



# ACRPC

*update* July 2011

## 2012 Municipal Planning Grants – Apply Now!

This grant program funds planning and implementation projects aimed at revitalizing communities and guiding future development. Priority will be given to projects that further smart growth principles and town plan projects that address the new economic development element as passed by the legislature this year as Act 52.

MPG funding for fiscal year 2012 (FY12) was allocated at approximately the same \$400,000 level as last year. A cash match is required for grant requests between \$8,000-\$15,000. Matching funds are not required for grant requests of \$8,000 or less.

Applications must be submitted online and the application website will open later this summer. In the meantime, we encourage you to begin working on your application by meeting with appropriate boards and consultants and developing your work plan and budget using the Sample Application as a reference. See Application First Steps for instructions on getting started now at this following website: [www.dhca.state.vt.us/planning](http://www.dhca.state.vt.us/planning)

### Application dates:

- July/August 2011 – Opening of online application website will be announced
- September 30 – Application due date
- Late November – Grant decisions announced

For questions about the MPG program please email [Wendy.Tudor@state.vt.us](mailto:Wendy.Tudor@state.vt.us) or call: 802-828-5249 (direct line) or (800)622-4553 (toll free).

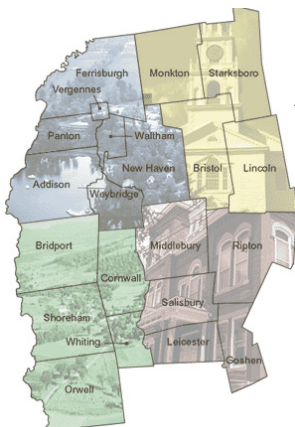
If you would like technical assistance in applying for a Municipal Planning Grant, please contact Claire Tebbs in our office no later than August 1st to schedule a meeting: [ctebbs@acrpc.org](mailto:ctebbs@acrpc.org) or 388-3141.

## Commission Calendar

July 2011

8	8:15-10:00am	ACTR Board
13	7:00pm	Full Commission Meeting
20	5:00pm	Local Emergency Planning Committee
21	11:00-1:00	Regional Technology Team project
21	7:00pm	Addison County Solid Waste Management District
26	7:00pm	Natural Resources Committee Meeting
27	7:00pm	ACRPC Executive Board
27	4:30-6:30pm	Addison County River Watch Collaborative Meeting

Meetings are held at ACRPC, 14 Seminary Street, Middlebury, and are open to the public.



Addison County Regional Planning Commission  
14 Seminary Street  
Middlebury, VT 05753

Phone: 802.388.3141  
Fax: 802.388.0038

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## Plugging in Vermont's future by Andrew Stein, *Addison Independent*



*ADAM LOUGEE, LEFT, Kevin Lehman and Kevin Behm of the Addison County Regional Planning Commission stand next to the organization's plug-in hybrid car. The car is capable of getting more than 100 miles to the gallon. Independent photo/Trent Campbell*

Throughout Addison County, residents might notice a blue Toyota Prius with the license plate "PLUG IN." That's the new plug-in hybrid vehicle that the Addison County Regional Planning Commission (ACRPC) is using to reduce carbon dioxide emissions, cut costs and, planners hope, help drive Vermont into the future.

With Department of Energy funding that stems from President Obama's goal to put 1 million plug-in vehicles on American roads by 2015, the planning commission recently converted a 2008 Prius into a plug-in hybrid vehicle by installing a larger 5-kWh battery.

ACRPC officials also plan to install two charging stations this summer on the east side of their Seminary Street headquarters in Middlebury.

The end result?

"The car can get over 100 miles per gallon," said ACRPC energy planner Kevin Lehman. That point is important considering Vermont's transportation sector devours more petroleum and produces more carbon dioxide than any other facet of the state's economy. According to a VTrans study, transportation

accounts for 33 percent of Vermont's total energy use and contributes 44 percent of the state's greenhouse gases.

To deal with this issue, planning commissions across the state are searching for low-carbon and energy-efficient solutions to reduce the impact of the transportation system on the environment and economy.

One concept that has been gaining momentum across the country is the large-scale production of electric vehicles (EVs) and plug-in hybrid vehicles and the infrastructure needed to support them.

Planners at ACRPC had initially hoped to work with other regional planning commissions to begin putting such infrastructure in place.

"The original vision was to have all the regional planning commissions collaborate to get a plug-in hybrid and a couple of charging stations, so that then we could drive to each other's offices, plug our cars in and charge them up (and start creating a network of infrastructure)," said ACRPC Assistant Director Kevin Behm. "But we were the only ones that actually went ahead with that proposal."

Now, ACRPC hopes to reduce emissions and cut costs by using the car for work-related purposes. According to Lehman, if the planners use the plug-in to drive a total of 12,000 miles a year, a pace they are currently maintaining, they'll save an estimated \$1,500. This number is based on the IRS standard rate of reimbursement of 51 cents a mile, which the commission had paid each of its employees for the cost of travel.

The planning commission also received federal aid for the full \$10,000 cost of conversion. So while the plug-in might save ACRPC money, a similar conversion might not produce the same savings for the average Vermonter. If this technology grows in popularity, however, its mass production could drive down costs.

The planning commission also believes that the car will drastically reduce carbon dioxide (CO<sub>2</sub>) emis-

sions. Using the U.S. Environmental Protection Agency (EPA) calculation that a gallon of gas produces 19.4 pounds of CO<sub>2</sub> (the carbon from the gas blends with oxygen in the air to produce CO<sub>2</sub> that weighs more than the original 6.3-pound weight of the gas), Lehman estimates that the plug-in will decrease ACRPC CO<sub>2</sub> emissions by 5,850 pounds.

With what Lehman refers to as a conservative mpg estimate of 75 mpg, the plug-in will produce about 3,100 pounds of CO<sub>2</sub> at 12,000 miles. For an idea of what this number means, an above-average-fuel-efficiency car that gets 26 mpg produces 8,954 pounds of CO<sub>2</sub> from 12,000 miles of driving.

Furthermore, a Carnegie Mellon University study found that plug-in hybrids are capable of producing 7-12 percent less CO<sub>2</sub> than the average hybrid.

But a plug-in's CO<sub>2</sub> reduction is contingent upon where its electricity comes from. If it uses electricity derived solely from coal, its carbon footprint will be significantly higher than a typical hybrid's. If the plug-in uses low carbon sources of energy such as wind, solar or hydro, the plug-in will have a smaller carbon footprint than the normal hybrid.

## THE FUTURE

The planners at ACRPC see their new plug-in and upcoming charging stations as the potential beginning of something huge.

"Electricity will drive a car," said Behm. "But people have been driving on gas for so long that they don't even realize that it's an option for the future."

Due to big tax rebates, subsidies and a fertile economic climate, thousands of charging stations are scheduled to be up and running come 2012 in states such as California, Oregon, Washington and Arizona. Companies like Nissan are claiming that some of these charging stations will be able to charge cars up to 80 percent capacity in just a half-hour's time.

This massive infrastructure project will make driving new all-electric vehicles like the Nissan Leaf and the Ford Focus Electric much more feasible. Most of these cars average about 100 miles a battery load, and the all-electric Tesla Roadster averages 200 miles a load and accelerates from 0-60 mph in less than 4 seconds, reported [plugincars.com](http://plugincars.com) — a leading source of information on the electric vehicle industry.

But without adequate infrastructure, electric vehicles are impractical and right now the Northeast is far behind the Western and Southern U.S.

"None of this will work without the proper infrastructure and we'd like to play a role in that infrastructure, but we're just one entity with limited funding," said Lehman.

Without the necessary infrastructure, people get what is referred to as "range anxiety."

"People are concerned about how far can I go on my charged battery because I need to find a place to plug in," said Behm.

Another variable that might worry Vermonters is that batteries don't function as well in the cold, and Vermont winters are a hostile environment for a battery.

One prospect, however, that state planners, engineers and academics are excited about is called "vehicle-to-grid." If Vermont had hundreds of charging stations with plug-ins and electric vehicles hooked up, the cars' batteries could be used to store energy. Then, with effective communication and the proper controls in place, utility companies would be able to draw energy from these storage devices in times of need.

"The problem is that most of these cars will be plugged in at night and that's not peak hours," said Behm.

"But if the infrastructure ends up being at a lot of employer locations, there could be a large number of vehicles plugged in during the day," added Lehman.

# News/Events

This idea of vehicle-to-grid relies on what is called a “smart grid” using “smart meters.” These smart meters would allow homeowners and utility companies to calculate their energy use in real time, rather than having a utility employee read the meter once a month.

Such technology might go as far as to charge homeowners higher or lower rates at different points in the day and would allow homeowners to more easily trade energy back to the grid, whether through a solar panel, a car battery or some other form of energy storage or production. Communication would be two-way and every entity tied into the grid would be better informed about the grid’s energy use and production — hence the name smart grid.

But before a concept like vehicle to grid can be implemented, said the planners, Vermont and the Northeast will need federal funding and a commitment from the people.

“Putting in two charging stations is certainly not the end game, it’s just the beginning,” said Lehman.

*This article was reprinted with permission from the Addison Independent (www.addisonindependent.com/201106plugging-vermonts-future). Reporter Andrew Stein is at andrews@addisonindependent.com.*

## **Integrating Stormwater and Wastewater Solutions**

*City Hall Conference Room, Montpelier, VT ((parking available behind City Hall)*

*Thursday, July 21, 8:30 a.m. - 4:30 p.m.*

Come learn from low-impact development (LID) experts about strategies for integrating wastewater and stormwater management decisions at the site scale, participate in the construction of a bioretention area, and network with your colleagues at a one-day workshop exploring the link between onsite wastewater treatment systems (“septic systems”) and water quality in rivers, ponds, and lakes.

For more information, contact: Mary Clark, Orenco Systems at [mclark@orencosystems.com](mailto:mclark@orencosystems.com) or (802) 441-4400. Cost: \$75.00.

## **Middlebury Green Drinks**

*51 Main, Middlebury*

*Tuesday, July 19, 7:00 - 9:00 pm*

Mull ideas to make Middlebury and Addison County greener while enjoying free snacks, drink discounts, door prizes. This month’s theme will be cargo bikes and will feature free snacks, drink discounts and door prizes from local shops and groups. GreenDrinks.org is a global movement aimed at connecting environmentally-minded people in cities throughout the world for networking, learning and socializing. For more info or to suggest themes, email [middleburygreendrinks@gmail.com](mailto:middleburygreendrinks@gmail.com).

## **Renewable Energy Vermont Annual Meeting**

*Long Trail Brewery, Bridgewater Corners, VT*

*Tues., July 12, 5:00 - 7:00 pm*

You’re invited and the first beer is on REV. The organization is pleased to have you share in this year’s successes, and are eager to hear your input on REV’s goals for the rest of 2011 and into years to come. REV will provide one drink ticket per attendee, plus buffet-style hors d’oeuvres. Contact Scott Merriam as soon as possible by to RSVP at [scott@revermont.org](mailto:scott@revermont.org) or (802) 229-0099.

## **Solarfest 2011**

*Tinmouth, VT*

*July 15, 16 & 17*

Located on Forget-Me-Not Farm in Tinmouth, Vermont, SolarFest is the Northeast’s premier renewable energy and arts festival: a three-day family friendly-festival which combines world-class entertainment with not-to-be-missed workshops in renewable energy, sustainability and community engagement. This innovative combination of energy education and the arts attracts a wide and varied audience. Tickets for SolarFest are available online through July 1 or at the gate July 15-17. For details, go to [www.solarfest.org](http://www.solarfest.org).

# Events

## **Webinars from the Fish and Wildlife Dept.**

*ACRPC Office, 14 Seminary St., Middlebury*

*Tuesday 7/19 and Wednesday 8/17, 10:30 – 11:30 a.m.*

The Fish & Wildlife Department is offering a summer webinar training series, to be broadcast at the ACRPC office. All are welcome. Please call 388-3141 or email [kbehm@acrpc.org](mailto:kbehm@acrpc.org) if you have questions.

Tuesday 7/19 10:30 – 11:30 a.m. Town Plan Review; Vermont Natural Resources Council has completed a review of all town plans and municipal bylaws in the state with respect to their treatment of fish & wildlife resources. The report is an update of a similar study done in 2000 and documents the progress and shortcomings in natural resource protection over the last ten years as well as the challenges and opportunities for future years. This session will highlight the major findings of the report and discuss implications for how municipalities can continue to strengthen planning for fish and wildlife conservation. (Jamey Fidel & Brian Shupe, VNRC & Jens Hilke VFWD) (<http://www.vnrc.org/forest/hot-issues/report-release-wildlife-considerations-in-local-planning/>)

Wednesday 8/17 10:30 – 11:30 a.m. Subdivision Trends; Vermont Natural Resources Council recently studied Grand List data from 2003 and 2009 to establish a database of parcels of land in the state, compiled by class size, to quantify the extent of subdivision over the last decade, and the degree to which subdivision is affecting the long-term viability of forestland in Vermont. The study highlights recent changes to parcel size and ownership patterns, implications for land use planning, forest management and conservation, and provides recommendations for future action to track and address subdivision patterns in Vermont. Additionally, eight towns were studied in detail to determine whether certain zoning or subdivision policies promote or discourage viable parcel sizes for resource management. Participants will be able to access an interactive webpage which provides statewide maps and subdivision and land classification trend information for every municipality in Vermont. (Jamey Fidel & Brian Shupe, VNRC) (<http://svr3.acornhost.com/~vnrcorg/report/>)