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I. Detailed Project Description:

The proposed project is the creation of a sister location for The Bike Project (TBP), an Urbana-based bicycling cooperative. TBP, located at the Urbana Champaign Independent Media Center (UCIMC), had been steadily growing since its inception in September of 2006 and would like to expand its model to the campus of UIUC. The goals of TBP at UIUC (TBP-UIUC) will encompass TBP's stated goals, but will also include goals specific to TBP-UIUC:

- Facilitate/advocate for increased biking and bike commuting in Urbana-Champaign and on the UIUC Campus
- Recycle used bikes/ parts to provide affordable, reliable transportation
- Educate and empower people to repair their own bikes
- Share knowledge about safe bicycle commuting

The unique and primary TBP-UIUC goal will be to increase the number of students biking on campus, and by doing so reduce the number of single occupancy vehicle (SOV) trips, thus reducing the need for additional parking on campus and on-campus traffic.

These goals will be achieved by:

- Providing an on-campus location with appropriate tools and repair space where University students, faculty, and staff can maintain their bicycles and learn bicycle maintenance skills.
- Providing low cost used bicycles and the basic parts required for maintaining a bicycle (tires, tubes, chains, and lubricants).
- Providing a low cost source for bicycle safety and security products (helmets, reflectors, lights, and bicycle locks).
- Training staff and visitors in bicycle maintenance to empower people to maintain and share the habit of sustainable transportation; spreading the value of bicycle commuting far beyond the direct impact of the project.

Sustainability:

TBP ascribes to the definition of sustainability as: the ability to meet present needs without compromising the ability of future generations to meet their needs. In this understanding of sustainability, TBP-UIUC will be sustainable on a number of levels:

- Biking meets an important need: transportation. Compared to SOV trips, biking serves as an inexpensive, reliable and healthy means of transportation. Reducing SOV trips to campus reduces costs for road maintenance and parking.
- TBP-UIUC will operate with very low overhead: TBP has established relationships with UIUC, the City of Urbana, and the City of Champaign, whereby used bikes are donated to the project instead of entering the waste stream.
- Donated bikes are repaired and/or sold by TBP. Currently, TBP has more bikes than we can repair. Through TBP-UIUC, the project will increase in scope and impact.
- TBP-UIUC will encourage individuals to select an un-repaired bike and learn to make those repairs themselves under the supervision of TBP-UIUC staff. This creates a community of individuals who have the skills to maintain their bikes.
- Through this proposed model, TBP-UIUC will create or secure enough income- through membership and sales- to support the part-time to full-time staff required to supervise the space, coordinate volunteers, and run the program.

TBP already has over two years of sustainable existence and has many useful connections. TBP-UIUC will follow this template in cooperation with the existing TBP.

Longevity/permanence of project results:

TBP would like to see TBP-UIUC as a permanent resource for students, faculty, and university staff, and has designed the project to meet this goal. After the initial renovation of TBP-UIUC's space and purchase of repair equipment, TBP-UIUC's overhead is very low.

All bikes are donated and the sale of the bikes, while inexpensive, generates revenue to sustain the project. Many of the donated bikes come from UIUC, effectively reducing the University's waste disposal costs.

The impact of TBP-UIUC on campus is also long-term and will benefit campus members who use the project, as well as those who don't. The Facilities and Services Department's Strategic Plan cites: "in fiscal year 2005, the campus burned...476,504 gallons of gasoline, and consumed...(a)n unquantifiable number of bus miles and thousands of vehicle trips were generated on campus to transport faculty, students and staff." As such, this project will coordinate efforts with the Transportation Demand Management Office. TBP-UIUC will be run by one part-time staff person/graduate assistant (see budget) and student volunteers. The staff person will have oversight and support from the Facilities and Services Transportation Demand Management Coordinator as well as TBP's current members and volunteers. TBP and Transportation Demand Management will also form a board to provide support and oversight for this project.

Location:

Working with the Facilities and Services Department, UIUC identified space in the Natural Resources Garage on Pennsylvania Avenue. Here, TBP-UIUC will have at least 1,200 square feet. (TBP's location in Urbana is about 2,200 square feet). By offering an on-campus location, students will be able to easily access the shop, enabling them to commit the time required to repair their bike or fix up a used bike. They can also return easily for routine maintenance training, and volunteering.

In order to make this space usable, rehabilitation will be necessary (see budget). Significant savings in startup costs could be realized if a space on campus could be identified that does not need major renovation.

Similar Projects:

Many campuses cite increasing bike transportation as a goal and provide access to bikes/bike rental (UConn, Mercer, Juanita University, Emory, St. Xavier, and many more).¹ Several universities offer new and free bikes to students who agree to leave their cars at home. But rental programs face problems with irresponsible handling of bikes and free bikes are often poor quality. UC Irvine refurbishes impounded bikes, and donates them to local charities. But of the programs researched, TBP-UIUC would be the only to offer low-cost ownership of bikes and the skills to maintain them. And, this model is highly replicable.

II. Budget & Fundraising:

1. Detailed budget

The following budget assumes that Sustainability Grant funding would cover startup costs and the first six months of monthly operating expenses. After six months TBP-UIUC should have adequate funding to pay monthly operating expenses with income beyond expenses going into a rainy day fund until approximately equal to one year's worth of operating expenses.

Total Estimated Startup Cost: \$52,610-\$72,610:

- \$30,000-\$50,000: conversion of garage bays to a 4-season, secure workshop (estimate from Facilities and Services)
- \$2,000 for the initial bicycle repair tools and workstands
- \$2,000 for the computer, printer, and point-of-sale checkout system
- \$17,220 to cover the first twelve months of expected operating expenses including the wages of a part time employee

* Note: we are negotiating with the Kinesiology and Community Health Departments, who may provide the funding for a part time "staff person" for TBP-UIUC through a graduate research assistantship.

Total Estimated Income: \$1760/month

- \$1460/month from sales of used bikes and bike parts - estimated from current per hour income at the IMC Bike Project location
- \$300/month from membership fees paid by individuals to utilize the workshop space and tools. Assumed a 100% increase in membership from current levels at the IMC Bike Project (+~150 new members).

Total Estimated Expenses: \$1435/month

- \$980/month for 20hr/wk part time staff person paid \$12/hr
- \$60/month for tool repair and replacement
- \$220/month for bike parts used in repair of sold used bikes
- \$75/month for consumable items such as chain oil, grease, and small nuts/bolts
- \$100/month for volunteer events, meeting expenses (food), and training
- \$60/month - sharing 20% of membership income with TBP

Total estimated monthly Income minus Expenses: \$325/month

Income beyond monthly expenses would be used to build up a fund equal to one year's operating expenses of the cooperative. Once a 1-year rainy day fund is reached, TBP-UIUC income beyond monthly expenses could be used to offset these indirect expenses or to begin paying staff.

Estimated Monthly Expenses not captured in Campus Bike Project Budget due to expected departmental support: \$1000/month

¹ <http://www.nytimes.com/2008/10/20/education/20bikes.html>

- \$900/month for costs associated with the on campus space and utilities (It is unlikely that an on campus bike shop cooperative could sustainably support a market rate rent).
- \$100/month for costs associated with coordinating with campus departments and oversight of part time employee

If the Student Clean Energy Committee does not fund the full requested amount, a partially funded project could be successful if a University department would be willing to fund a graduate assistant to fulfill the part time staff position. Significant savings in startup costs could be realized if a space on campus could be identified that does not need major renovation in order to be suitable for year round human use (dorm basement, etc).

2. Fundraising

- TBP-UIUC, in cooperation with UCIMC, has applied for state AmeriCorps volunteers. If awarded, TBP will have an AmeriCorp volunteer to help with TBP locations.
- The IMC Bike Project has relationships with the City of Urbana and the City of Champaign, the University of Illinois, and local apartment rental companies resulting in the donation of 500+ used bikes each year. TBP cannot store and rehabilitate this many bikes at the current location, so bikes will be shared equally with TBP-UIUC.
- The UIUC Bike Project is an active RSO and with access to SORF funding. The funding structure proposed for TBP-UIUC has been tested successfully at TBP's Urbana location.

III. Timeline

The project is highly dependent upon funding from this committee, the hiring of the part time employee, and the preparation of the workshop space on campus. Once funding is awarded and the identified space on campus is confirmed, the conversion of the identified garage space is estimated to take 3 months. During that time a part time employee will be hired and will be responsible for purchasing the initial tools and setting up the workshop. Four months after the receipt of Sustainability funding and confirmation of the campus space allocation, TBP-UIUC will be open for business.

The start date of The Campus Bike Project is dependent on the date funding is received and the confirmation of the available space and cost of space conversion.

TBP-UIUC will be ongoing, but will report financial status and accomplishments one year from receipt of Sustainability funding.

IV. Energy, Environmental, Social and Economic Impact

A. Renewable Energy Projects: n/a

B. Energy Efficiency Projects:

a) A conservative estimate for how many SOV trips could be eliminated from campus would be: 1000 miles/week of bike trips replacing automobile trips (with 300 new cyclists, this would be only 3.3 miles/week each -cases can be made for impacts 10-100 times greater): Estimated savings: 3375 gallons of gas annually.

(Calculating by the 3.375 annual-gallons-saved / weekly-commute-mile ratio in "Using a bicycle to commute four days a week for four miles (one-way) saves 54 gallons of gas annually)."²

² From the Eugene/Springfield (OR) Bicycle Map (1998?), which further credits the American Lung Association, Oregon Traffic Commission, Association of Commuter Transportation, American Automobile Association, and City of Eugene.

b) Only HVAC and minor electricity will be needed for the space, with occasional powered tool use. This roughly amounts to 1,000 gallons of fuel annually (enough to heat a large home). We assume bike recycling more than makes up for new tool/storage purchases.

c) 3,375 gallons of fuel – 1,000 gallons of heating fuel = 2,375 gallons of fuel saved
= 2,375 gal * 35.65 kWh saved = 13,369 kWh saved
(conversion factor: 1 gal Gasoline contains 36,650 watt-hour)³

C. All Projects

Environmental Impact

Using a bicycle to commute four days a week for four miles (one-way) saves 54 gallons of gas annually. The energy and resources needed to build one medium-sized car could produce 100 bicycles.⁴

Effect on greenhouse gases: (using the provided rates and costs): 2,375 gal Gasoline offset * 19.4 pounds CO₂/gallon = 46,075.0 pounds CO₂
2,375 gal Gasoline offset * \$2.50 = \$6,187.5

Other environmental impacts:

The Bike Project aims to be sustainable in all its undertakings. We recycle bikes that might otherwise enter the waste stream. Bikes and parts that we cannot use are brought to scrapyards. In addition to decreasing the number of SOV trips, our presence will increase the visibility of bikes used around campus. More bike visibility often leads to more bike use, in a virtuous circle including more aware drivers, and safer streets, and ultimately to a lowered rate of SOV trips and high energy savings.

Social Impact

TBP is a co-operative where students can learn how to repair and maintain their bike for transportation throughout the year. They will gain bike safety skills, and the necessary access to bike safety gear. They will also be exposed to an active community of bike enthusiasts who share ideas, knowledge, and expertise on biking in this community. This model empowers people to maintain and share the habit of sustainable transportation, spreading the value of bicycle commuting far beyond the direct impact of the project.

Transportation is a universal need and this service is open to all University members. Community members who might not otherwise interact would have a venue for meeting new and different people. By providing sustainable transportation to persons that would otherwise be limited to walking and public transit, the project will also increase trips to the neighboring business districts resulting in sustainable local commerce (e.g. - trips to the Urbana Farmer's market). Increasing student/staff/faculty mobility means people are able to become more active participants in their academic and surrounding community, regardless of income level.

Economic Impact

A bicycle, as opposed to a personal automobile, is a much more economically efficient transportation solution. The ideal trade is a bicycle as a 100% replacement for a personal vehicle, supplemented as needed by public transit, walking, and occasional cab rides. As reported by The Bureau of Labor and Statistics, the average yearly total ownership cost of a personal automobile in

³ "How Gasoline Works".<http://science.howstuffworks.com/gasoline1.htm>. Accessed March 19, 2009.

⁴ "How Gasoline Works".<http://science.howstuffworks.com/gasoline1.htm>. Accessed March 19, 2009.

2001 was more than \$7,232. This includes insurance, fuel, averaged cost of the vehicle over its life, and maintenance. A bicycle has an average yearly ownership and operating cost of approximately \$600 and many get by with even less investment, especially with TBP.

V. Outreach and Education

Visibility of Project:

Currently, with very little advertising, TBP, located in downtown Urbana, counts almost 70% of their supporters as members of the University community. The project has seen phenomenal growth since 2002, doubling membership and now operating at capacity. All this has happened with very little advertising outreach. One ad on Craigslist resulted in TBP having to turn people away so as not to violate the maximum occupancy limit for their space. The interest in this project is so strong that we have already had people asking when it would be open.

With a new location, the need for advertising will increase. TBP has participated in Quad Day and would be happy to do so again. Many professors have expressed willingness to advertise this project among their students, particularly foreign exchange students who often have greater need for transportation than students more familiar with the area. Even in these early planning stages, people are wondering when this service will be available. With targeted efforts to the university community, TBP-UIUC has the potential to be highly successful and well-utilized.

Role that students will play in the project:

Ideally, we will have a Research Assistant serving as the part-time staff person as well as a student-volunteer coordinator. Thus, the project will be a student-run campus service.

Opportunities for involvement in classroom curriculum

To encourage student involvement, the part time staff person would also be asked to contact professors who may be interested in including this project as a service-learning opportunity for their students. The project applies to the curricula of many different departments that could each make a substantial contribution to the success of this project.

Media Opportunities

TBP in Urbana is visited by almost one new reporter every two months. With a new location, TBP would utilize these relationships as well as the media resources at the UCIMC to get the word out about this exciting initiative.

Methods the project will use to educate the students and the public about clean energy technologies:

This project has the ability to expose the community to a highly effective bike recycling/repurposing program. The very nature of the project causes all participants to reconsider the value of bikes that would have been thrown away that are now selling for anywhere from \$30-\$150. The practice of bicycle commuting also causes project participants to reconsider alternative forms of transportation as a viable option for their own transportation needs.

Final Note:

Currently, over 15,000 bikes are registered on campus. A recent survey showed that TBP-UIUC offers a valuable resource to all these individuals. But, with over 40,000 students and 10,000 faculty and staff, TBP-UIUC has the potential to serve an even greater number of campus members. At TBP's current location, at least 70% of members are affiliated with UIUC. However, this space is operating at capacity and has had to turn visitors away because of space limitations. For many students, TBP's downtown Urbana location is not readily accessible. Offering students a

central and accessible location will maximize the benefits of this program. Given the student turnover each year, it makes sense to maintain this project so that new students can benefit.

Addendum

What is The Bike Project?

The Bike Project was formed in late 2006 as a group of bicyclists, bike mechanics, and environmentally minded CU residents decided to do something about their vision of a cooperative bike shop space that could serve both the University and communities of Urbana-Champaign. Some tools and funds were donated, enough to rent a small, below market rate space in the basement of the Urbana-Champaign Independent Media Center (UCIMC). The UCIMC served and still serves as the book keeper and fiscally sponsoring organization of The IMC Bike Project. The IMC has status as a 501.c.3 charitable non-profit organization, and by extension The IMC Bike Project is also a non-profit charitable organization. The IMC Bike Project has been growing since and currently occupies a 2,200 square foot basement space at the UCIMC. The co-op currently is open for volunteer staffed hours five days a week for a total of 13 hours per week. Outside of staffed hours, members that have received orientation and paid a key deposit can access the space during most regular business hours. Volunteer staff members have 24 hour / 7 day access to the space.

How does The Bike Project work?

The Bike Project is not a bike shop in the traditional sense. One can't drop off a broken bike and show up two weeks later to pick it up fixed up and ready to go. You're not going to find a shiny, new \$2,000 racing bike at The Bike Project. There are several bike shops in town that fit that niche well, and the cooperative purposefully serves a different population. The Bike Project was conceived to serve those that are looking for inexpensive, low maintenance, and environmentally friendly transportation - and don't mind getting their hands dirty in the process. The Bike Project provides a cooperatively shared space for working on bicycles, learning from skilled volunteer mechanics, and sharing knowledge about bicycle commuting.

The Bike Project takes in used bicycles as donations from the University of Illinois, the cities of Urbana and Champaign, local landlords, and individual donors. The number of used bicycles in Urbana-Champaign is somewhat amazing and before The Bike Project many more of them headed to the dump and metal recyclers. Some of the bicycles are fixed up by volunteers and sold as ready to go bikes to raise enough funds to operate the cooperative. Some of the bicycles are parted out and provide used parts to fix other bikes. A sizable group of used bikes is available to members and can be purchased as Build-a-Bikes. A Build-a-Bike is when a member fixes up a bike using the tools at the co-op and used parts. The cost of a Build-a-Bike is approximately half that of what a "ready to go" bike is sold for, which is the least expensive way to obtain a usable bicycle in Urbana-Champaign. When volunteers can't keep up with the demand during peak season, many more bikes are completed as Build-a-Bikes at the hands of an army of deputy mechanics.

A secondary and regular source of income for The IMC Bike Project is membership in the cooperative. The price of an annual membership is less than the cost of a bicycle tune up at a traditional shop, \$25 for students / limited income and \$40 for those that can afford it. Family memberships and work equity memberships are also available. Many of the memberships are an auto renewing subscription that reduces the amount of lapsing members and reduces the amount time spent reminding members about yearly renewal. Right now 90 of the 150 memberships are auto renewing.

What can you do at The Bike Project?

The Bike Project serves several valuable roles in the community - economic, environmental, and social.

- 1.) Get an inexpensive used bike that's ready to roll. Pick up a lock, helmet, and lights while you are at it. A Bike Project membership would be a good idea too if you're going to be doing much serious bike commuting.
- 2.) Fix up and maintain your own bikes without the expense and hassle of having your own workshop and tools. That special tool is probably at the co-op and someone there can show you how to use it.
- 3.) Learn basic mechanic skills, advanced mechanic skills, and practice those skills on used bikes at the coop. While you are practicing, you're raising funds for the organization since the bikes you fix can be sold.
- 4.) Talk to other experienced bicycle commuters and trade tips and tricks for making a bicycle a bigger part of your transportation mix. Many coop members will be bicycle commuters exclusively, and you may even be tempted to try to be car free with them.
- 5.) Help provide ready-to-ride bicycles to local charitable organizations and donate fixed up kids bikes to Safe Routes to School programs. Give back to and be involved in your community.