

Minneapolis

**ENERGY
PLAN**

PASSED BY CITY COUNCIL 5/10/96

MINNEAPOLIS ENERGY PLAN

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ACKNOWLEDGEMENTS

The Minneapolis Energy Plan is the product of many individuals, City of Minneapolis departments and agencies, nonprofits and utilities. In particular, the Energy Plan resulted from the cooperative efforts of the City of Minneapolis Inspections Division in the Department of Regulatory Services, Planning Department, Public Works Department, Minneapolis Park and Recreation Board, Department of Health and Family Support and the Minneapolis Community Development Agency. The directors of these six City entities comprise the Minneapolis Environmental Coordinating Team (ECT). It is under the auspices of the ECT that this Plan is submitted to the Mayor of Minneapolis, Sharon Sayles Belton, Minneapolis City Council President Jackie Cherryhomes and City Council Members.

Additionally, invaluable assistance with the development of this Plan has been provided by Hennepin County, the Minneapolis Neighborhood Revitalization Program, the Downtown Minneapolis Transportation Management Organization, Northern States Power and Minnegasco, who have contributed considerable staff time and resources to this ongoing project, as well as the Center for Energy and Environment and the Citizens Environmental Advisory Committee. The basis for much of this document can be found in the Minneapolis/Saint Paul Urban CO₂ Reduction Project. The International Council for Local Environmental Initiatives, the Urban Consortium Energy Task Force, the U.S. Department of Energy and both Argonne and Oak Ridge National Laboratories have also provided ongoing technical assistance. The University of Minnesota and the Minnesota Department of Public Service have reviewed and commented on the plan.

The City of Minneapolis also wishes to acknowledge the cooperation and assistance received from the cities of Saint Paul, San Francisco, Portland and Seattle.

INTRODUCTION

The City of Minneapolis has a direct interest in promoting and implementing energy efficiency measures that save future taxpayer dollars and improve the local economy and environment.

The Minneapolis Energy Plan represents an ongoing effort to implement energy efficiency initiatives that are deemed cost effective, feasible and consistent with the City's Directions Framework and other relevant City policies.

The Minneapolis Energy Plan was developed to integrate energy conservation initiatives through a flexible framework of goals, objectives, strategies and identification of resources which address the four energy sectors of the urban economy identified as Municipal, Residential, Commercial/Industrial and Transportation.

Development of the Energy Plan was facilitated by the Energy Working Group. Implementation of the plan is being undertaken by the four energy committees (meeting on an ad hoc basis) who have expressed an ongoing commitment to enact the Plan's various strategies. This improved interdepartmental and intergovernmental coordination occurs under the aegis of the Environmental Coordinating Team (ECT), the Citizens Environmental Advisory Committee, the City Council and Mayor.

MINNEAPOLIS ENERGY PLAN : DECISION-MAKING PROCESS



I. MUNICIPAL ENERGY EFFICIENCY

The municipal component of the Minneapolis Energy Plan focuses on accomplishing energy conservation measures for municipal buildings and operations. Previous studies (Great Lakes Municipal Energy Collaborative - 94' and City as Example- 94') estimated that the City can save 10 - 20% on its energy costs. It is the City's intent to serve as a positive example for others to follow.

GOAL 1: Increase energy conservation in building management operations.

In 1988, the City began raising the overall condition of its buildings by committing an annual appropriation of City net debt bonds to fund capital improvement projects. This ongoing effort allows Public Works to increase energy efficiencies in many City owned buildings by including "deep" energy retrofit projects with payback periods that would not be justifiable based on energy savings alone. Typically, 75% of the \$1.0M to \$1.5M annual Building and Facility Capital Improvement Program appropriation deals with projects affecting energy issues, including window systems, roof systems, HVAC systems, lighting upgrades, and weather stripping. The City continues to benefit from savings resulting from these capital efforts.

Objective A: Reduce energy use in City owned buildings.

Strategies:

1. Continue deep energy retrofit projects through the City's annual Building and Facility Capital Improvement Program appropriation.

Resources: The Municipal committee of the Energy Working Group will review and explore viable energy saving projects.

Time line: 1996 - ongoing

2. Energy audits of selected municipal buildings will be conducted and bids will be let for the installation of energy retrofits with a confirmed payback of ten years or less. The City will continue to participate in Northern States Power Company's Local Government Energy Conservation Program to improve its facilities and operations by reducing energy costs without an up-front capital expenditure from City funds.

See Minneapolis Energy Plan Appendix A:

Table 1: Local Government Energy Conservation Program Flowchart (LGECP)

Table 2: LGECP Results Worksheet

Note: Information updated on an ongoing basis.

Resources:

1. Local Government Energy Conservation Program (NSP)

Time line: 1995 - termination of NSP's Local Government Conservation Program.

3. Participate in Minnegasco's Conservation Improvement Program (CIP) whereby energy audits are provided for building mechanical systems to identify qualifying energy efficiency upgrade projects. Projects that are funded as part of the City's Building and Facility Capital Improvement Program will qualify for rebates from Minnegasco.

Note: Information updated on an ongoing basis.

Resources:

1. Conservation Improvement Programs (Minnegasco)

Timeline: 1995- Termination of Minnegasco CIP

Objective B: Document Energy Savings for municipal buildings.

Strategy:

1. Determine actual energy savings for municipal buildings which are part of the LGECP program.

Resources: Public Works General Services Division's *Building Energy Information System*, City Net, NSP and Minnegasco.

Time line: 1996 - ongoing

Objective C: Create an energy reinvestment fund from municipal energy savings to continue energy conservation projects for municipal buildings.

Strategy:

1. Create an energy reinvestment/revolving loan fund based upon actual energy savings to finance municipal building retrofits

Resources: The Municipal committee of the Energy Working Group will develop the energy reinvestment fund and applicable disbursement guidelines.

Time line: 1997

Objective D: Create energy saving opportunities by improving Municipal investment and purchasing decisions.

Government procurement on the state and local levels amounts to approximately 12 percent of the U.S. gross national product. Government investment and procurement strategies should increase municipal energy savings and encourage industry to manufacture more energy efficient and environmentally sound products.

Strategy:

1. Explore developing a centralized energy purchasing strategy for the City to improve accountability for actual usage and cost control.

Resources: The Municipal committee of the Energy Working Group will consult available information and expertise and assess the feasibility and implications of a centralized energy purchasing strategy for the City.

Time line: 1996 – 1997

2. Design and implement municipal purchasing guidelines that promote energy conservation and source reduction investments². The purchasing guidelines should include the following:

- Product life cycle costs of 10 years or less.
- A ten percent price allowance for energy efficient/renewable energy projects.
- Increased purchases of energy efficient products which are indigenously produced.
- Joining a buying consortium or purchase through state contracts to reduce the costs of recycled products.
- Provide staff incentives to encourage purchases of energy efficient products.

Resources: The Municipal committee of the Energy Working Group will develop and implement municipal purchasing guidelines.

Time line: 1996-1998

3. Create a purchasing guide illustrating low energy intensity products for distribution among the various municipal purchasing units.

Resources: The Municipal committee of the Energy Working Group will develop and distribute a purchasing guide.

Time line: 1996-1998

4. Require all municipal construction projects which receive public financing to meet stringent building energy efficiency standards for projects with a 10 year payback or better³.

Resources: The Municipal committee of the Energy Working Group will work to ensure that all municipal construction projects which receive public financing meet stringent building energy efficiency standards.

Time line: 1996 – ongoing

5. Hold energy saving competitions between municipal buildings similar to those conducted at the University of Minnesota's Building Energy Efficiency Program to help educate staff on appropriate measures.

Resources: The Municipal committee of the Energy Working Group will develop and conduct energy saving competitions between municipal buildings .

Time line: 1997 - ongoing

Objective E: Increase urban tree planting to sustain and improve the urban forest of the City.

Trees and other foliage shelter buildings, effectively reducing fuel consumption needed for heating and cooling. Strategic planting of deciduous trees can substantially reduce air conditioning energy demand while minimizing the reduction in winter solar gain (i.e. heating).

Strategies:

1. Establish a dedicated tree planting fund within the Minneapolis Park Board budget.

Resources: The Park Board will establish a dedicated tree fund within its annual budget.

Other potential resources include:

- Minnesota Department of Natural Resources Metro Forestry Divisions' Minnesota ReLeaf Community Forest Program. Under this program, local units of government (municipal, township, school district, and other legal local governmental entities) and nonprofit organizations with a 501 (c) (3) status can apply for program funds.
- Minneapolis Neighborhood Revitalization Program (NRP) Neighborhoods have invested in tree planting projects on boulevards and City parks.
- The Cool Communities program of American Forests.
- The Minnesota Shade Tree Advisory Committee and the Minnesota Extension Service.

Timeline: 1996 – ongoing

2. Reexamine the Minneapolis Park Boards' Reforestation Plan to ensure its continued relevance and applicability as a tree planting blue print for the City.

Resources: The Minneapolis Park Board and the Municipal committee of the Energy Working Group will review the Reforestation Plan.

Timeline: 1996

3. Reduce the need to replace trees due to "line clearance" in conjunction with an agreement with NSP to voluntarily bury power cables when possible.

Resources: The Minneapolis Park Board will work closely with NSP to alleviate tree/power line conflicts.

Timeline: 1996 - ongoing

Objective F: Reduce the amount of electricity used by City street lights.

Strategy:

1. Continue to develop/study photocell prototypes that will reduce unnecessary street lighting.

Resources: University of Minnesota, Public Works and NSP will work to develop and test photocell prototypes.

Timeline: 1995-1996

II. RESIDENTIAL ENERGY EFFICIENCY

The residential section of the Minneapolis Energy Plan focuses on creating energy saving opportunities by increasing education and services delivery to renters, homeowners and rental property owners. Minneapolis will work to facilitate and market existing and new energy conservation program information and promote a practical standard for making cost-effective energy conservation improvements in the housing sector.

GOAL 1: Maximize opportunities to increase energy efficiency in the residential sector.

Objective A: Promote energy efficiency improvements for new construction and rehab of single, multi-family and rental housing.

Strategies:

1. Promote cost-effective energy standards for new and existing single, multi-family and rental properties.

Resources: Minneapolis Inspections Division will promote practical, cost-effective energy standards in the course of performing plan review and field inspection, and provide information to renters, homeowners and residential property owners on energy saving programs, products/materials, rehab and new construction techniques.

Timeline: 1996-Ongoing

2. Develop and integrate a home energy rating program for new/existing housing that recognizes and rewards energy efficiency improvements in residential construction.

Resources: The Residential committee of the Energy Working Group will work to integrate an energy "star" rating system for the Minneapolis residential sector.

Timeline: 1996-Ongoing

3. Explore opportunities for developing energy conservation programs that focus on the residential sector of Minneapolis.

Resources: The Residential committee of the Energy Working Group will explore developing applicable energy improvement programs for the residential sector of Minneapolis.

Timeline: 1996-Ongoing

4. Institute a training program for City Inspectors on the R-2000 Home Program Technical Requirements for new construction of one and two family residences by 19984.

Resources: The Minneapolis Inspections Division will monitor DPS' efforts to develop a training program that could be used for educating Minneapolis Inspectors on the R2000 Home Program Technical Requirements of the Minnesota Energy Code.

State funding will also be-pursued to provide the necessary budget for this project in combination with internal funding from the inspections department.

Timeline: 1996 - ongoing

5. Better utilize existing energy efficient mortgage programs in conjunction with area financial institutions.

Qualifying home buyers can include 100 percent of the cost of needed, cost-effective energy improvements into their home mortgage at the time of purchase or refinance, when the improvements can be documented to pay for themselves by lowered utility bills.

Resources: The Residential committee of the Energy Working Group will work to promote the use of energy efficient mortgage programs.

Timeline: 1996-1997.

Objective B: Improve accessibility of residential energy loan and grant programs to owners of single, multi-family and rental properties.

Strategies:

1. Integrate existing energy conservation programs and services into neighborhoods involved in Neighborhood Revitalization Program (NRP) planning activities. Promote audits for any residential structure receiving property improvement financing from the MCDA and the NRR

Resources: Inspections, MCDA, and NRP will distribute the *Residential and Commercial Industrial Energy Programs* guide/flyers to NRP neighborhoods and educate residents and neighborhood organizations on the use of the Guide.

Timeline: 1995-Ongoing

III. COMMERCIAL/INDUSTRIAL ENERGY EFFICIENCY

The commercial/industrial sector comprises one of the largest users of energy in Minneapolis. This component of the Minneapolis Energy Plan will focus on strategies that increase the efficiency of current energy saving programs by improving outreach efforts to the private/public sector to maximize energy saving opportunities. Additionally, this

GOAL 1: Increase commercial/industrial and institutional energy efficiency.

Objective A: Increase accessibility of energy loan and grant programs to commercial/industrial property owners.

Strategy:

1. Integrate existing energy conservation programs and services into neighborhoods involved in Neighborhood Revitalization Program (NRP) planning activities. Promote audits for any commercial/industrial project receiving financing from the MCDA and the NRR

Resources: Distribute the *Residential and Commercial/Industrial Energy Programs* guide to NRP neighborhoods and educate neighborhood organizations and businesses on the use of the Guide.

Time line: 1995-ongoing

Objective B: Develop pollution prevention (P2) partnerships to reduce source pollution and increase energy conservation.

"Environmental costs can be reduced or avoided through P2 practices such as product design changes, input materials substitution, process redesign, and improved operation and maintenance (O&M) practices⁵. Studies show that "the average savings per P2 project was \$3.49 for every dollar spent" for companies with some type of environmental cost accounting program⁶.

1. Approach commercial/industrial businesses with pollution prevention assistance that promotes energy and water conservation, encourages hazardous/solid waste source reduction and promotes environmental cost accounting methods.
- Resources:** The MPLS Environmental Section will work with Hennepin County Hazardous Waste Division, Office of Environmental Assistance (OEA), MN Technical Assistance Program (MNTAP), MCDA, the NorthEast Business Association, NSP, Minnegasco and other interested organizations to develop partnerships that facilitate pollution prevention activities for commercial/industrial businesses.

Timeline: 1995 – ongoing

Objective C: Increase effectiveness of new and existing commercial/industrial energy efficiency programs in Minneapolis.

Strategies:

1. Develop MCDA "pilot" development projects to provide energy efficiency information and determine if sufficient financing is available to make energy improvements.
Resources: The Commercial/Industrial committee of the Energy Working Group will determine applicable pilot projects.
Timeline: 1996 - ongoing (follow-up steps will be based on results of pilot projects)
2. Improve information distribution to business customers to better promote available energy programs/resources and financing.
Resources: MCDA's Business Link and the Minneapolis Environmental Section's Business Assistance Team will provide energy efficiency information to local businesses.
Timeline: 1995 – ongoing
3. The City, MCDA, NSP and Minnegasco, will work to define the current level of energy efficiency improvements/savings that have been achieved by Minneapolis businesses.
Resources: The Commercial/Industrial subcommittee of the Energy Working Group will work to quantify energy savings and develop energy improvement goals for the commercial/industrial sector.
Timeline: 1996-1997

Objective D: Expand district heating, cooling and cogeneration systems in Minneapolis.

District Heating/Cogeneration: Minneapolis has an extensive district heating system which offers opportunities for cogeneration of heat and electricity. Typical electricity production efficiency is 35-50 percent. If the waste heat generated in the process can be used (as it is in cogeneration), then overall production efficiency of the heating system and generating electricity can be increased to 70 percent or more.

District Cooling: District cooling is available to only a small fraction of the downtown area. Expanding district heating/cooling systems will lower installation and maintenance costs. District cooling systems distribute chilled water, replacing air conditioners using chlorofluorocarbons (CFCs), decreasing electricity demand in peak times, and eliminating ground water cooling systems.

Strategy:

1. MCDA will continue to work with the Minneapolis Energy Center to incorporate district heating/cooling in MCDA supported developments when the customer can benefit by reduced heating/cooling costs.

Resources: MCDA and the Minneapolis Energy Center determine district heating/cooling opportunities on a customer-case by case basis.

Timeline: 1995 - ongoing

Objective E: Initiate Integrated Resource Planning

Integrated Resource Planning (IRP) provisions in the Energy Policy Act of 1992 expand and increase competition by broadening the field of electricity producers and utility service providers. IRP efforts seek to assure that utilities provide safe, reliable and cost effective service to customers. In Minnesota, the costs and benefits of providing utility services to customers will soon include quantifying external, indirect costs (environmental and health related issues), as a means of comparing alternative generating options for new power.

Regional IRP may take on increased importance in light of the deregulation of the electric and gas utility industries. Utility mergers and subsequent market structures which occur on a multi-state level will redefine the efficacy/relevance of regulatory oversight and the degree of financial commitment dedicated towards Conservation Improvement Programs.

Strategy:

- 1.** The City will work with the Center for Energy and Environment (CEE), The City of St. Paul, the Public Utilities Commission (PUC), the Department of Public Service (DPS), NSP and Minnegasco to guide utility decision making, helping to insure that utilities provide safe, reliable, cost effective service to the customer.
Resources: The City, CEE, St. Paul, PUC, DPS, NSP, and Minnegasco.
Timeline: 1995 - **ongoing**
- 2.** Demand Side Management Programs that offer greater individualized energy initiatives to commercial/industrial businesses and institutions will be strengthened and continued.
Resources: Minnegasco, NSP and the PUC.
Timeline: 1995 - ongoing
- 3.** Training programs for businesses and institutions on operation and maintenance, energy accounting, life-cycle costing and other energy efficiency system management practices will be continued and expanded.
Resources: The Commercial Development Committee of the Energy Working Group will review available programs and resources.
Timeline: 1995 - ongoing

Objective F: Promote development of environmental and energy conservation related businesses.

Strategy:

- 1.** Encourage development of and financial support for "green" and energy efficient businesses and businesses that produce and sell energy conservation products.
Resources: The City, MCDA and NRR
Timeline: 1996 - ongoing

IV. TRANSPORTATION EFFICIENCY

Increasing the efficiency of the transportation system is important for several reasons. First, transportation is a major contributor to air emissions and pollution problems in the region. Second, congestion on roads during rush hours continues to worsen, resulting in longer commuting times⁹, decreases in productivity and increases in worker stress. Finally, transportation energy costs have major impact on the local economy.

Several problems contribute to the regional transportation dilemma: high numbers of single occupant vehicle trips, increasing numbers and distance of trips and sprawling suburbs. As a result, it is very important for the City to work with the Downtown Minneapolis Transportation Management Organization, Hennepin County, the City of St. Paul, Metropolitan Council,¹ MNDOT, the suburbs and the State to develop a common vision and policies to increase local and regional transportation efficiency.

Federal and State funding subsidies for transportation projects are entering a period of austerity. Plans for Light Rail Transit (LRT) and major interstate corridor projects are threatened. The goals and accompanying objectives and strategies provide an opportunity to take stock of current transit policies/programs and will help increase transportation efficiency to further enhance the quality of life for those who live, work and visit Minneapolis.

GOAL 1: Change the mix of Minneapolis' transportation sector to increase transportation efficiency as much as possible.

Objective A: Support the Downtown Minneapolis Transportation Management Organization (TMO) whose goal is to "...promote efficient and environmentally sound transportation networks in order to assure the continued growth and prosperity of the downtown area."

Concerns over worsening congestion¹² and air quality in downtown prompted the Minneapolis City Council, in June 1991, to become one of the first political bodies in the nation to establish a transportation management organization in the central business district.

The implementation of the Downtown Transportation Management Plan, as approved by the Minneapolis Planning Commission in 1993, is being coordinated in part by the TMO. The goals and strategies contained therein provide a ready platform and guide to increase downtown transportation efficiency.

Strategy: EMPLOYER OUTREACH

1. The City supports the continued development and expansion of the Downtown Minneapolis TMO program as it works with relocating and existing businesses to design travel demand management (TDM) strategies that are tailored to their corporate culture and the commuting needs of their employees¹³.

Resources: Representatives of the City; downtown retailers, developers, service industries, and parking facilities; the Downtown Council; and the Minneapolis Building Owners and Managers Association participate in the TMO.

Timeline: 1993 – ongoing

Objective B: Increase and promote the use of alternatives to driving alone.

Strategies:

EDUCATIONAL

1. Increase transit ridership by developing stronger partnerships with the Metropolitan Transit Education Committee (MTEC), TMO, and MCTO. Provide all new employees with information about alternatives to driving alone.

Resources: A Transportation subcommittee of the energy working group will support the efforts of the TMO and MCTO to develop educational campaign materials that strengthen transit ridership.

Timeline: 1996 and beyond

PUBLIC TRANSIT

2. Develop more designated lanes for buses to decrease travel time on busy arterials.

Resources: The City has identified streets for future bus lanes and in the near future, some freeway entrances from the downtown area may have exclusive lanes for buses/HOV use.

Timeline: 1997 and beyond

3. Increase bus capacity in downtown during peak hours through such services as the Nicollet Mall Shuttle.

Resources: Transportation Engineering, Downtown TMO, Downtown Council, MCTO.

Timeline: 1996 and beyond

4. Advocate for dedicated transit funding to keep transit fares low and improve services through a strong lobbying effort at the legislature and with the governor.

Resources: Minneapolis City Council, Minneapolis Downtown Council and Minneapolis Downtown TMO.

Timeline: 1995 - ongoing

5. Work with the Downtown Minneapolis TMO and other governmental agencies (MCTO, MN Rideshare, MNDOT, Hennepin County) to sponsor special events and programs on a regular or monthly basis that encourage the use of alternative transportation options.

Resources: The Transportation subcommittee of the Energy Working Group will work to develop special events and programs such as B-BOP and voluntary no drive days that reduce individual automobile use.

Timeline: 1997 and beyond

6. Develop a "drive or bus system" at City parking garages that allows those who regularly drive 3-5 days per week and pay monthly parking fees to receive prorated credit for those days when they don't need to drive and opt for taking the bus instead.

Resources: The Transportation subcommittee of the Energy Working Group will work to develop options for implementation.

Timeline: 1996-1997

CARPOOL/VANPOOLING

7. One of the mandatory elements of the Local Comprehensive Plans required by the Metropolitan Council's Transportation Plan suggests many tools that Minneapolis could use including legislation and community ordinances for incentives such as:
 - Providing tax incentives to building owners for providing parking rate discounts or preferential parking spaces for carpool/vanpoolers.

Increasing the availability of:

- Passenger waiting areas at major employment centers.
- Provide discount parking for carpoolers/vanpoolers. As part of this strategy.
 - Parking validation systems can be made more modal-neutral and offer free bus tokens as an alternative to paid parking. If a parking benefit is offered, a cashequivalent commuting allowance can be offered to workers who use other modes.

Providing employees with pre-tax transit passes (draft legislation that allows governmental entities to exclude from taxation up to \$65.00 per month from a participating employee's paycheck if it is used for the purchase of a transit pass) should be considered by the City.
 - Employers could reduce parking subsidies that they provide to employees¹⁴ and only offer free parking to those who carpool/vanpool (City policies regarding under what conditions employees receive free parking would be reviewed).
 - Additional research can be conducted to review preferential HOV pricing strategies in public and private parking spaces.
- Ramp bypass and HOV lanes

Resources: The Transportation subcommittee of the Energy Working Group will review these strategies, develop recommendations and establish criteria for their implementation

Timeline: 1996-1997

8. Provide incentives to parkers who are involved in carpooling and vanpooling.

The Department of Public Works Transportation Division continues to provide leadership in recommending various incentive programs to individuals or groups who wish to car pool or vanpool. These programs are City, state, and/or federally subsidized programs. These subsidies, along with higher single occupant vehicle (SOV) prices allow these programs to continue.

Resources: Public Work's Transportation, MNDOT, FHWA, Minnesota Rideshare

Timeline: Ongoing.

BICYCLING

8. Encourage extensions to existing bike route/lane systems.

The Minneapolis City Council passed a Commuter Bikeways System Plan in 1992 to increase the percentage of City bicycle trips (currently comprising 1.5% - 2% of the total transportation modes used in the City). As part of this strategy:

- Provision should be made for biking safety and accessibility by creating:
 - Secure bike parking/showering facilities.
 - Rewards/incentives for building owners and managers who provide secure bicycle parking per zoning code revision.
 - Continued funding for bicycle routes and trails in the City.

Resources: The Transportation subcommittee of the Energy Working Group will review these strategies and develop recommendations/criteria for their implementation

Timeline: Ongoing

Objective C: City of Minneapolis as a model employer.

Strategies:

1. Institute a guaranteed ride home program. Public funds would pay for a cab ride home for a City employee who misses the bus or the car pool ride because they are required to work occasionally during abnormal hours or in the case of an emergency.

The State is already sponsoring a pilot program for the users of I-394 using both state and federal funds. Similar subsidies might be available for a City program.

Resources: The Transportation subcommittee of the Energy Working Group will review the State's pilot program and develop recommendations and establish criteria for developing a guaranteed ride home program in Minneapolis.

Timeline: 1997

2. Establish guidelines for employee telecommuting to reduce energy consumption, traffic congestion and wasted employee driving time.

Resources: The Transportation subcommittee of the Energy Working Group will monitor Hennepin County's efforts to implement a telecommuting program, work with the MPLS' Information Technical Services (ITS) office to develop City guidelines for City Net users outside of MPLS facilities for the purpose of telecommuting and work with ITS to develop a city wide telecommuting center of excellence.

Timeline: 1997

3. Provide a generic commuting coupon that adds incentive to taking the bus, carpooling or vanpooling.

Resources: The Transportation subcommittee of the Energy Working Group will determine project cost/feasibility.

Timeline: 1997

4. Reduce car pool parking costs.

Resources: The Transportation subcommittee of the Energy Working Group will determine project cost/feasibility.

Timeline: 1997

5. New employee information/incentives.

Resources: The Transportation subcommittee of the Energy Working Group will determine project cost/feasibility.

Timeline: 1997

GOAL 2: Reduce transportation energy use in City fleets and non-passenger vehicles.

Objective 1: Promote driver training/maintenance programs with fuel efficiency as the goal.

Studies estimate that teaching drivers to drive safely and economically can achieve a 30 percent short term reduction in fuel consumption and a long term reduction of about 15 percent¹⁵.

Strategy:

1. Promote drivers education and maintenance programs which teach efficient driving techniques and best vehicle maintenance practices to the public/private sector.

Resources: The Transportation subcommittee of the Energy Working Group will work to integrate driver's education and maintenance programs into City and private sector operations.

Timeline: 1997

GOAL 3: Coordinate and accelerate the percentage of vehicles used in Minneapolis that are powered by alternative fuels (other than petroleum based fuel).

Minnesota Statutes 216C.40 Subdivision 1 was created to encourage the use of alternative fueled vehicles, stating:

"It is in the long term economic, environmental and social interest of the State of Minnesota to promote the development and market penetration of alternative fuel vehicles that reduce harmful emissions from motor vehicles ... so as to assist in attaining and maintaining healthful air quality, to provide fuel security through diversity of alternative fuel supply sources and to develop additional markets for indigenous crop-based fuels."

Objective A: Participate in the Clean Fuels Minnesota (Clean Cities) program.

A committee structure has been established through the MN Department of Public Service (DPS) for Clean Fuels Minnesota, to engage in a fuel neutral effort to get Alternative Fueled Vehicles (AFV) "on the roads of Minnesota." The City of Minneapolis is a member on the Steering Committee whose principle task is to assure implementation of the program. Standing committees are working to develop the goals and objectives and action strategies which will make up the basic implementation plan⁶.

Strategy:

1. Meet State or federal requirements for municipal fleet vehicles⁷.

Resources: The Transportation subcommittee of the Energy Working Group will continue to monitor this situation in the event that future budgeting is more conducive to meeting the proposed AFV acquisition requirements for its fleet vehicles.

Timeline: 1996- ongoing

NOTES/REFERENCES

I. Municipal Energy Efficiency pages 3-7

1. Lewis, Eleanor and Eric Weltman. "Government buying can save tax dollars and the environment," *Public Management*, February, 1993.
2. Implementation would require 6-standards for heating and cooling systems, lighting, insulation, tree planting, light colored surfaces, green fleets, transit commuting incentives, bicycle parking with shower facilities etc.
3. New building construction represents long-term investments which have the potential for significant energy savings. It is important to build energy efficiency into new construction projects, rather than retrofit later. These energy measures should not only relate to the operating efficiency of the completed buildings, but also the materials and procedures used to construct them. "Public financing" is defined as any time the City or City agency directly expends City resources for construction.

II. Residential Energy efficiency pages 8-9

4. The Minnesota Energy Code [MECI (Minn. Rules Chapt. 7670, subp. 6) stipulates, "Building assemblies are required to maintain the thermal performance of required insulation and the integrity of building materials against cold weather water vapor condensation and intrusion of unconditioned air."

Category 2 standards are the current norm for building assemblies with Category 1 standards requiring installation of a mechanical ventilation system. Effective January 1, 1998, newly constructed residential buildings in Minnesota (one and two family and other residential buildings three stories or less in height) must meet the standards of the R-2000 Home Program Technical Requirements (Canadian Home Builders' Association, 8/92).

III. Commercial/Industrial Energy Efficiency pages 10-12

5. *An introduction to Environmental Accounting As A Business Management Tool: Key Concepts and Terms*, Environmental Protection Agency, p. 2. June 1995
6. Ibid. p. 3. (*Cutting Chemical Wastes* [1985], INFORM, New York, NY; *Environmental Dividends: Cutting More Chemical Wastes* [1992], INFORM, New York, NY.)
7. This pilot project attempts to improve the energy efficiency standards of new and used commercial/industrial construction/rehab projects. Participants will be selected on a case by case basis and assisted in evaluating and if feasible, making energy improvements that are cost effective, combining public*/private financing (which may include existing utility programs) to improve building energy efficiency standards. Projects shown to be affordable with up to a 10 year payback will be encouraged.

"Public financing" is defined as any time that the City or City agency directly expends City resources for construction or site acquisition or sells bonds on behalf of a private concern for construction for housing or commercial purposes. This would include write downs, tax increment financing, and industrial revenue and housing revenue bonds

III. Commercial/Industrial Energy Efficiency pages 10-12 cont.

8. A production ban on the worst ozone depleting CFC's will take effect on January 1, 1996. the municipalities of Minneapolis and St. Paul collaborated on the development of an ordinance which regulates the sale and distribution of certain products which contain CFC'S, regulates the servicing of equipment and appliances which contain CFC's and controls the release of halons into the atmosphere. This effort prompted the State to add its own CFC ordinance modeled on the Cities' version. *MPLS/St. Paul C02 Reduction Project, 12 193 p. 47.*

IV Transportation Efficiency pages 13-18

9. The miles of freeway with major or severe congestion in the Twin Cities is expected to double by the year 2010. *Metropolitan Council's Regional Transit Facilities Plan, February 1992.*
10. Only about 15 cents of every dollar spent for gasoline stays in the local economy. Morris, David. *A Rational Transportation System: Getting From Here to There, Institute for Local Self Reliance, Saint Paul, Minnesota, May 4, 1991.*
11. *Downtown Minneapolis Transportation Management Plan, TMO Work Program, Appendix A, p. 5, 1993.*
12. Of the city's 266,522 employed labor force ".it is estimated that 160,000 (60 percent) drive alone to work, about 28,000 carpool (10.5 percent), and nearly 43,000 use public transit (16 percent)." *State of the City, City of Minneapolis, page 72, 1995.*
13. This includes programs and services that improve access to transportation information, increase flexible alternative work arrangements/schedules and support the use of alternative transportation modes: biking, busing, carpooling, telecommuting, vanpooling, or walking. Participants are encouraged to determine the present commuting patterns and needs of their employees by conducting surveys. The TMO sponsors Commuter Connection and serves as the clearinghouse for transportation -information for the City, MCTO, MNDOT, Minnesota Rideshare, and other organizations. As such, the TMO provides a valuable educational service to downtown Minneapolis commuters, Twin Cities visitors and newcomers.
14. Minneapolis has subsidized 250 HOV stalls in the City owned parking system. Along with this MNDOT has subsidized 100 City owned stalls. The Third Avenue North Distributor Parking Facilities are State owned, City operated, facilities with approximately 6000 stalls. These facilities offer a substantially discounted rate to those carpoolers coming in on I-394. By the end of 1995, 100 stalls will be subsidized in the Third Avenue North Distributor C for those poolers registered and coming in from the north on 1094.
- The purpose of these special stalls is to encourage people to car pool, especially on 1-394 which contains exclusive HOV lanes and direct access from these lanes to the facilities.
- HOV users pay only \$25-30 a month to park while others pay \$85-95 per month. Preferential HOV pricing strategies in Montgomery County Maryland have achieved over 75% HOV stall use of public spaces. Seattle has achieved 95% HOV space use in public spaces and 35% in private space.
15. Bock, M., NOVA PRO, Denmark, *Improved Driving Techniques.* CADDET Newsletter, No. 2. 1992.

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16. Committees which are currently meeting, their functions and progress to date are described briefly as follows (committee information excerpted from *Clean Fuels Minnesota application to DOE, 1994*):

Legislative Committee: Determine barriers or incentives to the timely implementation of Clean Fuels Minnesota Minnesota that could be affected by legislation and develop a legislative agenda that would be beneficial to implementation.

This committee suggests enacting one or more of the following fuel neutral financial incentives to encourage and expand the use of these clean-burning alternative fuel vehicles in Minnesota:

- Exempt alternative fuel vehicles from the state motor fuels tax for a specific amount of time (i.e. 5 years). Approximately \$750,000 annual revenue reduction.
- Establish a capital pool to fund AFV development activities by implementing a one-time \$1 dollar fee on all vehicles requiring state registration. Approximately \$3,700,000 in revenue and expenditure.
- Implement a 50% vehicle registration (up to \$100) for alternative fuel vehicles for a specific period of time (i.e. 5 years). Approximately \$250,000 annual revenue reduction.

Infrastructure and Procurement: What is required from a user perspective to make the program effective.

Education and Information Committee: Monitor public interest in alternative fuels and AFVs to develop programs that will foster a greater interest

Technical Advisory Committee: Assure that all of the latest technical developments are examined and are properly communicated to the appropriate parties.

The aforementioned committee structure and is designed to facilitate the U.S. Department of Energy's **proposed** regulations requiring State government fleets to begin purchasing alternative fueled vehicles as of September 1, 1995.

17. U.S. Department of Energy's proposed regulations requiring State government fleets to begin purchasing alternative fueled vehicles as of September 1, 1995. Note: this regulation has been deferred for one year (10/96). Based upon this change, proposed acquisition requirements for state fleet vehicles are:

10 percent of vehicles acquired after September 1, 1996;
15 percent of vehicles acquired after September 1, 1997;
20 percent of vehicles acquired after September 1, 1998;
50 percent of vehicles acquired after September 1, 1999;
75 percent of vehicles acquired after September 1, 2000;

Federal Register, Energy Efficiency and Renewable Energy Office, *Alternative fueled vehicle acquisition requirements*; implementation, Vol. 60, #112, pgs. 30795-96.