital for comprehensive retrofits. Corporate sponsors, which to date have primarily been utilities, recoup all their money over time. A new program track, begun in early 1994, allows schools to move directly to capital intensive retrofits, which are generally subcontracted to regional firms, with their commensurate dollar savings in Year 1. In both tracks, the program enables schools to retrofit their facilities without any cash outlay and then provides schools with positive cash flow since their loan repayments are structured to be less than their monthly bill savings.

To date, 24 school districts in Alberta with over 220 schools have participated or are currently participating in the program. In Ontario and Saskatchewan, three school districts are participating, while British Columbia and New Brunswick each have two school districts involved in the program. In terms of savings, the DC program promotes comprehensive retrofits and works with schools to get systematic retrofits done at the lowest possible cost. The 87 participating schools in TransAlta Utilities' service territory, for example, have saved an average of approximately 25% of their baseline utility bills. And while these energy savings are financially attractive to the schools, Destination Conservation also plays an important role in teaching schoolchildren about their role in protecting the environment and sustainable development by getting students integrally involved in the process.

ENVIRONMENTAL RESOURCE CENTER
Destination Conservation

Agency:	*Environmental Resource Center, Alberta, Canada*
Sector:	*Schools*
Measures:	*A wide range of customized efficiency measures ranging from low and no cost to capital cost measures addressing electricity, fossil fuel, and water use*
Mechanism:	*Technical and behavioral audits identify savings opportunities. Students and staff are involved to capture low cost savings; later supported by sponsor-provided capital loans for more sophisticated retrofits*
History:	*Began in 1987 in Alberta, Canada, and has since spread to six other provinces*
Participation:	*34 districts, 297 schools*

SAMPLE SCHOOL DISTRICT
CUMULATIVE THREE-YEAR SAVINGS

Electricity:	*1,485 MWh*
Gas:	*9,617 million Btu*
Water:	*2.78 million gallons*
Financial:	*$148,347*

CONVENTIONS

For the entire 1994 profile series all dollar values have been adjusted to 1990 U.S. dollar levels unless otherwise specified. Inflation and exchange rates were derived from the U.S. Department of Labor's Consumer Price Index and the U.S. Federal Reserve's foreign exchange rates.

The Results Center uses three conventions for presenting program savings. ANNUAL SAVINGS refer to the annualized value of increments of energy and capacity installed in a given year, or what might be best described as the first full-year effect of the measures installed in a given year. CUMULATIVE SAVINGS represent the savings in a given year for all measures installed to date. LIFECYCLE SAVINGS are calculated by multiplying the annual savings by the assumed average measure lifetime. CAUTION: cumulative and lifecycle savings are theoretical values that usually represent only the technical measure lifetimes and are not adjusted for attrition unless specifically stated.

Destination Conservation (DC) is an energy-efficiency program that is targeted at schools and is spreading quickly throughout Canada. The goal of the program is to create a climate of conservation and responsible energy and resource consumption within the school community. Not only does the program enhance schools' environmental curricula, but it also provides pragmatic means for schools to reduce their energy and water use, allowing them to save money while preserving the environment.

Since its inception in 1987 using a staged retrofit approach that essentially leverages greater and greater savings by using early, no and low cost savings to create capital for more complex retrofits later, Destination Conservation has evolved thanks to corporate partnerships and now assists and enables schools to perform comprehensive capital-intensive retrofits early off using project finance arranged through the program. Schools that elect this option, however, must also engage in the educational aspects of the program.

The program's genesis came from the Edmonton Public School District's impetus to save energy, despite the fact that the District lacked the capital to perform retrofits. This is when Eckhart Stoyke, the Energy Technician for the District, Don Kenyon, a teacher at one of its schools, and Brian Staszenski of the Environmental Resource Center located in Edmonton, teamed up to create the concept behind Destination Conservation. This trio, with Brian Staszenski leading the way, then worked hard to turn this vision for energy efficiency in schools into a reality.

Staszenski, now DC's Program Manager, believed that low and no-cost efficiency measures in schools could create a stream of savings that would then allow for more sophisticated retrofits. Thus, he created a three-year program for schools based on a unique three-way partnership between DC, school districts, and corporate sponsors.

One of the unique and most positive aspects of DC is that the program is largely self-financing using an innovative shared-savings approach. Not only do the schools accrue financial savings to use at their discretion or to repay their loans, but the administration of the program is also paid for out of the savings. For example, for retrofits promoted by TransAlta Utilities (the program's leading sponsor), 90% of the savings flow back to the school (usually to pay off the retrofit fund), 5% goes to the program facilitator (DC), and 5% to the corporate sponsor (TransAlta).

Destination Conservation is a project physically housed in Edmonton, Alberta's Environmental Resource Center, a community-based information center which was established in 1979 under the auspices of the Tomorrow Foundation, a federally chartered, non-profit organization. The Center also houses the offices of the Toxics Watch Society of Alberta, the Alberta Wilderness Association, the Rainforest Action Group of Edmonton, and the Alberta Environmental Network. These combine to make a center that assists individuals and community groups working to preserve and protect the environment.[R#7]

Destination Conservation has been developed in Alberta, a Canadian province where energy efficiency has been driven by a widespread regional environmental awareness. This societal awareness is based on the fact that Canada as a whole unwillingly boasts one of the highest energy consumption rates per capita in the world. More specifically, TransAlta Utilities Corporation, in the Province of Alberta, is one of the largest carbon emitters in all of Canada. Thus, a widespread regional acquiescence to pursue energy efficiency endeavors has been a fundamental source of motivation behind the success of the program.

With the program's burgeoning success throughout Alberta, it has now spread across Canada. To date, twenty-four Alberta school districts, three Ontario and Saskatchewan school districts, two British Columbia, and two New Brunswick districts are currently implementing the program. While the program is spreading throughout Canada, this profile will focus on Alberta, Canada and the TransAlta Utilities Corporation service area school districts where the program originated and where it has had its greatest success to date.

In addition to the energy and resulting dollar savings at the schools, the program has another important element, namely teaching schoolchildren about their role in protecting the environment and sustainable development. By providing program participants with essential information and by creating opportunities to identify, implement, and monitor specific conservation practices in their immediate environment, the DC program increases the awareness of school staff and students towards their place in the global ecosystem, and additionally emphasizes the importance of an energy-efficient society, promoting individual and collective action towards a sustainable environment. [R#2] ■

MARKETING

In 1987, in response to tight school budgets coupled with high energy bills, the Edmonton Public Schools District decided that it wanted to find a way to save energy, money, and help the environment. To do so the District teamed up with the Environmental Resource Center and Brian Staszenski in particular, to develop an innovative program. The resulting program began as a pilot within one of the Edmonton schools. Word of its initial success spread rapidly among school districts and as a result Destination Conservation has not needed any formal marketing or promotions to date within Alberta.

Not having to focus on marketing has allowed DC to focus on what they do best: creating streams of savings in schools. DC's focus is clearly on implementation, as DC's reputation precedes the program and schools are clamoring to get on board. In fact, the program has been so well received that marketing it is not the current limiting factor; instead, keeping up with its rapid pace of implementation has become the program's limiting factor.[R#3]

The program's latest evolution, however, has required some direct marketing by Program Manager, Brian Staszenski. When he set out to recruit corporate sponsors in order to begin the capital cost retrofit side of the program (discussed at length later in this section), he began by establishing contacts at senior levels of potential corporate sponsors. He approached large corporations, banks, and utilities which were already familiar with the DC program and told them he wanted to make DC more comprehensive so that the program could stimulate deeper levels of savings in less time. He didn't, however, ask these potential sponsors for rebates or incentives. Instead he requested that these organizations underwrite a capital cost recovery mechanism such that school districts could finance most or all of the improvements via corporate-sponsored financing. With Staszenski's credibility anchored by the program's successful track record, the corporate sponsors (in this case utilities) agreed to finance retrofits while recouping only their out of pocket costs, and with no additional markup or financing fee. Within Alberta and working with TransAlta, Destination Conservation has attracted the interests of Energy, Mines and Resources Canada, the Royal Bank of Canada, and Canada Trust's Green Fund, all eager to participate in such a viable program. The utility sponsor, TransAlta for example, now markets the program, although very little, via presentations, literature, and mainly word-of-mouth. [R#5]

DELIVERY

As of January 1994, the program has been expanded to encompass two basic implementation tracks. The first and original track is rooted in a sequential approach and is based on a three-year implementation schedule that relies on savings from no cost measures in the first year, from which these savings are used to finance more sophisticated, low-cost measures in the second year, which in turn finance more capital intensive measures in the third year. The second track, or what is called the "capital cost retrofit track," provides participating school districts with immediate access to capital so that they can proceed directly to capital intensive retrofits with their commensurately high levels of energy and dollar savings. Currently, there is a major emphasis on the second track.

THREE KEY PLAYERS' ROLES

The Destination Conservation program is based on a partnership between the DC Consulting team, a corporate sponsor, and the school districts. Each plays an integral role in making the DC program work and their specific roles are presented herein:

Program Facilitator: The DC Consulting team is the program facilitator. This team provides the technical and educational components of the program. The DC Consultant team also provides participating school districts with initial training, or what are called "inservice sessions" for all program leaders, coupled with ongoing management, curricular, and technical support. This team consists of a Program Coordinator, an Energy Consultant, and an Educational Consultant.[R#2]

Role of the Corporate Sponsor: Corporate sponsors provide the initial funding necessary to implement the DC program in the schools, though they ultimately get all their money back. An initial sum of $2,000 per school covers the technical audit ($1,000), plus wages, program manuals, and equipment. The corporate sponsor is invited to attend inservices along with the schools' key leaders. As of January of 1994, the corporate sponsor has also become the source of capital cost retrofit financing.[R#2]

Role of the School Districts: School districts that elect to participate in the DC program are required to formally adopt an Energy Conservation Policy and an Energy Conservation Payback System. Besides promoting increased conservation awareness and habits, a primary responsibil-

ity of the school district is to assure that energy conservation program progress reports are provided to all participants on an ongoing basis. The districts must also provide a mechanism for schools to share in the benefits of the financial savings resulting from the implementation of the energy and water conservation plan. Leadership within the district is provided by an appointed district representative, who in partnership with the DC Consultant team, coordinates and facilitates the implementation of the program. Now that the capital cost retrofits are an option, districts are responsible for sending out the audit's conservation recommendations for tendering to the lowest bidder.[R#2]

Within each individual school educational goals are established to provide both a focus and direction for the students' conservation activities. Leadership for the schools is provided by a Program Administrator.

A key to the success of the DC program is its integration into the school's curriculum. DC distributes a School Program Manual that teaches the students not only about the program and their school's environment, but also about energy, water, and waste management in the world around them. School staff leaders are called upon to incorporate these teachings into math, science, or business classes, allowing students to acquire hands on applications of environmental awareness. Students and staff play a critical role in the implementation of this part of the DC program, developing sound conservation habits. Combined, students and staff set school energy conservation goals, develop a school action plan and implement the conservation campaign, monitor school energy use, and recommend how the school's proportion of savings will be allocated.[R#2]

The school's Conservation Committee is the core planning and organizing group within the school. The key members include the principal, a lead teacher, the building custodian, a lead parent, and a lead student. The Conservation Committee is the body in charge of conducting a school energy audit followed by a conservation campaign that reaches not only the school staff and students, but also the community. The Conservation Committee also supports the establishment of a Conservation Club.

Within the Conservation Committee, each member has specific responsibilities:

The principal must attend Conservation Committee meetings and training sessions provided by the DC Consultant team. He or she leads the school's program implementation by coordinating and communicating the program within the school and then sets school energy and resource goals in consultation with the Conservation Committee, communicates with parents regarding school conservation activities and the resulting savings, and acts as a liaison with the district's DC program representative. The principal also supports student energy and resource monitoring, as well as classroom curricula.[R#2]

The lead teacher must also attend training sessions, Conservation Committee meetings, and act as a liaison with the district's DC program representative. The teacher must provide program leadership for the Conservation Club and the Conservation Campaign by motivating and coordinating the students. Regular reports regarding program activities and results must be presented to the staff. Most importantly, resource materials must be integrated into classroom curricula by the lead teacher.

The lead student(s) must attend Conservation Committee and Conservation Club meetings, and coordinate between the two. The student must also provide leadership to other students, communicating with the student body and the Student Council via assemblies, classroom visits, announcements, and publications.

The building custodian must also attend the Conservation Committee meetings and DC inservice sessions, but additionally must implement specific energy, water, and waste conservation actions plans and strategies. The custodian must communicate with the principal regarding program activities, and advise students in their energy and resource monitoring activities.

Lead parent(s) must attend Conservation Committee meetings, represent parents in the conservation campaign, and promote complementary activities in students' homes. The parents must also communicate the program's purpose, activities, and progress to other parents while encouraging their support.

The Conservation Club is composed of the lead teacher and selected students. The Club's main purpose is to provide the awareness, motivation, and action needed to involve the whole school in conservation activities. The Club publicizes the monthly consumption of energy and water relative to the base level calculations and coordinates the Action Plans with the Conservation ☞

Committee. The Club can consist of a single class or it can be representative of a cross-section of classes. A single class Club can be very effective because it concentrates the focus and contact among the students. A cross-section of classes, on the other hand, provides for completely voluntary student involvement as well as broad representation from several classes and grades.[R#10]

THE STEP BY STEP PROCESS

There are two basic tracks for school participation in the Destination Conservation program. The first track is a three year, "no/low cost retrofit track," that relies on energy savings in early years to finance more comprehensive retrofits in subsequent years. Virtually all retrofits up until January of 1994 have followed this track.

In January 1994 DC offered a new track thanks to a partnership with TransAlta Utilities. This track basically accelerates the retrofit process by providing capital to school districts to implement costly measures immediately, thereby resulting in significant energy savings early in the process.

Note that the tracks are not mutually exclusive. In fact, if a school decides to go the capital cost retrofit track, the normal no/low cost measures are still implemented. For instance, student involvement and the environmental curricula aspects of the original program are key to its overall success. Therefore, despite the accelerated financing, these elements discussed at length are retained. For both tracks, the following basic steps are used with minor modifications.

A needs assessment is conducted: The first step undertaken by DC is an assessment of needs of the particular school district. This is based upon information gathered on electricity, gas, and water usage for the previous year at each school. If the school's usage is at or above a province calculated average, then the DC Consultant team recommends that the school have a full technical audit covering both no/low and capital cost measures to be implemented.

The technical energy audit is designed to identify opportunities to reduce energy consumption. It is performed by an outside consultant and includes: the establishment of a baseline of consumption for water, heating, and electricity; an inventory of no cost/low cost measures for water, heating, and electricity; and an inventory of capital cost measures for water, heating, and electricity. The capital cost measures report contains prices and paybacks for each measure recommended. The district then evaluates the feasibility of the measures and determines whether or not to proceed. (See Sample Technical Audit, Savings section).

A policy is adopted: The program requires that a school district sign and comply with the Limited Program Agreement, a three-year contract with Destination Conservation that requires adoption of a comprehensive Energy and Resource Conservation Policy to determine how such savings can be achieved and what is to be done with the savings. This contract binds both the DC Consultant team and the school district to a formal agreement of cooperation and mutual assistance. Herein, the district agrees to establish a shared-savings agreement for a three-year period for providing and implementing the program. This savings is paid within 30 days from the delivery of DC's invoice to the district.[R#2]

Training is provided at the schools: Next, participating school districts receive direct program training through comprehensive "inservice sessions" conducted by the DC Consultant team for district representatives, principals, teachers, maintenance personnel and custodians. The inservice sessions provide the framework and support necessary to create an energy and resource-efficient school district with environmentally-aware staff and students. Background is provided on how to run an effective energy conservation campaign, how to make the associated technical adjustments and maintenance functions, as well as how to present the program to students. Specific inservice packages for these participants are provided. Throughout the three-year program, school districts receive ongoing support from the DC Consultant team via these sessions. Answers to technical questions or advice on the classroom or school-based activities is also provided.[R#1,2]

"Lifestyle" audits are executed: After the DC Consultant team conducts the initial inservice session and a contractor performs the technical energy audit, a DC guided "lifestyle" energy audit is conducted by each school. This audit determines many of the no-cost measures that the school can begin undertaking. These include simply turning off lights, fixing leaky faucets, and reducing the temperature on thermostats and hot water heaters.

Action plans are developed: The results of the "lifestyle" audit are the roots for the formation of an Action Plan. The Action Plan, carried out by students and staff, is the guiding structure for achieving and maintaining energy efficiency. It is then developed and implemented by each school.

Although the Action Plan is run jointly by the Conservation Committee and the Conservation Club, the Action Plan is developed by the Conservation Committee. The Action Plan kicks off a year of school awareness activities and action committed to the reduction of school energy and resource consumption. It begins with the student audit, that, combined with the recommendations from the DC Consultant team, create the foundation on which school priorities are made.[R#10]

Ongoing assistance and support: Districts implementing the energy conservation program are provided with ongoing assistance and support. In the past, schools have requested and received assistance in the provision of conservation ideas, energy monitoring techniques, energy analysis matters, and information on energy-efficient retrofit technologies. A follow-up workshop with the lead teacher and the Conservation Club is advised. This workshop ideally should be conducted about two months into the program to keep program momentum going. At the end of the year the difference in savings is determined and allocated.[R#1]

NO/LOW COST RETROFIT TRACK

The track that has been used to date, in fact exclusively from 1987 to January 1994, follows a logical sequence and is based on a three-year implementation schedule.

Year 1 Implementation:

- First, the DC Program Coordinator facilitates the matching of a district with a corporate sponsor. The school board adopts the comprehensive energy conservation plan as policy; establishes a leadership team within the board; and identifies the participating schools.

- Effort is made to enroll the support of principals and administrators and district maintenance staff for the program.

- The school district, the corporate sponsor, and the DC Consultant team notify community parents, media, and schools about their participation in the DC program.

- The DC Consultants, through the corporate sponsor funding, organize an initial inservice for teachers. At that time the DC team provides training and resource materials to participants.

- Next, the school board and DC Consultant team calculate baseline energy and water consumption data. The utility company prepares the pre-demand profiles of the schools' consumption patterns.

- The DC Consultant team performs school audits and makes recommendations.

- The DC Consultant team prepares the Year 1 Action Plans for submission to the district maintenance staff.

- Each individual school approves its technical Action Plan collaborating with the school's district maintenance staff.

- Teachers and students attend their first inservice where they learn how to create clubs, conduct monitoring, and perform audits.

- Teachers and students attend their second inservice session which focuses on how to launch campaigns and how to use curriculum units to support the program.

- The Conservation Club, maintenance staff, and custodians plan and implement the conservation campaign based on student audit and DC Consultant team audit findings from the Year 1 Action Plan.

- Schools, district maintenance and the DC Consultants monitor and record energy and water consumption relative to baseline figures.

- Schools complete their demand profile chart. This is done by the lead students and the school custodian.

- In the first six-months, adjustments, such as fixing leaky faucets, installing "turn off the lights" stickers, the lowering of thermostat and water heater temperatures, and other no cost measures, are done by the maintenance staff.

- The teachers and students prepare their savings and activities into a report. ☞

• At the end of Year 1 another inservice with involved teachers and students is held. At this meeting the schools present activity reports, savings reports, and Year 2 Action Plans.

Year 2 Implementation:

• At the onset of Year 2 the schools, district maintenance, and the DC Consultants calculate Year 1 savings once all the utility bills have been received. The school district then distributes the savings to participants.

• The media and community parents are notified of the Year 1 success.

• Next, the district maintenance implements the conservation campaign, refining energy conservation measures and expanding where appropriate, to other forms of conservation such as water use efficiency.

• Two more inservices are conducted in order to re-train teachers and students on monitoring, auditing, curriculum units, and how to launch another campaign.

• Once again, the maintenance staff enacts adjustments within the first six months of the year. These include installation of high performance (and water-efficient) shower heads, quick close toilet flaps, shutting down humidifiers at appropriate times, and checking the timing on outdoor lighting systems.

• Year-end savings are reported and distributed by the school district.

Year 3 Implementation:

Year 3 follows the same process as Year 2 except adding new areas to the conservation efforts, with a particular focus at this juncture of the program on waste management, and also using the savings of Year 2 to perform capital cost retrofits where appropriate.[R#2]

CAPITAL COST RETROFIT TRACK

Starting in 1994 the DC program began including capital cost retrofits as an option for schools to gain greater savings at a quicker rate. This track involves an even closer three-way partnership between the DC Consultant team, the school district, and a corporate sponsor. The corporate sponsor serves as the financier, cosigner, or intermediary to a loan appropriated to do the retrofit.[R#5]

TransAlta Utilities used to act solely as a "passive sponsor," aiding the DC program with occasional audits and promotions. Now TransAlta serves as a financier and an active technical resource for the school and the DC Consultant team. Additionally, the utility pays $1,000 up-front to the DC Consultant team to pay for the cost of the initial technical audit, which is comprised of two stages: an initial walk-through audit identifying low and no cost measures; a formal and in-depth technical audit recommending both no/low cost and capital cost measures performed by an outside consultant. An additional $1,000 to the DC Consultant team pays for inservice promotions, staffing, and materials necessary for implementation. The utility recoups this money via their 5% share of the school's savings.[R#5]

After the technical audit recommendations have been reviewed by the district, TransAlta, and the DC team, the school must decide if they want to proceed with the capital cost measures. If they do, TransAlta, using the results of the technical audit, then formulates a specific list of recommended products that they feel are the best available technologies in order to maintain required quality and construction control of capital cost improvements at a low cost for the school. The school district then secures conservation measures and labor by tendering them out to the lowest local bidder. The installation of measures goes to the contractor who can do it for the lowest cost to the school. The contractor's pricing package is then reviewed by the utility to verify for the school district that the savings and payback scenario is accurate and achievable. [R#5]

This tendering to local suppliers and installers is a standard practice. Rural schools, for example, reportedly don't want outsiders coming into their school and installing measures at their prices. Instead, the schools trust local contractors and local prices and thus the program addresses this sensitivity by specifying local contractors. Local contractors have not only proven to be effective at installations, but also help facilitate the program by working well with the schools.

TransAlta and DC then team up to provide the management and oversight of the chosen improvements. The school district then selects one of three options for financing: 1) It can get a loan from any bank. 2) It can finance a loan at 8.5% interest through TransAlta and their pre-established connection with the Royal Bank of Canada.

3) It can finance through TransAlta with Canada Trust and their Green Fund loan program. Finally, the conservation measures are installed and energy savings then monitored via school utility bills. Savings have ranged from 5-50% in the first year of operation. Typical savings for the entirety of the program average around 30%.[R#1]

Any corporate sponsor who is willing to finance the loan for the capital cost retrofits can, but historically utilities have had the most interest in decreasing electrical demand and use and thus are the most logical corporate sponsors. Utilities also serve as valuable technical resources for the schools. Throughout Canada, however, Esso Oil, Energy Mines and Resources, and a provincial gas company have acted as sponsors. In Alberta, TransAlta is not the only utility to work as financier with the DC program. Edmonton Power and Alberta Power are currently in the analysis stage of the program in their respective service territories. The Provincial government has also taken interest and has funded DC conferences.

STAFFING

The core group of DC staff consists of Brian Staszenski, the DC Program Manager based in the Environmental Resource Center; Tom Yohemas, Communications Coordinator; an accountant; an office manager; a person in charge of development and desktop publishing; and an inservice coordinator. Additionally, six teams of auditors, with each team made up of four to five members, work on a flexible schedule. These auditors are often teachers who work part-time for DC. Also, three teachers work summers helping on program manual and curriculum revisions.

DC feels that their key to proper staffing lies within their flexibility. The organization hires auditors as needed, proportional to their school implementation work loads which are constantly changing.[R#3,6]

From a sponsor's perspective, staffing is quite minimal. TransAllta, for example, devotes approximately ½ full-time equivalent to the administration of the program. In addition to this individual, around 25 field personel spend a small part of their time assisting with audits.

The school contracts out for labor and materials for the capital cost retrofits of the schools to the lowest local bidder. These bidders are certified professionals, usually electrical engineers and tradesmen.

DC estimates that if the program were to be replicated in another area, staffing requirements might fall within the following basic guidelines. Assuming the program was designed to be able to handle 20-25 school districts, the following is required to get the program up and running, until the program grows, at which time the staffing would need to double: administration - 1 FTE, project management - 1 FTE, educator - 1 FTE, inservice coordinator - 1 FTE, data entry/research - 1 FTE, secretarial - 1 FTE, technical auditor - contract out.

MEASURES INSTALLED

Measures installed fall into three categories: electrical energy savings measures, fuel energy savings measures, and water savings measures. After the technical energy audit has been conducted, a list of measures is prescribed and the range and number of measures is customized for each individual school.

Sample electrical energy savings measures: No/low cost measures include installing lighting timers, turning off lights in classrooms when unoccupied, checking timers on outside lights, shutting down humidifiers from March to November, and delamping where necessary. Capital cost measures include installation of compact fluorescent lamps, T8 fluorescent lamps, electronic ballasts, specular reflectors, high pressure sodium lamps, and metal halide lamps.

Sample fuel energy savings measures: No/low cost measures include installing outlet plugs and insulation, decreasing the temperature settings on the hot water heaters, and lowering the temperature on thermostats. Capital cost measures include weather stripping, electronic night set-back control systems for thermostats, and hot water tank wraps.

Sample water savings measures: No/low cost measures include checking leaky faucets and turning off water when not in use. Capital cost measures include low-flow shower heads, quick close toilet flapper valves, motion sensor shut off taps, and low flow toilet modifications. [11,13] ■

MONITORING

Savings projections for individual measures are based upon products' engineering estimates. The utility and the DC Consultant team do no metering of the schools involved. Utility bills, whether in the fast-track retrofit or no and low cost parts of the program, are the sole means of monitoring the monetary and energy savings. Schools are required by the Program Agreement to submit a record of savings.[R#3]

For the purpose of determining energy and water bill savings, calculations are made based on the school's baseline year utility billing information. The baseline year is defined as the 12 months immediately prior to the start of the DC program. All utility bill data is gathered for each building from previous bills. Weather information is collected from the closest Environment Canada weather station.

While every effort is made to make weather adjustments and to back out rate schedule changes, DC reports that savings calculations are accurate within a reasonable standard deviation to allow for minor changes in the weather, school building size, school population, construction, and utility rate schedules. When determining natural gas savings an adjustment for the severity of the winter must be made on the basis of heating days below 32 degrees F (-18 degrees C). This also ensures that if a severe winter hits, savings will still be accrued and allocated.

Note that if there is a severe winter, participating schools could use more energy than pre-retrofit levels. In such a case, the schools would still have to pay DC and their corporate sponsor, creating a situation whereby the school would have to pay out of pocket, rather than through energy savings. While true in a nominal sense, the school's energy bills would have been even higher. Inversely, if the retrofitted school experiences a mild winter – making DC's work appear even more attractive – weather adjustments are again enacted to account for weather induced savings, thereby protecting the schools from overpayments. Thus energy savings due to a mild winter will not be confused with savings due to improved efficiency.[R#3,10]

EVALUATION

To date the Destination Conservation program has had no formal evaluations. In the Spring of 1993, however, a survey was performed by Alberta Power and Light (APL) which focused on five school districts. The survey identified areas where DC could be improved, as well as areas where the program is doing well.[R#12]

One of the primary findings is that the participating school districts are saving money. The utility's image has also benefitted from sponsorship of the DC program as utility staff have built good relationships with school districts working with them on the DC program. Therefore, the DC program has also functioned as an excellent way for Alberta Power to educate future customers found in school administrators, teachers, as well as students.

The curriculum portion of the program is also very beneficial. Staff and students are more aware of energy costs as a result of the DC program. The program is ongoing, is based on a teamwork approach, and involves "lifestyle" education rather than just facility management. School boards appreciate DC's balanced and holistic perspective.[R#12]

The survey also found program areas that need to be improved. For instance, maintenance personnel require more training and time to do tracking. There are some questions as to whether the DC Consultant team has the time and resources needed to manage the DC program as it has grown.

The survey also found that DC is too focused on electricity conservation which typically comprises roughly 70% of savings, and not enough on water which accounts for

around 5% of savings, and gas which accounts for 25% of savings. Survey respondents believe the program's focus needs to remain upon education and not capital measures and financing. Focus also needs to be on large school districts because smaller ones may amalgamate within the next year or so because of government cutbacks. Furthermore, the program needs to sustain interest after three years.

Billing information should be released to the schools by APL local staff not to the DC Consultant team unless written authorization is provided by the school board. Although the APL time commitment is heavy, it would be nice to get involved in the education portion of the program too, i.e. graphs, presentations, and load profiles. APL's sponsorship could be promoted more.[R#12]

The bulk of these difficulties have been dealt with and corrected. The growth problem has especially been ameliorated and kept in-check since DC's partnership with TransAlta Utilities Corporation. ■

SAMPLE SCHOOL "LIFESTYLE" ENERGY AUDIT

The "Lifestyles" Audit which is contained within the DC Program Manual is essentially a series of questions that must be answered primarily by students with the assistance of the lead teacher and school custodian in the Conservation Committee The questions prompt student investigations, which in turn lead to actions. To perform the Lifestyles Audit, students are divided into six teams which cover specific areas:

Audit Team #1, Building heating system: This team of students determines such things as th fuel used to heat the school: oil, natural gas, or electricity. Does the school use passive or active solar heating? Does the school use automatic setback thermostats?

Audit Team #2, Draft-proofing and insulation: This team uses a draft detector to check windows, doors, and entrances. The team also examines the conditions of weather stripping and caulking.

Audit Team #3, Water heating and circulation system: This team determines if faucets are leak-free, if low-flow shower heads have been installed, and if hot water pipes and hot water tanks are insulated.

Audit Team #4, Cooling the school: In this area teams examine such things as the positions of shade trees, window awnings, and ceiling fans. Is the school's air conditioning serviced, set at a moderate temperature, and turned off during the evenings?

Audit Team #5, Lighting: This team examines a range of lighting habits and measures from simply turning off lights not in use, to delamping, to what type of lights are already installed.

Audit Team #6, Transportation and winter parking: This team examines "lifestyle" uses of buses, car pools, bicycling, and proper use of block heaters for cars.[R#11]

Program Savings

ST. ALBERT RESOURCE SAVINGS	ELECTRICITY (MWh)	GAS (Million Btu)	WATER (Million gallons)
Base Year Usage	2,687	33,453	3.96
Year 1	2,268	31,358	3.44
Savings	419	2,095	0.52
(%) Saved	15.6	6.6	13.2
Year 2	2,065	29,642	2.81
Savings	622	3,811	1.04
(%) Saved	23.1	12.2	29.1
Year 3	2,168	29,747	2.75
Savings	519	3,706	1.21
(%) Saved	21.2	11.1	31.0
Total Savings	1,485	9,617	2.78

DATA ALERT: This section is based on the savings of a subset of schools that have participated in the DC programs. Savings are reported herein for five select school districts, including a more in-depth look at the St. Albert School District based on the program's typical three-year implementation schedule.

The DC program is designed to capture savings from three areas: electricity, gas, and water usage. One school district that has undergone the full three years of the program is the St. Albert School District. This district has reported savings of 13% totaling over $29,478 in saved utility bills for Year 1, 21% totaling $65,011 for Year 2, and a 23% savings totaling $53,858 for Year 3.[R#2]

While one St. Albert School District school reported as much savings as $14,000 for one year, an average of roughly 25% or $7,500 in savings per year was calculated by DC for the 87 participating schools in TransAlta's service territory.[R#3]

FINANCIAL SAVINGS ALLOCATION

According to the Program Agreement, the school district consents to establish a shared-savings policy, out of which it will pay DC 10% of accrued savings over a three-year period. Using the St. Albert School District as an example, the financial savings allocation chart below provides the recommended model for disbursements of savings.

ST. ALBERT FINANCIAL SAVINGS	SAVINGS (x1000)	5% TO DC (x1000)	5% TO SPONSOR (x1000)	90% TO JURISDICTION (x1000)
Year 1	$29.48	$1.47	$1.47	$26.53
Year 2	$65.01	$3.25	$3.25	$58.51
Year 3	$53.86	$2.69	$2.69	$48.47
Total	$148.35	$7.42	$7.42	$133.51

5 DISTRICTS' SAVINGS	YEAR 1	YEAR 2	YEAR 3	SAVINGS TO DATE
County of Parkland	$59,937	$77,675	NA	$137,612
Yellowhead	$47,803	NA	NA	$47,803
East Smoky	NA	$16,353	NA	$16,353
Sherwood Catholic	$8,425	NA	NA	$8,425
St. Albert Catholic	$29,478	$65,011	$53,858	$148,347
Total	$145,643	$159,039	$53,858	$358,540

In DC Alberta's case the recommended model for distribution of annually accrued savings among the program participants is as follows: 5% goes to the DC Consultant team (to enable it to continue its work), 5% goes to the utility sponsor to cover program and audit costs, and 90% of the savings is allocated to the school district to distribute how they want. It is recommended that 80% of this be used to pay for the energy retrofit fund (the utility sponsored loan or low/middle cost measures), while the remaining 10% goes to the school for discretionary programs.

In the St. Albert School District's case over three years, of the $148,347 saved, $7,417 (5%) was allocated to DC, $7,417 (5%) went to TransAlta, and the remaining savings, $133,512 (90%) flowed to the school district for loan repayments and other general uses.[R#2]

This flexibility basically allows the school district to use their 90% share however they want. Consequently, this flexibility in savings allocation has led to customized variations in disbursements, which has helped the program. Alberta's Sherwood Park Catholic Schools District, for example, has found a slightly different distribution that meets their financial needs. There, the usual 10% is allocated to DC (of which DC disburses half to the sponsoring utility), of the remaining 90% or balance, 40% is allocated to the school board to pay for the retrofit requirements, 10% to maintenance, and 50% to the individual schools.[R#10]

As shown in the savings chart above of five school districts in Alberta, they have reported savings totaling just under $360,000 with two districts reporting only Year 1 savings. Note that this reflects only reported savings from five of Alberta's 24 active school districts and that over 80% of these savings resulted from no and low cost measures.

PARTICIPATION RATES

Currently, in Alberta, there are 24 active school districts made up of over 220 active schools participating in the DC program. Between January and April 1994, another 12 districts and 137 schools were in the process of signing up and being audited, bringing total participation in Alberta to 36 school districts and 357 schools. (Of the active districts, 15 comprising 87 schools have been completed and have reported at least first-year savings.) Thus the DC program covers roughly 20% of the market of all schools in Alberta.[R#15] ☞

PARTICIPATION BY PROVINCE	NUMBER OF ACTIVE DISTRICTS	NUMBER OF ACTIVE SCHOOLS
Alberta	24	>220
Ontario	3	>15
Saskatchewan	3	20
British Columbia	2	22
New Brunswick	2	20
Total	34	297

REDMOND SCHOOL TECH. AUDIT	ELECTRIC SAVINGS (kWh)	ELECTRIC DEMAND SAVINGS (kW)	ELECTRIC COST SAVINGS	FUEL COST SAVINGS	ANNUAL ENERGY COST SAVINGS	TOTAL CAPITAL COST	PAYBACK (YEARS)
CFLs	6,868	3.1	$555	$0	$555	$1,268	2.3
CFL Exit Signs	5,256	0.6	$158	$0	$158	$614	3.9
1X4s	43,207	22.0	$3,858	$0	$3,858	$18,902	4.9
2X4s	30,536	15.8	$2,771	$0	$2,771	$13,831	5.0
HIDs	10,440	4.6	$829	$0	$829	$4,121	5.0
Weather Stripping	0	0.0	$0	$419	$419	$1,047	2.5
Night Set-Back	11,400	0.0	$147	$793	$940	$4,679	5.0
Total	107,707	46.1	$8,318	$1,212	$9,530	$44,462	4.7

Outside of Alberta the DC program is just beginning to burgeon. Ontario has three school districts with over 15 schools participating. Saskatchewan has three school districts with 20 schools looking into the program. British Columbia and New Brunswick each have two school districts participating in the DC program. In each of these provinces a variety of organizations are participating, ranging from the local utility, to non-profit environmental groups, energy service companies, oil companies, governmental groups, and gas companies.[R#4]

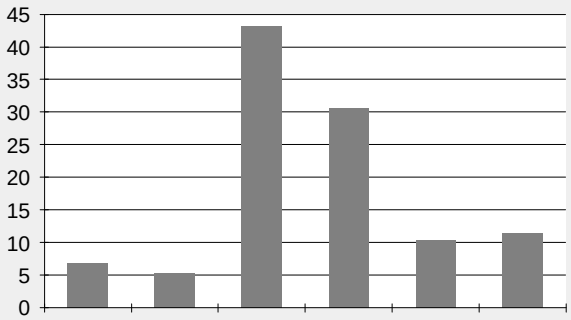
FREE RIDERSHIP

DC has not accounted for free ridership and thus the savings reported do not reflect such adjustments. While schools have attempted to be energy efficient in the past, constrained budgets have not allowed schools the cash flow to actively promote and implement energy efficiency. The DC program has allowed for no and low cost measures to be taken, while also offering the capital cost retrofits formerly not feasible. Thus, program managers do not consider free ridership an issue with the DC program.

MEASURE LIFETIME

After the three years of DC program activity the DC Consultant team ends its leadership, inservices, and the financial arrangement in which DC is paid a percentage of the savings is terminated. All savings in the fourth year, and all subsequent years, flow directly to the school which then has the option of paying off the capital cost retrofit fund, investing in further energy efficiency initiatives, or using the money for other purposes, such as teachers' salaries and books. (Note that the typical payback period is on the order of five years.) While the financial arrangement with DC ends, the savings continue. Given the predominance of lighting measures, coupled with the careful attention to school building operating characteristics, The Results Center has assigned an average measure lifetime for the program of 12 years. ■

ANNUAL ENERGY SAVINGS PER MEASURE (MWh)



SAMPLE TECHNICAL AUDIT: GERARD REDMOND SCHOOL

A sample Energy Audit Report of the Gerard Redmond Community School prepared for TransAlta Utilities conducted by Cousins Consulting Services found that of the school's annual energy budget of $20,746, a total of $9,530, could be saved by installing measures that have less than a 5-year payback. The audit also found that the school's annual electrical usage of 255,000 kWh could be reduced by 42.3%, or 107,707 kWh. This results in a lifecycle energy savings of 1.3 GWh of savings for a 12-year average measure lifetime.

ELECTRICITY SAVINGS MEASURES IDENTIFIED:

CFLs (compact fluorescent lamps): Replace 33 incandescent lamps with 17-watt compact fluorescent lamps. Electricity savings of 6,868 kWh and capacity savings of 3.1 kW. Capital costs of $1,268; annual savings of $555; resulting in a 2.3-year payback. **CFL Exit Signs:** Replace 16 incandescent Exit sign lamps with 7-watt CFLs. Resulting energy savings of 5,256 kWh; demand savings of 0.6 kW. Capital costs of $614; annual savings of $158; resulting in a 3.9-year payback. **1x4 Conversions:** Retrofit 186 1x4 fixtures loaded with 40-watt lamps with T8 lamps resulting in a wattage reduction from 95 to 26 watts per fixture. Resulting energy savings of 43,207 kWh and demand savings of 22.0 kW. Capital costs of $18,902; annual savings $3,858; resulting in a 4.9-year payback. **2x4 Conversions:** Retrofit 186, four lamp fluorescent fixtures with 40-watt lamps, with three-lamp fixtures using T8s with rapid-start type electronic ballasts cutting power consumption from 190 to 49 watts. Resulting energy savings of 30,536 kWh and demand savings of 15.8 kW. Capital costs of $13,831; annual savings $2,771; resulting in a five-year payback. **HID Conversions:** Replace 20 existing 400-watt and 250-watt mercury vapor fixtures with new 250-watt and 150-watt metal halide units. Resulting energy savings of 10,440 kWh and demand savings of 4.6 kW. With a capital cost of $4,121 and annual savings of $829, the payback is 5 years. **No/Low Cost Recommendations:** Turn lighting in classroom off when unoccupied. Consumption savings of 1,000 kWh per classroom or $13 per year results. No demand savings are achieved.

FUEL ENERGY SAVINGS IDENTIFIED:

Weather stripping: With an upgrade of the weather stripping in the eight outside entrances to the main school as well as the four entrances to the portable buildings, a natural gas savings of 14.2 million Btu per door or $35 per year results. Capital costs are $1,047 and annual savings $419, yielding a 2.5-year payback. **Night Set-back:** Install a night set-back temperature control system to minimize building heat loss during unoccupied hours. The temperature setting is reduced when the building is unoccupied and a programmed warm-up cycle allows comfortable temperatures to be achieved by the time the building is occupied. Consumption savings of 11,400 kWh results. With capital costs of $4,679 and annual savings of $940, the payback is 5 years. **No/Low Cost Recommendations:** These include lowering the setting on the hot water heater and lowering the thermostat in entrance vestibules.

WATER SAVINGS MEASURES IDENTIFIED:

Measures: Creating energy conservation through water conservation involves installing high efficiency plumbing fixtures including high performance (low flow) shower heads, quick close toilet flapper valves, and motion sensor shut-off taps. An estimate of savings for these flow reductions is $105 and roughly 26,417 gallons of water per year. Capital costs exceed $315, yielding a three-year payback. **No/Low Cost Recommendations:** Repair leaky faucets.

CONCLUSIONS:

To install all measures recommended at the school requires a total capital cost of $44,462. Between the electrical, fuel, and water use reductions, a total savings of $9,530 per year results lending to a 4.7-year payback. Close to 90% of the savings are derived from the electrical savings.

Cost of the Program

DC COST OVERVIEW	MGMNT.	INSERVICE	AUDITS	REPORTING	PROD.	TRAVEL	TOTAL
Year 1	$909	$3,633	$6,985	$698	$698	$907	$13,830
Year 2	$559	$3,143	$0	$698	$0	$420	$4,820
Year 3	$559	$3,143	$0	$698	$0	$420	$4,820
Total	$2,027	$9,919	$6,985	$2,094	$698	$1,747	$23,470

DATA ALERT: The following costs analysis is a model calculated for 1 district with 10 schools. Variations in costs and savings allocations to DC occur from district to district.

DC COSTS

It costs Destination Conservation a total of $13,830 to deliver the program to ten schools in the first year. The following two years cost DC $4,820 per year to deliver. Thus, for three years of operating the program a total of $23,470 is required. These costs, as presented above, cover management (9% of the total), inservices (42%), audits (30%), reporting (9%), production (3%), and travel costs (7%). The greatest costs are associated with inservicing. This includes several sessions (initial, student/teacher #1, and student/teacher #2) which each cost approximately $850. Furthermore, the annual meeting inservice costs approximately $1,100, for a first year total of $3,633. In subsequent year, inservicing costs $3,143 annually. The second largest cost component is auditing. However, TransAlta repays DC for the school audits.

Note that DC staff salaries are reflected in the management costs presented above. Of course DC is involved in many school districts and as such the management fee for the ten schools presented represents a small share of staff salaries. In addition to management fees from other districts, staff has been paid in part from a grant from Environment Canada.

The table on the adjacent page presents the revenues that DC accrues using the same ten-school model. DC's total costs are more than recouped in two ways. First, the sponsor repays the cost of the audits ($6,985, or $10,000 Canadian). Additionally the sponsor pays another $6,985 ($10,000 Canadian which reflects cost of $1,000 Canadian per school) to cover implementation costs. Thus the sponsor pays DC a total of $13,970 in the first year. Also after the first year, and for years 2 and 3, DC receives revenues from savings that occur at the schools equal to 5% of the total savings for three years. In this model, annual savings of $5,239 also flow to DC (roughly $529/school), which ends up with a net profit of $5,378 in the first year, $419 in the second year, and $419 in the third year. Thus DC's net profit for ten schools over three years is $6,216.

DC REVENUE OVERVIEW	TOTAL COSTS	COSTS PAID BY SPONSOR	REVENUE FROM SAVINGS	NET PROFIT
Year 1	$13,830	$13,970	$5,239	$5,379
Year 2	$4,820	$0	$5,239	$419
Year 3	$4,820	$0	$5,239	$419
Total	$23,470	$13,970	$15,717	$6,217

SPONSOR COSTS

The utility sponsor is required to pay $699 per school ($1,000 Canadian) for audits. This sum is an average that takes into account no/low cost audits that cost around $500 Canadian, as well as the technical audits which can cost up to $1,500 Canadian.

The sponsor is also required to provide another $699 per school to cover DC's implementation costs for a total of $1,397 per school or $13,970 for the model district. This sum is recouped via their 5% share of savings which averages $524 per school annually ($750 Canadian) or $1,572 for the three years of the program, yielding a $175 per school profit. This small profit is readily used to cover sundry program costs ranging from utility staff salaries to collaborating, administering, and marketing the program. Eventually utilities plan to make a profit off schools' savings but for now they have taken a break-even posture. TransAlta projects costs of $139,710 ($200,000 Canadian) per year for 1994 and 1995 for 100 schools each year, half of this to pay audit costs and the other half to support DC's implementation of the program.[R#5]

This model does not address capital cost retrofits but instead presents the basic model that DC has used to date. Currently, however, the program has become so popular that in the first quarter of 1994 alone, over 137 schools have been audited, and most of these want to take the capital cost fast track approach in addition to the no/low cost three-year approach.

SCHOOL COSTS

While a good deal of time is required of schools, essentially the only "cost" to the school relates to its energy retrofit loan should the school elect to pursue capital cost retrofits. While technically a cost, DC structures loans with the sponsor such that schools can enjoy energy savings and positive cash flow, as the loan repayments can be less than the energy savings that result from participating in the program. Typically loan payback periods are under five years after which time the schools continue to save money and profit from the program. ■

LESSONS LEARNED

Destination Conservation has proven itself to be an exemplary model for retrofitting schools and raising awareness of the potentials for energy efficiency for both school children and staff for a number of reasons. Paramount is that the program follows and supports a key utility trend of shifting the focus of utility-driven DSM from an incentive orientation to providing customers with education and then loans for retrofits that will ultimately pay for themselves. DC provides a means for low-cost utility DSM while catalyzing school retrofits by overcoming the first cost hurdles and tight budgetary constraints that schools have. It is this winning financial combination that addresses both utility and school district financial concerns, and is the fundamental strength of DC.[R#3]

On the technical level, much has been learned pertaining to performing technical audits. Through trial and error, DC discovered that the technical audits need to be performed by independent auditors that are not tied to any products that might be implemented. This results in more accurate, unbiased, and less costly audit results.[R#3]

Spreading the word about the DC program has never been a problem, but convincing the school district to implement has required a little more work. For instance, district officials are apprehensive about implementing conservation measures that have 10-year paybacks. To solve this, Destination Conservation has developed an innovative means of reducing this payback. Program Manager Brian Staszenski contracts an outside consulting firm to perform the utility-financed technical audits. Instead of having the consulting firm perform the installations, he then takes the audit's resulting recommendations and tenders them out to energy service companies for bidding, to determine who can install the measures at the lowest cost rather than allowing the auditor to install the measures at its "list price." The competitive bidding process has resulted in the installation of measures at the lowest cost, thus assisting DC to recruit more schools by offering quicker paybacks. This disaggregation of work has resulted in an average payback of four years for the schools which DC has found is highly attractive to the schools themselves.

Ironically, one of the major lessons that Alberta's DC program has been forced to learn is how to deal with rapid growth and participation in the program. DC program staff have had trouble keeping up with high demand from schools that want to begin the program. DC has responded to this quite welcome "problem" by contracting out more teams of auditors and adding four energy educators to the staff. Simultaneously they have been forced to slow down the pace. Brian Staszenski has discovered that the key to adapting to this growth is flexibility of staff. A core group of staff is maintained while a major part is contracted out only when work is needed.[R#3]

To date the program is successful and spreading throughout Canada for a number of reasons. First and foremost, the program is holistic in nature, creating a network within the school system. Since the school is the focus of the community, the program itself becomes community centered. It represents a community development project. And while the program clearly engages students, it also fosters an energy efficiency ethic for adults.

The "lifestyle" component of the program, which focuses on the ability to save energy through behavioral change — such as turning off unnecessary lights — enrolls students and staff in a positive, hands-on team approach that mo-

tivates and empowers a "win-win" environmental cause. This is closely tied with the program's focus on long-term resource reduction and habit change that reinforces concepts learned through technical retrofits.

Participants' rewards are obvious, and schools can clearly see that their utility bills are decreasing. Furthermore, the program has been timely, with utility bills going up and interest rates at all time lows, it is an opportune time for schools to invest in efficiency.

TRANSFERABILITY

Currently the DC program has been implemented in over 35 districts comprising over 300 schools across Canada. DC is presently looking into implementing the program in the United States, with school districts within four states, Missouri, Minnesota, California, and Colorado, expected to participate within the next two years. Once again, these contacts with the states have been made by Brian Staszenski via word-of-mouth. DC has also received expressions of interest from Sweden and Argentina. [R#4]

The DC program is copyright protected by law. DC's goal is to expand the program across North America. For each expansion, DC receives a percentage of that program's savings, and because they are non-profit, these benefits are tilled directly back into the program.[R#14]

According to Brian Staszenski, in order for a non-profit in another area to make this program work in conjunction with DC it must be financially strong, have the ability to attract funding partners (before the program is licensed), be environmentally oriented, have a good understanding of education, have good administration and systems follow-up, and have integrity. This group will facilitate the process just as DC has done to date in Alberta and other provinces. Naturally other factors that a non-profit will have to consider include the region's level of environmental awareness, the prevailing political climate, and potential language barriers.

Should the program be transferred to other areas, Staszenski notes that potential sponsors include utilities, but also foundations, corporations, government agencies, individuals, and energy service companies. DC recommends that for maximum effectiveness of a new program, the number of new districts per year should be limited to no more than 10, with up to 15 schools per district.

For information on other energy efficiency school programs, see The Results Center topical paper, "School Programs: Retrofitting Today's Schools and Educating Tomorrow's Energy Consumers," and The Results Center Profile #72 on EcoGroup's In Concert with the Environment program. ■

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