

EPAct Launches Fleets Toward Minnesota's Alternative Fuel Future

Minnesota is a national leader in the use of alternative fuels. This corn-belt state requires a 10% ethanol blend (E10) in all its gasoline, and E85 (85% ethanol, 15% gasoline) is available at more than 100 fueling stations statewide. It recently enacted ambitious petroleum reduction goals for its state fleets. Two of the state fleets finding success with alternative fuels are the Minnesota Department of Natural Resources (DNR) and the Pollution Control Agency (MPCA).

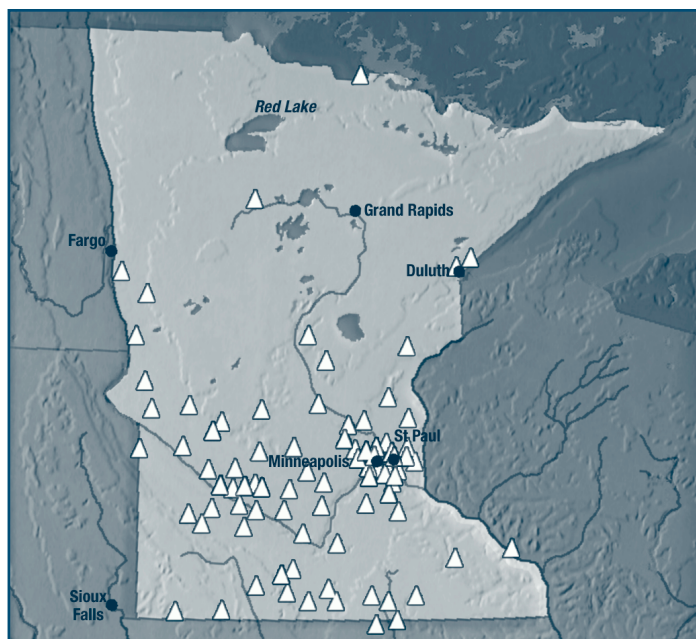
The DNR and MPCA consistently surpass their Energy Policy Act (EPAct) alternative fuel vehicle (AFV) requirements, but they don't stop there. Committed to cleaning the air, supporting the local economy, and reducing petroleum dependence, they actively promote the use of E85 in their flexible fuel vehicles (FFVs).

With the help of partners like the Minnesota Department of Administration and the American Lung Association of Minnesota (ALAMN), their EPAct success is giving the DNR and MPCA a head start toward attaining Minnesota's ambitious alternative fuel vision.

EPAct and Minnesota's Visions

EPAct requires certain state government and alternative fuel provider fleets to acquire light-duty AFVs as a percentage of their yearly vehicle acquisitions. As of 2001, 75% of state fleet light-duty vehicle acquisitions must be AFVs; for alternative fuel providers, the percentage is 90%. Although the acquisition of AFVs is required, the use of alternative fuel by state fleets is not.

For Minnesota state fleets, the natural way to comply with EPAct is through acquisition of FFVs—vehicles capable of fueling with gasoline or any mixture of gasoline and ethanol up to E85. Ethanol is clean burning, renewable, and, because of Minnesota's extensive E85 fueling infrastructure, readily available in much of the state. Ethanol use is also good for the state's economy because



Minnesota's E85 stations (Source: Alternative Fuels Data Center www.eere.energy.gov/afdc)

Minnesota is among the nation's leading producers of corn (an ethanol feedstock) and ethanol.

In September 2004, Minnesota—which requires state fleets to purchase alternative fuels and AFVs whenever reasonably possible—took a bold step. Governor Tim Pawlenty signed an executive order requiring state agencies to reduce gasoline use in onroad vehicles 25% by 2010 and 50% by 2015, and to reduce petroleum-based diesel fuel use 10% by 2010 and 25% by 2015. At least 75% of most new onroad vehicles must be powered by biodiesel (blends of 20% or greater), ethanol (blends of 70% or greater), or hydrogen. Vehicles with high fuel economies—such as hybrid vehicles—also qualify under Minnesota's executive order (as of February 2005, these vehicles don't qualify under EPAct).



A “SmartFleet Committee,” consisting of state agency representatives, was established to recommend ways to comply with the order and oversee progress. The SmartFleet Committee estimates that implementation of the order will result in a 25-fold increase in the state’s E85 use to 1.7 million gallons per year.

Department of Natural Resources

The Minnesota DNR is responsible for conserving and managing natural resources and providing outdoor recreation opportunities. To accomplish this mission, the department employs a fleet of 1,500 to 1,700 vehicles, including pickup trucks, medium- and heavy-duty trucks, passenger cars, vans, and buses. These vehicles perform duties such as park maintenance, law enforcement, fire suppression, and wildlife management. They operate from 240 locations across the state, from urban areas in the south to far-flung outposts in the north.

About 10% of the DNR’s vehicles are FFVs, primarily sedans, minivans, and light-duty pickup trucks. The DNR acquired these vehicles by surpassing its EPAct requirements for the past seven years, and it has amassed 83 banked credits. “Our policy is to buy 100% FFVs when they’re available for passenger vehicles and whenever there isn’t an extra charge for light trucks,” says Dave Schiller, DNR Fleet, Safety, and Materials Manager.

The DNR chose FFVs because they fit its needs. Many types of vehicles are available as FFVs, Minnesota E85 infrastructure is extensive, and, when E85 infrastructure isn’t available, FFVs can run on gasoline. The DNR also sees the fuel’s benefits to Minnesota. “We use ethanol because its renewable, and it reduces air pollution,” Schiller says.

The DNR encourages its drivers to fuel with E85 whenever possible, but the lack of E85 infrastructure remains a challenge in some parts of the DNR’s operating area. “South Minnesota is corn country, and that’s where most of the infrastructure is,” Schiller says. “But we operate in the north, too, which is forest country, and there’s not much infrastructure there.”

Minnesota E85 Team - 2004

- Minnesota Corn Growers Association
- Minnesota Coalition for Ethanol
- Minnesota Department of Commerce Energy Division
- Minnesota Office of Environmental Assistance
- Minnesota Department of Agriculture
- National Ethanol Vehicle Coalition
- Ford Motor Company
- U.S. Department of Energy Clean Cities Program
- American Lung Association of Minnesota

Still, Schiller estimates that 25% of the fuel consumed by DNR’s FFVs is E85, with nearly 100% E85 use in some southern areas where E85 infrastructure is readily available. DNR is working with ALAMN to make E85 infrastructure even more widespread. “Right now we’re trying to get an E85 station in Grand Rapids,” says Schiller. This small city is just two hours south of the Canadian border.

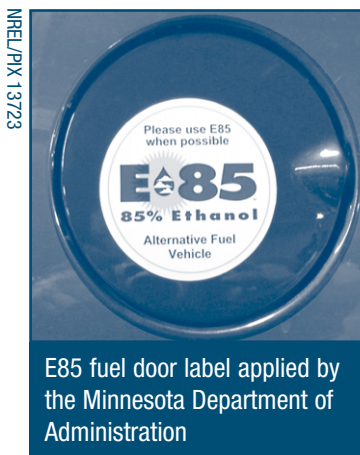
ALAMN and its partners in the Minnesota E85 Team and Twin Cities Clean Cities (TC3) Coalition play a key role in establishing E85 infrastructure in Minnesota. The group partnered with the DNR and other agencies to locate areas that need stations. “We tell the ALAMN where we’d like a station to be built and that we’ll use it, and they get the grants to have it built,” says Schiller.

Minnesota Pollution Control Agency

The MPCA is responsible for protecting the state’s environment through monitoring environmental quality and enforcing environmental regulations. It uses 126 sedans, sport utility vehicles, and light trucks for travel to meetings and for fieldwork such as inspecting facilities and testing water quality. About half of its vehicles are FFVs, and it has accumulated eight banked credits since becoming an EPAct-regulated fleet in 2001. Its goal is to meet or surpass the EPAct AFV requirement of acquiring 75% of vehicles as FFVs.

Most of MPCA’s vehicles operate in the 11-county metropolitan area surrounding Minneapolis and St. Paul, and its FFVs are able to use E85 infrastructure in this area.

E85 infrastructure is harder to come by for vehicles that operate out of MPCA’s regional offices. The MPCA estimates that E85 use in FFVs is 40% to 48% in the metropolitan area and 16% to 30% at the regional offices.



E85 fuel door label applied by the Minnesota Department of Administration

MPCA

Help MPCA Raise The Bar Think E85 When You Refuel

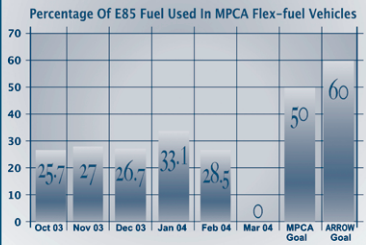
Though E85 fuel reduces emissions by more than 33 percent, MPCA staff use E85 only 28 percent of the time in the fleet's 59 flex-fuel vehicles.

The MPCA purchases vehicles that can use E85 to meet federal requirements. State law requires these vehicles use E85 fuel when it is available.

Help our agency model the way and double our E85 usage in 2004!

MPCA has 59 flexible fuel vehicles

- 33 Ford Taurus sedans
- 8 Ford Taurus wagons
- 8 Dodge Caravans
- 6 Plymouth Voyagers
- 1 Ford Windstar
- 3 Chevy 4x4 trucks



Minnesota Pollution Control Agency display promoting E85 to its drivers

As the state’s environmental agency, the MPCA has a unique stake in promoting cleaner burning fuels such as E85. MPCA Commissioner Sheryl Corrigan challenges the agency to achieve 50% E85 use in its FFVs.

Fuel choices are tracked monthly. If an FFV driver fills up with gasoline at a station that offers E85, MPCA contacts the driver and encourages the use of E85 in the future.

Other strategies to encourage the use of E85 include putting maps of E85 station locations in

vehicles and posting guidelines for E85 use on the MPCA Web site. “We ask people to plan ahead,” says Diane Droeger, MPCA Business Systems Supervisor. “If they’re going on a long trip we want them to fuel up with E85 before they leave at the station near our headquarters.” Like the DNR, MPCA works with ALAMN and its partners in the Minnesota E85 Team and TC3 to site stations where they’re needed.

Department of Administration

Many Minnesota agencies, including MPCA, acquire some or all of their vehicles through the Minnesota Department of Administration. (The DNR makes its own

vehicle acquisitions.) Statewide, the Department of Administration leases more than 2,000 vehicles, of which more than 1,100 are FFVs. “We assemble contracts that include FFVs, then help agencies meet their EPCa requirements by leasing FFVs to them,” says Tim Morse, Department of Administration’s Director of Travel Management and Chairman of the SmartFleet Committee.

The department also promotes E85 use through educational efforts. It labels the fuel doors on FFVs as E85 capable, provides maps of E85 stations, and, in cooperation with ALAMN, educates drivers on the advantages of E85 through publications and informational programs.

Keys to Success

If you build it, they will fuel. The experiences of the DNR and MPCA show that where E85 infrastructure is readily available to state vehicles, drivers will frequently use it. “The biggest challenge is meshing fuel availability with where FFVs are,” says the DNR’s Schiller. Collaboration among state fleets and partner organizations is helping to bring stations to the locations of the FFVs.

According to MPCA’s Droeger, education is critical in the use of E85. “The E85 pump is not always easy to find at a station,” Droeger says. “We’re trying to make it a habit for people to find the E85 pump when they go to fill up.”

Overcoming skepticism is another goal of driver education. “Some drivers are still skeptical about ethanol, thinking, for example, that it causes maintenance problems, but the DNR has never had ethanol-related problems,” says Schiller. Morse agrees: “You have to make the drivers believe in the benefits of E85—it doesn’t happen by itself.”

Establishing an accurate method for tracking fuel use is important for measuring the progress of an alternative

Comparing Regulations		
	EPAc	Minnesota Executive Order 04-10
Vehicle Acquisition Requirements*	75% of new light-duty vehicles for state governments, 90% for alternative fuel providers.	75% of new onroad, state-owned vehicles.
Eligible Vehicles	Vehicles fueled with qualifying alternative fuels; excludes hybrid electric and neighborhood electric vehicles.	Vehicles fueled with qualifying alternative fuels or vehicles with fuel economies exceeding 30/35 mpg (city/highway), including but not limited to hybrid electric vehicles.
Alternative Fuel Use Requirements	No requirements for state fleets; alternative fuel providers must use alternative fuels when possible. Covered fleets receive credit for biodiesel use.	Compared with 2005 use, reduce gasoline use 25% by 2010 and 50% by 2015; reduce petroleum-based diesel use 10% by 2010 and 25% by 2015.

* Various exclusions apply. For details about EPAc, see www.eere.energy.gov/vehiclesandfuels/epact. For details about Minnesota E.O. 04-10, see www.governor.state.mn.us/tpaw_view_article.asp?artid=1121

Lessons Learned

- Coordinate location of FFVs and public E85 fueling infrastructure.
- Collaborate with organizations such as the American Lung Association to encourage establishment of infrastructure where it is needed.
- Educate drivers so they make E85 fueling a habit.
- Establish accurate fuel use tracking.
- Make individual agencies responsible for EAct compliance.

fuel program, particularly with FFVs. Morse and Schiller emphasized the importance of removing human error (such as station clerks mistyping the fuel type sold) in establishing a tracking system. Pay-at-the-pump systems that record fuel type automatically are one possible solution.

Finally, Morse suggests that individual state agencies should be made responsible for meeting EAct's AFV acquisition requirements. "Minnesota used to report as a state, but we changed to individual agency reporting, and it increased accountability," he says.

Looking to the Future

Minnesota agencies are now looking toward compliance with the state's aggressive petroleum reduction requirements. Those that comply with EAct have a head start. "In the near term, the DNR plans to meet the executive order by acquiring more FFVs and using E85 and by using biodiesel in our diesel vehicles," says Schiller. "Hydrogen and fuel cells may have a larger role in the future." The DNR and MPCA include hybrid electric vehicles in their plans to reduce petroleum use.

The Department of Administration will continue to play a key role by making alternative fuel and fuel-efficient vehicles available to state agencies, and the advocacy of organizations such as ALAMN will remain

important. Although the goals are challenging, Morse is optimistic about the prospects for success. "We're on the verge of moving away from petroleum," he says. "Fuels like ethanol are domestic, renewable, and clean—that's hard to beat."

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What is EAct?

The Energy Policy Act of 1992 (EAct) was passed by Congress to reduce the nation's dependence on imported petroleum. Provisions of EAct require certain fleets to purchase AFVs. DOE administers these requirements through its State & Fuel Provider Rule, Federal Fleet Rule, and Alternative Fuel Designation Authority.

For more information, visit www.eere.energy.gov/vehiclesandfuels/epact, or call the Regulatory Information Line at 202-586-9171.

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