SAMPLE GRANT PROPOSAL:

LOW-INCOME WIND POWER PROJECT

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This Sample Grant Narrative includes:

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This Sample Grant Proposal
is meant to be a model only. Your project will be unique.
Use the ideas but not the text!

Project Theory, Design and Plan

The Big Picture: Future of Electricity in Washington

Electricity prices will continue to rise as the electricity supply becomes more and more dependent on natural gas-fired turbines. In the U.S. 272 gas-fired plants are projected to be connected to the grid over the next decade. At the same time, domestic natural gas production is expected to peak in 2007, Canadian production in 2005, and Mexican production in 2011. Remaining natural gas reserves will be primarily in an unstable Middle East. (Rifkin, *The Hydrogen Economy*, 2002, p. 126-7) In this environment, a continued rise is in the market price of natural gas is almost inevitable.

For this reason, it makes sense to shift to energy sources that are not subject to market pricing, to so-called *cost-based* resources. Wind is such a source, and is abundant in Washington State. The price of wind-based energy is a function of the cost of wind-turbines and other infrastructure needed to develop a wind farm. Once these capital costs are paid, the energy source itself, wind, is free. In this sense, a wind farm is an insurance policy for low-income families against future volatility in the price of natural gas.

This project builds on a foundation of partnerships, working with partner utilities to shift from treating the low-income community as passive consumers of power to active developers of power. By developing wind-generated electricity, the low-income community gains access to cost-based energy, escaping the fluctuations of the natural gas commodity market.

Target Population

The Project targets LIHEAP-eligible families heating with electricity.

According to a report prepared for DHHS by Roper ASW, there are 291,886 LIHEAP-eligible households in Washington State. Many of these households include members who are particularly vulnerable to heat or cold:

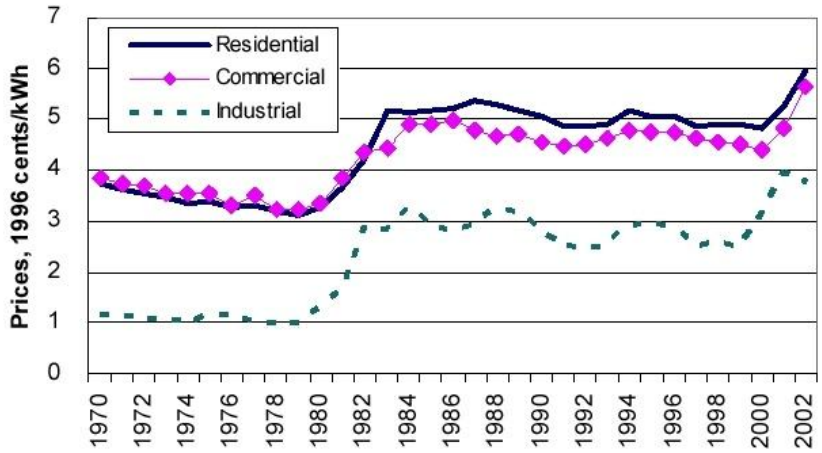
- 89,482 include an elderly person
- 73,051 include a disabled person
- 70,281 include a child five years old or younger

These numbers are based on Washington's LIHEAP income limit of 125% of the Federal Poverty Guidelines. Using a 150% FPG standard approximately doubles each of the numbers above (663,034 households live below 150% FPG; of these 244,950 include an elderly person etc.).

Last year, 57,300 households received LIHEAP, leaving 234,586 eligible households (80%) unserved. Because of historically low-priced hydro-electric power, most Washington low-income homes (73%) heat with electricity rather than natural gas (17%), with the balance using wood, oil, and other fuels. Although Washington once had some of the lowest priced electricity in the nation, since 1980 rates have doubled, even after adjusting for inflation. (See Figure 1.)

And from 1999 to 2002, residential rates saw a rapid surge of 20%. This understates the problem, because the rate increases have been disproportionate acoss the state, with some areas seeing significantly higher increases. For example, from October 2000 to the present, the largest public utility district in the state (Snohomish County PUD), increased residential rates by 50%.

Figure 1. Washington Retail Electricity Prices by Sector

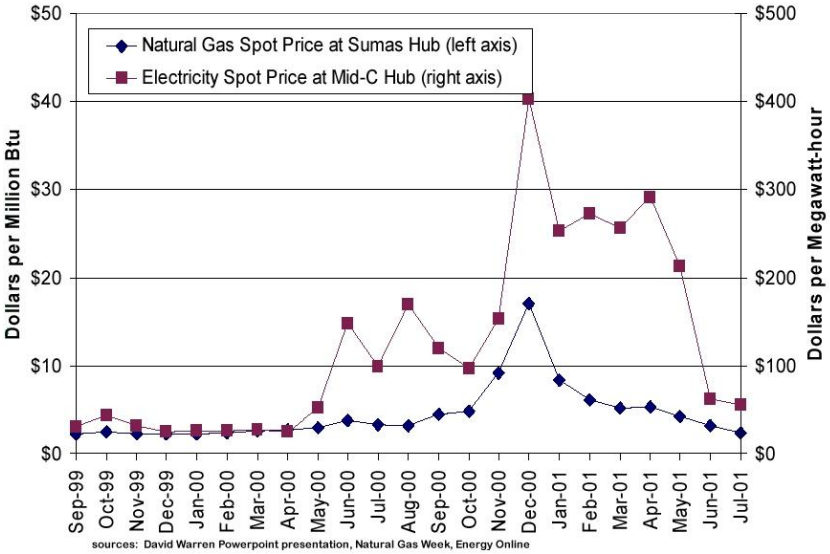


sources: EIA, BEA, OTED 2003 Biennial Report

When rates move with such volatility, low-income families are likely to be left stranded . Middle and high-income families have been able to migrate to gas heat. Of new single-family residential construction, only 9% is all-electric, according to a June 11, 2003 article in the *Seattle Post-Intelligencer*. And while 53% of Washington's homes heat with electricity (2000 US Census), fully 73% of low-income homes have electric heat. As often happens, low-income families have been left stranded in older housing stock, equipped for the energy markets of three decades ago.

Converting electric-heated households to gas heat would seem to be a solution to electric rate volatility. And in fact, several programs in the state are taking this tack, including the state's LIHEAP program which can perform conversions when a household's heating system is in such bad shape that it must be replaced. However, such conversions are expensive and must be balanced with the need for energy assistance.

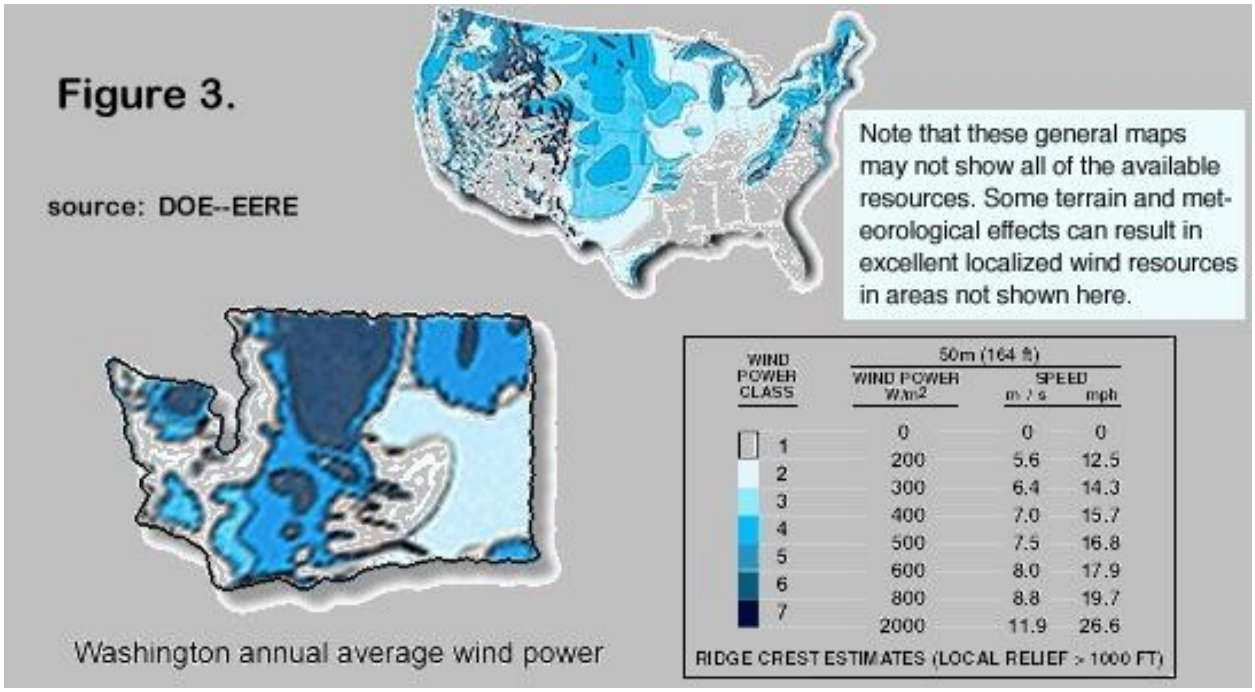
Figure 2. Monthly Average Natural Gas and Electricity Spot Prices



sources: David Warren Powerpoint presentation, Natural Gas Week, Energy Online

A large conversion program was announced in June 2003 by Puget Sound Energy (PSE), the largest utility in the state. PSE estimates that it will convert between 20,000 and 25,000 households from electric to gas. Given that the number of all electric households in Washington was placed at 1.2 million by the 2000 US Census, even a "large" program is a drop in the bucket. The program is incentive-based, with $150 rebates on furnaces, $25 on gas heaters and free hook-ups. However a $175 incentive on a conversion that may cost $1500 to $2000 is too small to make a difference to many low-income families. Also, 73% of low-income families are renters. Typically, they are responsible for utility bills, so there is little incentive for landlords to convert rental units to gas heat.

Even if all low-income households could be converted to gas heat, the problem would not be solved: PSE just raised gas prices 18% in March 2003. More and more, the gas and electric markets have become intertwined in Washington. Most of the new electric generation plants in Washington are gas-fired. As a result, natural gas prices have themselves become more volatile, and conversion to gas heat no longer provides the low-cost, stable utility bills that it once did. Increasingly, the cost of natural gas is linked to the cost of electricity. Figure 2 shows how natural gas prices at the Sumas Hub in Washington State have begun to track area electric prices.



Even as residential energy costs are rising, Washington's employment outlook is darkening. A US Bureau of Labor Statistics report for April 2003 shows Washington with the second highest unemployment rate (7.3%) of any state. The national rate for the same period was 6.0%. Washington is being particularly hard hit by the loss of high-paying jobs at Boeing. Because of cut-backs in the airline industry since the terrorist attacks of September 11, 2001, Boeing has been forced to lay-off 33,890 workers over the past 19 months and plans further cuts (*Seattle P-I*, 6.20.03). Boeing is also facing stiffer competition. On June 20, 2003 the AP reported, "European plane manufacturer Airbus won a $5.1 billion order for up to 32 wide-body planes from Gulf carrier Qatar Airways yesterday, snatching another deal from Boeing….Until last week, the airline was considering its first purchase of Boeing planes." Because Boeing is such a large employer in the Puget Sound area, the loss of these high-paying jobs has a negative ripple effect throughout the area.

And so low-income electric-heating households are caught between rising electric rates and negative job growth.

At the same time as companies like Boeing are downsizing, one industry in Washington State is poised for growth: wind energy. A recently completed wind map shows that Washington compares favorably with other states in available wind resources (see Figure 3 below; a more

detailed wind map is included as Appendix K). In Walla Walla County, the State Line Project (the largest wind project in the world) has shown that wind power is competitive with fossil fuels. Technology and cooperative buying power have brought down the cost of wind turbines. State and federal legislation have increased incentives for developing renewable power sources. The wind industry is primed for rapid growth.

Assumptions

There are several assumptions we have made about the needs of our target population and the economic environment around them. The first is that the LIHEAP-eligible population is not going to decline. In fact we assume that given high unemployment projected to persist through at least spring 2005 ("Economic dark cloud lingers over Washington," *Seattle P-I,* 6.20.03), this population will increase, making the need to find a permanent solution for reducing the energy costs of low-income households even greater. Our second assumption is that the amount of money for federal and state energy assistance programs, both LIHEAP and weatherization programs, will decline, again increasing the need for our proposed approach. Our third assumption is that costs for non-renewable electricity-generating resources (coal, natural gas) will rise over time.

Summary of Assumptions/Problems to be Addressed

1. Demand for LIHEAP far outstrips the need. 80% of families eligible for LIHEAP are unserved. Many of these families include vulnerable members.
2. Electricity rates have risen sharply, erasing many of the gains made by development of new nonfederal energy assistance funds.
3. 73% of Washington's low-income households heat with electricity.
4. Conversion from electric heating to natural gas heating is expensive.
5. Natural gas is increasingly used to generate electricity, linking the price of natural gas to electricity and making them rise in tandem.
6. Natural gas prices are likely to continue rising as production in North America and Mexico peak over the next 10 years.
7. Conversion to natural gas is at best part of the solution for low-income households stranded in housing built for energy markets of three decades ago.

Low-Income Inclusion in Planning Process

From the beginning this project has been designed as a collaborative project between the Washington Department of Community, Trade and Economic Development; Washington State Association Community Action Partnership (representing the CSBG/DOE weatherization/LIHEAP network); A W.I.S.H; and utilities. Community involvement, including the direct involvement of low-income representatives, has been built into the project. The project Steering Committee has majority representation from Community Action Agencies, whose boards of directors are mandated to have one-third low-income membership. As members of the Steering Committee, low-income representatives will have an on-going role in developing the project and in recommending changes as necessary. Each of the thirty CAA's partnering on this project, under the coordination of A W.I.S.H, has reviewed the project proposal all the way through the process leading to submittal to DHHS, and has had the opportunity to submit suggestions about the project design.

Empowerment Zone/Enterprise Community Consideration

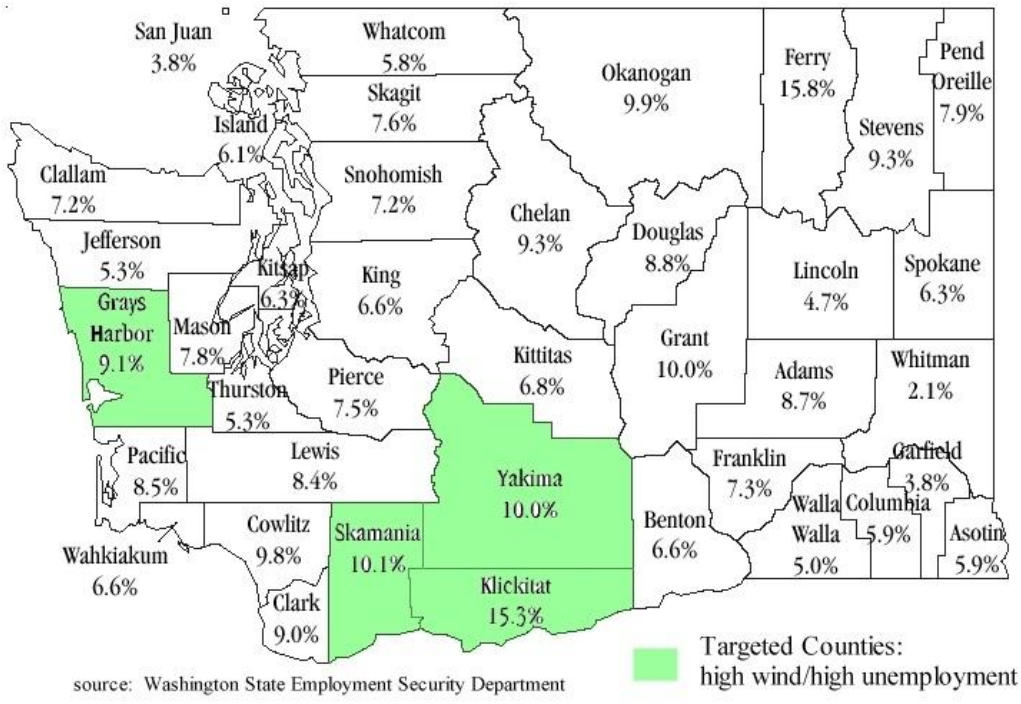
As noted above, Washington has the second highest unemployment rate in the nation. Our first intervention will target Grays Harbor County, where the unemployment rate is 28% higher than the state as a whole. Other counties targeted because of their high wind resources also have high unemployment rates:

- Klickitat 15.3%
- Skamania 10.1%
- Yakima 10.0%

(See Figure 4 below.)

Furthermore, in 2002 Yakima was selected as one of 40 Renewal Communities by HUD and will retain the designation until 2009. "Renewal Community" is a designation added to the Empowerment Zone/Enterprise Community program (now designated the RC/EZ/EC Initiative) in 2001. The unemployment rate in Yakima's Renewal Community (Census Tracts 1, 2, 6 and 15) is 20%. Building a wind farm in Yakima would provide good-paying jobs during the development process, as well as provide low-cost energy to low-income Yakima households on completion. Yakima Valley OIC (the CSBG entity in Yakima), and Northwest Community Action Center (the CSBG entity for other parts of Yakima County) have reviewed this application and are project partners through the Washington State Community Action Partnership (WSCAP).

Figure 4. **Unemployment Rates by County, May 2003**
Washington State = 7.1%
United States = 5.8%
Not Seasonally Adjusted



In Pierce County, part of Tacoma is a federal Enterprise Community and was also designated a Renewal Community in 2002. Unemployment in Tacoma's Renewal Community is 18 percent, with 72 percent of the families in the area identified as low-income. Pierce County's CSBG

entities (Metropolitan Development Council and Pierce County) were active participants in REACh I, working with Tacoma Power to develop a new low-income energy assistance program. The Pierce County CAAs (both members of WSCAP) reviewed this application and are potential partners with the CSBG entities in Yakima County. (Yakima and Pierce Counties are contiguous.)

Project Strategy and Design: Interventions, Outcomes, Goals, Impact [7]

Philosophy
The project treats the low-income community as active developers of power, rather than simply as passive consumers of power. To escape the volatility of market-priced energy sources, the project focuses on wind, a cost-based energy resource widely available in Washington State.

Mission and Impact
The project's mission is to increase the self-sufficiency of low-income families by securing stable energy sources and additional nonfederal energy assistance through participation in the rollout of the wind power industry in Washington State.

Final Goals
The mission can be achieved by accomplishing the following goals:

1. In partnership with utilities and the LIHEAP/Weatherization/CSBG Network, develop 12 megawatts of wind power dedicated to low-income households. The 12 megawatts will be produced by facilities with a useful life of 20 years.
2. Increase utility contributions toward lowering energy burdens by obtaining subsidies for wind development dedicated to low-income households.
3. Reduce the energy burden of 12,000 LIHEAP-eligible families by 20%
4. For the 12,000 target families, reduce disconnects by 20%.
5. For the 12,000 target families, increase regularity of payments by 15%.
6. For the 12,000 target families, reduce mobility (a predictor of homelessness) by 15%.
7. Improve the health and safety of vulnerable households by reducing the energy burden for 3,700 families that include an elderly person, 3,000 families that include a disabled person, and 2,900 families that include a young child.

NOTE: Each of the benefits described in Goals 3-7 above will be achieved annually for approximately 20 years, the useful life of a wind turbine facility.

Interventions
In general, REACh funds will be used as funding for high leverage activities such as partnership-building, technical assistance, and grant writing. The effect of these activities will be to position the LIHEAP/Weatherization/CSBG Network at the table as wind power develops in Washington State. Actual funding for wind power construction will come from non-REACh funds.

Just as public, cooperative, and investor-owned utilities share in development of other forms of energy generation, there will be various ownership models of wind energy production as the

industry develops. The project will seek to influence the development of each of these models to ensure that the interests of low-income families are considered.

The project will have four primary interventions, explained below in more detail.
1. Single Owner Model
2. Second Wind (Replicate Single Owner Model)
3. Cooperative Model
4. Process Participation
5. Tailored Energy Assistance Programs

Intervention 1: Single Owner Model

The project will help LIHEAP/Weatherization/CSBG CBOs acquire and operate their own wind-turbines, exchanging the energy produced for rate discounts/rebates to low-income customers.

The project will work initially with one community action agency to develop a multi-turbine wind farm. The initial project will serve as a model for replication by other community action agencies in Washington State.

The initial agency is Coastal Community Action Program. During the applicant's prior REACh project, Coastal CAP developed an excellent relationship with its local utility, Grays Harbor Public Utility District. Grays Harbor PUD enhanced its energy assistance fund as a result of discussions with Coastal CAP staff. The single-owner model grows out of further discussions between the utility and Coastal CAP on how to better serve low-income families.

The key parties in developing the model program are
- developer/owner of the wind farm: Coastal CAP
- purchaser of generated power: Grays Harbor PUD
- landowner: Grays Harbor School District
- technical assistance provider: Northwest SEED (see Appendix J for a preliminary Memorandum of Understanding)

Project activities include:

<u>First Scan</u>
- Review Washington wind map (www.windpowermaps.org/windmaps/states.asp).
- Select areas with moderate to strong wind resource (class 3 or higher) and access to transmission lines.
- Northwest SEED, which helped develop the wind maps, will provide technical assistance in identifying additional sites if needed.

<u>Site Assessment & Acquisition</u>
- Perform anemometer test to establish actual wind speed (Note: The wind map is suggestive but not precise. Coastal CAP's proposed site tests out at a higher wind speed than suggested by the wind map.): Northwest SEED will provide technical assistance.
- Estimate monthly and hourly project output based on power curve of intended turbine and measured wind speed: Power production increases by a square function of wind speed; a 26

mph wind blowing for an hour generates significantly more power than a 13 mph wind blowing for two hours; Northwest SEED will provide technical assistance.
- Obtain site control: Coastal CAP has had extensive discussions with Grays Harbor School District; the School District is eager to partner and has identified a site that it will make available to the project for token rent. In return, the project will be used as an educational site to teach students about wind power and energy.

Permitting
- Perform required environmental reviews of project to satisfy applicable U.S. Fish and Wildlife Service and state fish and wildlife requirements.
- Perform required archaeological studies to avoid destruction of cultural artifacts.
- Contact Indian tribes in the project area to ascertain their interests, if any.
- Northwest SEED will provide technical assistance in all areas above.

Access to Transmission Lines
- Obtain necessary access road and transmission corridor easements.
- Identify proposed location of interconnection.
- Establish status of transmission interconnection .
- Determine whether any facilities construction is necessary.
- Establish amount of available or reserved capacity.
- Northwest SEED will provide technical assistance in all areas above.

Construction
(NOTE: REACh funds will not be used for construction, but only for staff time to secure financing that will in turn pay for construction.)
- Identify size and number of turbines.
- Obtain turbines from manufacturer: Project partner Western S.U.N. (see Appendix J for Memorandum of Understanding) will assist Coastal CAP in obtaining turbines and related equipment at a discount. Western S.U.N. uses the purchasing power of its members (which include PUDS, electric co-ops, and municipal utilities) to acquire and implement renewable technologies at the lowest possible cost through market aggregation.
- Prepare site: Lay down access roads, turbine foundations.
- Install turbines.
- Connect to "the grid": Make connection to transmission lines.
- Northwest SEED will provide technical assistance in identifying the appropriate turbines and choosing a construction firm.

Financing
(NOTE: REACh funds will not be used for financing, but will be used to write grants, negotiate loans, request bonds and pursue other financing mechanisms listedbelow and in Section II (c) Holistic Program Strategies.)
- Grant-based financing: This is the preferred method of financing. Potential grantors include private foundations such as the Energy Foundation, and government entities such as the Department of Energy.
- Bond financing: Depending on final location of the project site, Coastal CAP may approach the County of Grays Harbor, Grays Harbor PUD, and/or the cities of Aberdeen and Hoquiam to sponsor a bond to cover upfront costs of the project, to be paid back with revenues generated over the life of the power plant.

- Loan-based financing: Potential sources include commercial banks. This is not a priority resource because energy-generation projects are looked at sceptically since the Enron bankruptcy. Also, renewables projects are seen as riskier than traditional power plants (e.g., natural gas fired turbines), with a proportionately high interest rate.
- Sale of "Green Tags": Green tags, also known as tradeable renewable energy credits (trc's), provide a way to buy and sell the environmental attributes of renewable generation separately from the electricity generated. A market currently exists for green tags with wind power valued at from 1 to 4 cents per kWh.

Power Purchase Agreements/Low-Income Credits

- Enter into firm contract for sale of electricity generated: Grays Harbor PUD is eager to purchase up to 6 MWh of power.
- In return for the electricity generated, Grays Harbor PUD will provide a block of credits to Coastal CAP for an equivalent number of kWh. Coastal CAP will award these credits to low-income families applying for energy assistance. (Grays Harbor PUD is the primary provider of electricity in Coastal CAP's service area.)

Key Immediate Outcomes for Intervention 1

- Sign agreement with School District describing access to site.
- Sign agreement with PUD to provide access to transmission lines.
- Sign agreement with PUD to provide low-income credits enumerated in kWh (rather than dollars) in return for power.
- Obtain all necessary permits.
- Complete financing proposals targeting foundations, federal agencies, local government, etc.

Key Intermediate Outcomes for Intervention 1

- Break ground in construction of wind farm.
- Coastal CAP obtains wind development expertise, allowing the agency to act as technical assistance provider to other LIHEAP/DOE WAP/CSBG CBOs.

Performance Goals for Intervention 1

- Finish construction of wind farm and connect to grid, supplying 6 Mw of power dedicated to low-income families and controlled by CSBG CBO (Coastal CAP).
- Lower by 20% the energy burden of 6,000 LIHEAP-eligible, electric-heated households by use of low-income credits, enumerated in kWh rather than dollars and therefore not subject to fluctuations in market pricing.

Intervention 2: Second Wind Model (Replicate Single Owner Model)

Even before the model wind farm is completed, Coastal CAP staff will have gained enough expertise to assist any of the 29 other members of Washington's LIHEAP/Weatherization/CSBG network in developing their own wind projects.

Coastal CAP and Northwest SEED will offer workshops on wind development at regularly scheduled energy coordinator conferences and other venues sponsored by Washington State Community Action Partnership (WSCAP).

The REACh program will subcontract with "Second Wind" CBOs who wish to act as developers. The program will target CBOs that the Washington wind map suggests are in high wind areas (e.g., Yakima, Skamania and Klickitat Counties; see Figure 4 above). However, all

CBOs will be eligible to develop projects. Agencies do not have to be in a high-wind area. They can act as co-developers of projects in other areas, especially if they are in the service area of one of the three large investor-owned electric utilities.

In such cases, collaborations among CBOs may prove most productive. The greatest successes were obtained in REACh I by groups of CBOs pooling their funds to work with the large investor-owned utilities (Puget Sound Energy, Avista, PacifiCorp).

Similar strategies will be helpful in the current project to connect projects to transmission lines and establish power purchase agreements. For example, the Community Action Center of Whitman County (poor in wind resources) might wish to collaborate with the Klickitat-Skamania Development Council (rich in wind resources). Even though the two service areas are not contiguous, both are served by Avista.

Subcontracts will be signed in the first year to allow two years to develop additional wind resources.

Once the subcontracts are signed, the development process will follow the same lines as Intervention 1 above, including:

- First Scan
- Site Assessment & Acquisition
- Permitting
- Access to Transmission Lines
- Construction
- Financing
- Power Purchase Agreements/Low-Income Credits

Key Immediate Outcomes for Intervention 2

- Second Wind CBOs learn more about wind power development
- CBOs develop collaborations with other CBOs, utilities
- CBOs are awarded subcontracts

Key Intermediate Outcomes for Intervention 2

- Second Wind CBOs identify sites, sign agreements with utilities, obtain necessary permits, obtain financing
- CBOs break ground in construction of wind farm

Performance Goals for Intervention 2

- Finish construction of additional wind farms and connect to grid, supplying 3 Mw of power dedicated to low-income families and controlled by LIHEAP/DOE WAP/CSBG CBOs.
- Lower by 20% the energy burden of 3,000 LIHEAP-eligible, electric-heated households by use of low-income credits, enumerated in kWh rather than dollars and therefore not subject to fluctuations in market pricing.

Intervention 3: Cooperative Model

The development process is complex and can be intimidating. The LIHEAP/Weatherization/CSBG CBOs will be offered a wealth of training and technical assistance, but some may still not wish to take on the process.

Intervention 3 is an option for CBOs who wish to participate but do not themselves wish to become wind developers. Under this model, the CBOs become part owners in cooperatively-owned wind farms with blocks of power set aside for low-income households. Western S.U.N. will provide training and technical assistance to CBOs on how cooperatively-owned power projects work. (See Memorandum of Understanding attached in Appendix J.)

In this case, the developer will be the Last Mile Electric Co-op (LMEC), a project partner (see Memorandum of Understanding attached in Appendix J). LMEC's principal members are 15 rural electric co-ops and municipal utilities. Thus, key parts of the development process, establishing a power purchase agreement and linking to the transmission grid, are ensured.

LMEC has played a key role in bringing together potential partners to develop smaller scale, renewable energy power plants. For example, LMEC co-sponsored the 2001 Director-Manager Conference for rural utility leaders in Pasco, Washington. Approximately 100 rural utility officials attended the conference. In the same year, LMEC co-sponsored a conference on "Harvesting Clean Energy for Rural Development." This conference was attended by 30 rural utility officials and 170 other participants, including potential funders, landowners, and CAA representatives.

LMEC will perform most of the activities described in Intervention 1 (site assessment and acquisition etc.). As in Intervention 1 above, Western S.U.N. will help the cooperative purchase turbines and related equipment at a discount. However, the CBOs will have a role in developing financing to secure their place in the cooperative. Funding mechanisms can include discretionary money controlled by the CBOs themselves, such as Community Services Block Grant funds, as well as external resources such as grants, bonds, and loans. For a full list of financing mechanisms, see Section II (c) Holistic Program Strategies.

The CBOs and Northwest SEED will also have a key role in shaping the power purchase agreement developed under the cooperative model. As in Intevention 1, CBOs will urge that such agreements be written to provide low-income credits numerated in kWh rather than dollars. As noted above, this will insulate low-income families who receive the credits from price shocks in the energy market.

Key Immediate Outcomes for Intervention 3

- CBOs attend Western S.U.N. trainings on cooperative model of power plant ownership
- CBOs become comfortable with cooperative model

Key Intermediate Outcomes for Intervention 3

- CBOs join LMEC cooperative

Performance Goals for Intervention 3

- LMEC cooperative builds wind farm and connect to grid, with 3 Mw of power dedicated to low-income families and managed by LIHEAP/DOE WAP/CSBG CBOs.
- Lower by 20% the energy burden of 3,000 LIHEAP-eligible, electric-heated households by use of low-income credits, enumerated in kWh.

Intervention 4: Process Participation

This intervention builds on expertise developed in Washington's prior REACh project, which developed over $12 million in low-income energy assistance by participating in the ratemaking process before the Washington Transportation and Utilities Commission (WUTC). By continuing to participate in procedures such as ratemaking and mergers before the WUTC, REACh can advocate for low-income interests and generate capital for low-income wind projects.

REACh will also participate in the permitting process. A number of gas-fired plants and large wind farms are proposed for development in the near future . Developments must obtain permits before breaking ground. This presents an opportunity for interveners to be heard. For example, Washington plans to require that developers of gas-fired turbines mitigate the carbon dioxide produced by such power plants. By participating in the permitting process, REACh can urge that mitigation be accomplished by purchasing "green tags" from REACh wind projects. In Washington State, new electric power plants with over 350 MW of generating capacity go through a state level review process overseen by the Energy Facility Site Evaluation Council (EFSEC). Smaller developments usually go through a local permitting process. In REACh I, Blue Mountain Action Council secured $50,000 for low-income energy assistance by participating in the permitting process for a gas-fired turbine power plant. However, most REACh I CBOs participated only in ratemaking processes before the WUTC. Therefore, A W.I.S.H. will provide technical assistance to the CBOs on how to intervene both through EFSEC and at the local level .

Figure 5. New Wind Projects in Washington State

Utility/Developer (Project)	Location	Status	MW Capacity	On Line By
Energy Northwest & Member Utilities (Nine Canyon Ph II)	NA	Under Dev.	15.6	2003 / Bonus 1.3 MW (12)
BPA / Pacific Winds (Maiden Wind Farm)	Benton & Yakima Co. near Presser	Proposed	150	2004
BPA / Pacific Winds (Horse Heaven Hills)	Benton Co.	Proposed	150	2004
Zilkha Renewable Energy (TBD)	Near Ellensburg / Kittitas County	Proposed	100	2004
BPA / SeaWest Wind Power (Roosevelt)	Klickitat County	Speculative	150	2004
BPA / SeaWest Wind Power (Six Prong)	Klickitat County	Speculative	150	2004
BPA / SeaWest Wind Power (Waitsburg)	Walla Walla / Columbia	Speculative	100	2004
BPA / Columbia Windpower (Columbia Wind Ranch)	Klickitat Co.	Speculative	80	2004
Source: www.awea.org				

Key Immediate Outcomes for Intervention 4

- Project participates in siting process for new wind plants and gas-fired turbines.
- Project participates in rate cases, mergers and other procedures before the Washington Utilities and Transportation Commission.

Key Intermediate Outcomes for Intervention 4

- Developers and utilities consider interests of low-income households.

Performance Goals for Intervention 4

- Increase utility contributions to reducing low-income energy burdens by generating financing for low-income wind projects.

Intervention 5: Tailored Energy Assistance Programs

In REACh I, we found that ratepayer-funded programs of the large utilities often had to be standardized throughout a large service area to comply with regulatory requirements and administrative ease desired by the utilities. Therefore, the programs did not always best fit needs of the target population. In REACh II, because the energy generated is controlled by the CBOs, they can develop an energy assistance program best tailored to their local area. And programs can be easily modified based on experience of the CBO or projects in other parts of the state. A W.I.S.H. will provide technical assistance on models which do the following:

- Discourage family energy crises
- Encourage responsible vendor and consumer behavior
- Provide incentives that encourage payment of home energy costs
- Provide incentives for vendors to help reduce energy burdens of target families

For example, technical assistance will be provided on Clark County PUD's Guarantee of Service Plan. This program has been documented to reduce delinquent balances, reduce shut-offs, increase regularity of bill payment, reduce write-offs and collection costs. For more detail, see the section on "Significant and Beneficial Impact" below.

The benefits generated by the project will be nonmonetary: energy assistance will be denominated in kWh rather than dollars. In this manner, clients are protected from the gyrations of the energy market. Provisionally, we have set the goal of reducing the energy burden of target families by 20%. This target may be adjusted up or down depending on experience gained as the project unfolds. REACh energy assistance will be combined with other programs operated by the CBOs to provide energy efficiency education and weatherization (funded through LIHEAP and DOE WAP) to maximize impact of benefits. All clients will receive energy efficiency education. Weatherization applications will be done according to established technical specifications, cost effectiveness tests, and applicable building codes. See II (c) Holistic Program Strategies below for more detail on integration of Intervention 5 with existing programs.

The target population for this project is low-income households in Washington State that are at the lowest end of the federal poverty guidelines. We feel our best strategy for serving them is to first move those at the higher end of the guidelines up and away from LIHEAP, since the program reaches only 20% of eligible recipients. By receiving a substantial reduction on their energy bills from REACh generated cost-based energy assistance, households at the higher end of the spectrum will transition off LIHEAP, to be replaced by families at the lower end of the guidelines. Per the state's LIHEAP plan, through targeted intake, we will focus on families with

members who are elderly, disabled, or young children. Weatherization referrals will be likewise targeted.

Key Immediate Outcomes for Intervention 5

- CBOs gain knowledge about energy assistance programs that discourage family crisis and present "win-win" situation for utilities and clients.

Key Intermediate Outcomes for Intervention 5

- Energy assistance programs put in place to distribute energy to target households.

Performance Goals for Intervention 5

- Reduce the energy burden of 12,000 LIHEAP-eligible families by 20%
- For the 12,000 target families, reduce disconnects by 20%.
- For the 12,000 target families, increase regularity of payments by 15%.
- For the 12,000 target families, reduce mobility (a predictor of homelessness) by 15%.
- Improve the health and safety of vulnerable households by reducing the energy burden for 3,700 families that include an elderly person, 3,000 families that include a disabled person, and 2,900 families that include a young child.

Significant and Beneficial Impact

Using a conservative estimate of 28% turbine effectiveness, 12 MW of capacity will generate 29,400 MWh annually (12 MW x 24 hours x 365 days x 28%). The average household in Washington uses 12 MWh annually. Therefore, each year the project could fully cover the energy needs of over 2,400 families. Or each year the project can reduce the energy burden of over 12,000 families by an average of 20%. Although the REACh project will last only three years, the average life of a wind turbine facility is 20 years.

- Over its viable life, the project will generate 588,000 MWh of electricity.
- This is enough energy to reduce by 20% the energy burden of 245,000 families for one year.
- A LIHEAP program of equivalent size in Seattle (where the residential marginal block rate is 8.66 cents per kWh) would require $50.9 million in funding.
- Therefore, the project has a potential leverage of 50:1.
- Even if energy costs rise over time, project impact will not erode, because benefits are denominated in MWh rather than dollars.

One of the key components to self-sufficiency is the ability to afford basic needs, such as heating, cooking, lighting, refrigeration, water heating and appliances. Wage earners and children cannot go off to school and work and perform successfully if they live in the dark, cannot cook food or have adequate warmth. This project promotes self-sufficiency by ensuring those basic needs are met by having affordable energy bills and energy-efficient homes and appliances, coupled with an education component. CBOs have noted that low-income families have a higher mobility than the general population. Often, a move is precipitated by inability to pay the utility bill. Once a family moves away from its support structures, its chances of becoming homeless greatly increase. Therefore mobility is a precursor to homelessness. By reducing energy burdens, the project will reduce mobility, and therfore homelessness, caused by inability to pay utility bills.

Once wind projects have begun generating power, CBOs have many options to choose among for deploying the energy assistance. They can tailor programs to the needs of their local target

population. Among other models, the project will provide technical assistance on the Clark County Public Utility District's current Guarantee of Service Plan. Under REACh I, most utilities felt the GOSP model to be too complicated. Research conducted by Clark County PUD shows that after implementing its GOSP program, delinquent balances fell from 67% to only 37%, and power disconnects declined by 65%. The most impressive finding was that the regularity of bill paying by low-income households increased. Once low-income customers felt their utility bills were under control, they paid on average $23 more per month on their bills. Not only did the regularity of bill payments increase, the amount paid also increased. Low-income customers benefited through reduced shut-offs, uncertainty and administrative hassles. Utilities and their ratepayers saved significant costs through lower write-offs, administrative costs and increased customer payments. Thus, the model is created for a cost-effective investment on the part of the utility rather than a "give-away" program, a "win-win" situation for both low-income households and utilities. This data clearly indicates that the Clark County model program can avoid family energy crisis and provide financial incentives that encourage household payments. At the same time the model will show utilities that it is in their interest to reduce low-income family energy burden. We expect to have similar results when implementing energy assistance programs under REACh II.

The goal of replicability is embedded in the project. In fact, the project design calls for replicating the model program developed in Grays Harbor County in other parts of Washington State. Lessons learned in this transition will be applicable to replication in other parts of the country as well. As information is collected and results determined, a report will be developed that outlines both the process and outcomes of this project. That report will be distributed to all project partners (utilities, CBOs) and the Steering Committee. The reported is intended to be used as a marketing tool to encourage government bodies, utilities and CBOs across the country to pursue supply-side energy assistance models. The report will be written in a succinct, non-technical, jargon-free manner for public consumption.

The 60 investor owned and public utilities in Washington will receive this report. Follow up contacts will be made to discuss the report's findings and answer any questions the utility may have.

A.W.I.S.H will put a report summary on its web site and make presentations at conferences such as the Energy Northwest Conference, which includes representatives from Washington, Oregon, Alaska and Idaho state governments and the U.S. Department of Energy. A.W.I.S.H will also make the report available to pertinent groups at the state (e.g., Energy Advisory Steering Committee of CTED) and national level (e.g., National Association of Community Action Agencies).

Holistic Program Strategies and Project Innovations

Integration with LIHEAP, DOE WAP, and Other Self-Sufficiency Programs
The energy assistance generated by Interventions 1-4 will be distributed by LIHEAP/DOE WAP agencies using their existing intake staff. Agencies will provide the following services to eligible clients as appropriate:

(i) energy assistance: cost-based energy assistance (from REACh wind-power projects); ratepayer-funded energy assistance (utility energy assistance funds developed by REACh); federal energy assistance (LIHEAP)
(ii) energy efficiency education (funded by LIHEAP)
(iii) weatherization & energy system conversion (if appropriate) (funded by DOE WAP and state weatherization program)
(iv) family services: needs assessment, counseling, and payment plans related to energy budget management (funded by LIHEAP, utility energy assistance funds); child care, Head Start and state preschool (by referral where CBO does not operate program); health services, vocational training, job search and job prep, senior services, case management, TANF, food stamps (by referral where CBO does not operate program)
(v) negotiation with home energy suppliers (funded by REACh, LIHEAP, utility energy assistance funds)

The thirty LIHEAP/DOE WAP/CSBG agencies partnering on this project, under the coordination of A W.I.S.H, have put forward suggestions about project design and have reviewed the project proposal throughout the process leading to submittal to DHHS. Each of these partners administers many million dollars worth of community programs such as LIHEAP, DOE WAP, Head Start, health clinics, homeless housing, housing rehabilitation, case management, senior services and child advocacy. In addition, CTED ensures coordination through interagency agreements, regional roundtable meetings, and advisory groups. One of CTED's major interagency agreements is with the State of Washington Department of Social and Health Services to provide client information, outreach and income verification services to local LIHEAP program contractors. Thus, this project will be integrated with the full spectrum of other services for low-income households in each community.

Partners and Roles

The program represents a collaboration of numerous partners representing the private for-profit sector, the private non-profit sector, and government**.** Project partners have committed $550,000 in match to the program.

- Washington State Department of Community, Trade and Economic Development: The state entity that oversees LIHEAP will have overall fiscal, management, and reporting responsibility.
- A W.I.S.H.: A private nonprofit representing the 30 CSBG/LIHEAP/DOE WAP entities in Washington will administer the project, coordinate partners, monitor contractors.
- Washington State Community Action Partnership (WSCAP): The state community action association will help coordinate with the community action network.
- CSBG/LIHEAP/DOE WAP network: Many of these 30 entities include private nonprofits and county-based agencies, and will administer energy assistance funds developed under the project and develop wind turbines projects.
- Coastal Community Action Agency: A private nonprofit will serve as model program for wind turbine acquisition, siting and operation and provide technical assistance to other community action agencies on development process.
- Grays Harbor School District: A school district will provide land for the Coastal CAP model program and will use the site to teach students about energy.
- Western SUN: A consortium of private and public utilities will provide training and technical assistance on cooperatively-owned power projects.
- Last Mile Cooperative: An organization representing utilities and others interested in distributed generation will develop a cooperatively-owned model wind project.
- Northwest SEED: A private nonprofit will provide technical assistance on the viability of potential wind power sites and assist in contract negotiation with landowners.

Coordination of Funding

REACh funds will be used to coordinate other funding sources. No REACh funds will be used for actual construction. Potential funding sources include the following:

- Seattle City Light: Seattle's municipal utility has a climate change committee that issues requests for proposals to acquire green resources and also meet other city objectives such as affordable energy costs for low-income families.
- Green Tags: Also known as tradeable renewable energy credits (trc's), green tags provide a way to buy and sell the environmental attributes of renewable generation separately from the electricity generated. A market currently exists for green tags with wind power valued at from 1 to 4 cents per kWh.

- Foundation funding: Foundations such as Bullitt, Brainerd, the Bonneville Foundation, the Energy Foundation and many others are viable sources.

- Bond Financing: Community Action Agencies may ask their local utility or local unit of government to sponsor a bond or other public loan to pay for the upfront costs of wind turbines and then pay the loan back from revenues generated over the life of the plant.

- Qualified Zone Academy Bonds (QZAB): As part of a Renewal Community/Enterprise Community/Empowerment Zone project, state or local governments can issue bonds at 0-percent interest cost to them to finance public school programs with private business partnerships where the private business contributes money, equipment, or services equal to 10 percent of bond proceeds. The federal government pays interest. For example, if Coastal CAP's model program (which partners with the Grays Harbor School District) were replicated in Yakima (where there is a Renewal Community), the project would be eligible for QZABs.

- Regulatory Proceedings: REACh funds will be used to participate in utility proceedings (e.g. rate cases, mergers, etc.) that have a prospect of funding this initiative. In many cases these proceedings are settled through a collaborative process and a settlement agreement.

- BPA Funds: The Bonneville Power Administration has five year funding cycles for the Conservation and Renewable energy program which funnels money to their customer utilities for these purposes. The REACh project will work with local utility boards on proposals to use some of these funds for our goals

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- Net Metering: Net metering has been approved by Washington's legislature and can be a useful tool in making payments to the financing agents for sales of green kilowatts.

- Local Agency Discretionary Funds: Some CBOs have discretionary funds that can be invested in wind development and they have expressed interest in doing so.

- CDBG: The Community Development Block Grant is a potential funding source for CBOs working in partnership with local government.

- USDA: The Department of Agriculture has a number of resources that can be tapped, particularly for rural areas of the project, including the Rural Partnership Office, Rural Devlopment Funds, and the Rural Development Council

- Department of Energy: From time to time, DOE's Office of Energy Efficiency and Renewable Energy issues State Energy Program Special Projects Solicitation with a focus on renewable energy sources.

Innovation

- Project views low-income community as producers of energy, not just as passive consumers**.**
- Project partners include utilities, CBOs, and local government.
- Interventions include a cooperative model for energy production.
- Energy resource to be developed is cost-based (wind) rather than market-based (e.g., coal, gas, oil).
- Project positions itself for success within an industry poised for growth in Washington, the wind industry.
- Project develops energy assistance denominated in kilowatt-hours rather than dollars, insulating the value of assistance from energy price spikes.
- CBOs can tailor energy assistance programs to meet local needs.
- Resources developed under the project will continue to provide benefits for 17 to 20 years after the REACh project period.
- The ratio of leveraged dollars to REACh funds is approximately 50 to 1.

Work Plan/Time Lines and Discussion of Critical Issues

Critical Issues/Potential Problems

Wind turbines are inaccurately perceived as a new, untried technology. For some organizations, the sense of being in the forefront of innovation may actually be enticing. However, we anticipate that a more common reaction will be caution. The following is a discussion of potential issues stemming from this reaction and plans for moving past it.

Issue: Since private sources generally consider renewable energy projects riskier than conventional alternatives, the cost of capital for such projects is higher, and may increase with the advent of competition.
Plan: Pursue a funding mix that focuses on grants, bonds and green tag sales rather than commercial bank loans.

Issue: In Intervention 2, CBOs may be intimidated by the development process and reluctant to becoming developers.
Plan: Provide technical assistance and examples of successful developments. If this does not work, shift focus to Intervention 3 which relies on project partner Last Mile Coop to act as developer.

Issue: Local communities may be resistant to wind farms being located in their areas.
Plan: Partner with rural networking groups (e.g., The Grange, the Rural Development Council, and Washington Rural Electric Cooperative Association) to provide education on the benefits of wind farms to the local economy.

WORK PLAN/TIME LINE: Activities & Milestones	Year I				Year II				Year III				Days Post
	Quarter												
	1	2	3	4	1	2	3	4	1	2	3	4	
State contracts with A W.I.S.H.	■												
State contracts with evaluator (AEA)	■												
A W.I.S.H. subcontracts with partners (NW SEED, Coastal CAP, We. SUN, LMEC)	■												
Finalize Evaluation Plan	■	■											
REACh Conferences/Workshops in DC		■					■				■		
Progress/Financial Reports (SF 269)		■		■		■		■		■		■	
Single Owner Model													
• First scan	■	■											
• Site assessment/acquisition		■	■										
• Permitting			■	■									
• Access to transmission lines			■	■									
• Financing	■	■	■	■									
• Power Purchase Agreements			■	■									
• Construction				■	■	■	■						
• 6 MW capacity on-line							■	■	■	■	■	■	>>
Technical assistance (NW SEED, We. SUN)	■	■	■	■	■	■	■	■	■	■	■	■	
Interim Evaluation Reports				■			■			■			
Policies/Procedures from Process Report							■						
Second Wind Model (replication phase)													
• T.A. to CBOs (Coastal CAP)			■	■	■	■	■	■	■	■	■	■	
• Workshops on wind development			■		■		■		■				
• Subcontracts with other CBOs			■	■	■								
• Wind project development by other CBOs				■	■	■	■	■	■	■	■	■	>>
• 3 MW capacity on-line											■	■	>>
Cooperative Model													
• We. SUN trainings on model to CBOs			■		■		■		■				
• CBOs dev. financing/join LMEC coop.	■	■	■	■	■	■	■	■					
• LMEC develops wind farm	■	■	■	■	■	■	■	■	■				
• 3 MW capacity on-line									■	■	■	■	>>
Process Participation	■	■	■	■	■	■	■	■	■	■	■	■	
T.A. on model assistance programs				■	■	■	■	■	■	■	■	■	
Outcomes													
• Reduce energy burden of 6,000 families							■	■					
• Reduce energy burden of 9,000 families									■	■			
• Reduce energy burden of 12,000 families											■	■	>>
Final Program/Financial Report													90
Final Evaluation Report													365
Dissemination of results													>>

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