City of Santa Fe, New Mexico

memo

DATE: February 25, 2015

TO: Mayor Javier M. Gonzales
Councilor Patti Bushee
Councilor Signe Lindell
Councilor Joseph Maestas
Councilor Peter Ives
Councilor Carmichael Dominguez
Councilor Chris Rivera
Councilor Ron Trujillo
Councilor Bill Dimas

FROM: Santa Fe Climate Action Task Force

SUBJECT: Energy Efficiency and Renewable Energy Programs and Projects Recommendations

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SUMMARY

On December 29, 2014, Mayor Javier Gonzales requested that the Climate Action Task Force submit a report with a list of recommendations that would help to scale-up the development and implementation of energy efficiency and renewable energy programs and projects in Santa Fe.

The City of Santa Fe is committed to protecting the long-term health and viability of the community through strategies designed to reduce greenhouse gas emissions and mitigate the effects of climate change, and as such, has passed resolutions calling for Santa Fe to attain carbon neutrality by 2040; reduce; greenhouse gas emissions by 2030; and reduce the carbon footprint of City government on the environment by a total of 20 percent by 2013, which has been achieved.

Over 20 members of the Energy Efficiency & Renewable Energy (EERE) and Finance working groups of the task force, comprised of environment, energy and finance professionals have been meeting over the last several months and have developed the following recommendations to help assist in achieving those goals. Many of them can be undertaken within the next six months and fully implemented by the end of the year.

In summary, the task force recommends that the City of Santa Fe:

1. Establish goals and benchmarks to reduce citywide energy consumption and greenhouse gas emissions.
2. Pursue energy savings performance contracting for city facilities with an Energy Service Company (ESCO).
3. Scale-up solar distributed generation projects on city facilities.
4. Strengthen and expand energy efficiency programs and solar energy projects in the commercial and residential sectors of our community.
5. Educate and inform the public about available programs.
6. Utilize creative financing options to pay for programs and projects.

It is the goal of the task force to identify the types of strategies and programs the City should consider undertaking to create a healthier, more resilient, adaptable, and vital community, in order to protect the environment and accelerate the advancement of its economy.

The Climate Action Task Force appreciates the opportunity to present the recommendations in this report.

RECOMMENDATIONS

I. ESTABLISH GOALS AND BENCHMARKS TO REDUCE ENERGY CONSUMPTION & GREENHOUSE GAS EMISSIONS

For the last several years, the energy use of all City facilities have been tracked, so baseline data from which to improve upon has been established. Additionally, the Sustainable Santa Fe Commission has been evaluating and quantifying a host of energy and environmental metrics, helping to establish baseline data for the entire city of Santa Fe which can also be used to track annual progress the city makes in those areas. Important next steps will be for City staff to develop a baseline of Greenhouse Gas (GHG) emissions from all sources (buildings, transportation, waste, land use, etc.) to gain greater insight into Santa Fe's sustainability indicators, work with the Climate Action Task Force and its working groups to establish energy and greenhouse gas reduction targets, and then identify the best opportunities to achieve them.

Two immediate opportunities for furthering the reductions of energy use, and by extension GHG emissions, are to:

- **Continue tracking and making energy improvements to city-owned buildings and facilities.** A goal of having at least 10 city buildings achieving Energy Star Certification by the end of 2015 should be established, continuing to demonstrate that the city is leading the community by example.

- **Institute a program of Building Energy Performance Reporting.** Portland, Oregon, Washington DC, New York State, and many cities in California have instituted local ordinances that require all owners of commercial buildings over a minimum size to track and report their building's energy use. Establishing this type of a program emphasizes the importance of energy efficiency in buildings, and demonstrates to owners proof that inefficient buildings waste energy and money,

reinforcing the notion that "energy hogs" may not retain their value and be undesirable for potential tenants to lease, thus encouraging them to invest in energy efficiency and renewable energy technologies.

Actionable Items and Timeline:

1. **Evaluate all City Buildings through the use of the Energy Star Portfolio Manager and evaluate buildings against Energy Star Benchmarks: Current**
2. **Conduct a GHG emissions inventory for Santa Fe and develop metrics to assist in prioritizing reduction opportunities: March**
3. **Establish a goal of at least 10 City Buildings to achieve Energy Star Certification and get Energy Star Plaques for 2015: March**
4. **Develop a Building Energy and Water Performance Reporting pilot project, starting with the hospitality industry (this sector is already familiar with green buildings through the Green Lodging Initiative), to track energy and water use. If this pilot is successful, then City Council can consider an ordinance requiring commercial buildings over a minimum size to report energy performance: April**

II. PURSUE ENERGY PERFORMACE CONTRACTING

Energy performance contracting is a tried and proven approach in identifying cost savings associated with energy use and building performance. It has been widely used in federal, state and local government projects across the nation for the past three decades. By entering into an energy performance contract with an Energy Service Company (ESCO), the City would be able to identify and evaluate potential energy savings throughout its facilities, and then install a variety of highly efficient energy and water saving equipment, and other energy-saving measures such as renewable energy and geothermal technologies, smart energy controls and alternative fuels to achieve such savings. The resulting cost savings from the reduction of energy used by the facilities pays for the entire cost of the project over time. Projects are financed through alternative funding vehicles by a financing company over a period up to 25 years. The ESCO guarantees that annual cost savings will meet or exceed annual financing payments. If savings are not realized, the ESCO pays the difference, as prescribed in a measurement and verification protocol detailed in the contract.

The City of Santa Fe has been invited by the New Mexico Department of Energy, Minerals and Natural Resources (EMNRD) to participate in its Local Energy Efficiency Performance (LEEP) process, using energy performance contracting to greatly increase City investments in energy efficiency and renewable energy measures at City-owned buildings, facilities and processes. The program 1) guides the City through the process, including initial energy audits with state-qualified ESCOs and subsequent contract negotiation; 2) benchmarks building energy use; and 3) provides a State certified third-party reviewer for energy audits and measurement and verification for any implemented clean energy measures.

A memorandum of agreement (MOU) outlining the program and the assistance provided by the State has been drafted by EMNRD for the City's review. The State is also in the process of pre-qualifying up to seven ESCOs that would be able to provide services. Should the City decide to pursue performance contracting with assistance from the State, the MOU must be entered into, and an ESCO would then be selected by the City, based on a variety of criteria.

The ESCO is responsible for performing an investment grade energy and water audit to identify potential energy savings from facility and mechanical improvements, in addition to identifying any renewable energy technologies that could also be implemented to help improve energy cost savings. Based on the results of the energy audit, the ESCO then develops the project and guarantees both the energy and cost savings of the project. If acceptable, the City would then enter into a fixed price contract with the ESCO, who would finance the energy improvements, typically over a 20 to 25-year period; the cost savings of the project pay for the energy improvements. Qualified Energy Conservation Bonds (QECBs, discussed in more detail under Section VI) can be utilized by the City to buy down the interest rate on the financing.

Successful implementation of this project could save Santa Fe taxpayers over $600,000 in natural gas and electricity bills from the energy efficient and/or renewable energy investments used to power its buildings, facilities and processes. Such investments will also help to reduce carbon emissions through the reduced consumption of fossil fuel-based electricity, create local jobs, and improve the indoor environments of public buildings utilized by the public and City employees.

Actionable Items and Timeline:

1. **City Council request staff to pursue performance contract project, execute State MOU for assistance from EMNRD: February**
2. **City staff to identify city facilities as potential candidates for program participation, including, but not limited to, the Genoveva Chavez Community Center and the Santa Fe Wastewater Treatment Facility: March**
3. **City staff to engage ESCO and start performance contracting process: April**
4. **Consider adding energy control smart devices to City buildings and provide incentives for their use in the private sector to provide real time feedback on energy use (long-term): TBD**
5. **Require city building operators and facility managers take the Building Operator Certification; through its existing BOC program, PNM pays a majority of the costs involved for qualifying participants: TBD**

III. SCALE-UP SOLAR DISTRIBUTED GENERATION PROJECTS ON CITY FACILITIES

The City has made great strides in installing solar energy systems on its facilities. It should continue to pursue the installation of solar systems, particularly if the City chooses to pursue performance contracting, as solar arrays can be designed and implemented as part of the performance contract itself.

The City should pursue the goal of adding 2 megawatts (MW) of solar energy to its inventory by 2016, delivered through the installation of systems:

- That are 100 kilowatts (kW) in size, when possible and feasible.
- On leased facilities, such as the Santa Fe University of Art and Design, which are master-metered and have great potential to be solarized;
- For moderate to low-income multi-family residential units and on affordable housing, through a community solar program; and,
- In collaboration with other entities such as the Santa Fe Public Schools.

Actionable Items and Timeline:

1. **Identify potential locations/facilities for new solar systems: Currently**
2. **Develop community solar program: <u>February</u>**
3. **Create a database of potential land sites for solar systems of 100 kW, including potential locations in City, County and State, and community colleges and on private land: <u>March</u>**
4. **Identify financing mechanisms, such as Clean Energy Revenue Bonds (CERBs) or QECBs, to fund solar at schools for school consumption: <u>April</u>**

IV. STRENGTHEN AND EXPAND ENERGY EFFICIENCY PROGRAMS AND SOLAR ENERGY PROJECTS IN THE COMMUNITY

Although the City of Santa Fe has been successful at implementing solar energy systems on its facilities and should continue to do so, and although it may stand to benefit from garnering additional energy savings from its facilities by entering into a performance contract with an ESCO, it should also focus on identifying ways to create an appetite in the commercial and residential sectors for energy efficiency and renewable energy programs and projects. Keys to making this a success are:

1. The establishment of public-private partnerships to either strengthen and expand existing programs, projects and financing mechanisms, or develop new ones that all Santa Feans may equally benefit from;
2. The development of an aggressive public education, outreach and marketing campaign (as discussed in Section V); and,
3. Continuing to advocate for and/or against local and state policies, programs, and regulations that have a positive and/or negative impact on the growth of the energy efficiency and renewable energy industries.

   The current rate case that PNM has filed with the Public Regulation Commission (PRC) includes a distributed generation access fee and elimination of the solar banking option. Based upon that filing, the market size for the solar market has been projected by PNM to be 21 megawatts (MW) installed in the system for 2014, 2015, and 2016, or 7 MW per year. Further, PNM projects for years 2017-2021, only 1 MW per year of new solar would be installed (ref: 14-00332-UT rate case schedule P-11, pages 1 and 2, PRC rate case hearing). According to the U.S. DOE Lawrence Berkeley Labs document titled, "Tracking the Sun Report," published in September 2014, the average cost for a solar installation of less than 10 kilowatts (kW) is $4.70 per kW. If the market size were to drop from 7 MW per year to 1 MW per year, the economic impact will be a $28.2 million reduction in the size of the solar industry within PNM's service territory. The EERE and Finance Working Groups of the CATF believe that the City should oppose any policy that would have such a negative impact on the local economy, the renewable energy industry, and the environment.

   Additionally, the CATF recommends the city oppose the PNM rate increase.

Energy efficiency programs can help all citizens, particularly moderate to low-income individuals and families, lower their energy use, save money on their electricity bills, and become more environmentally

responsible. Access to existing and new programs is critical to achieving Santa Fe's energy and sustainability goals.

Specific to solar energy, Table 1 located in the appendix reflects figures that support the notion that solar electricity can create significant economic development opportunities in Santa Fe, as it has achieved grid parity with fossil fuel-based electricity. As such, bold goals for solar on residential rooftops should be established by the City, in addition to the types of incentives and/or programs that can help increase the number of systems installed in the community.

Actionable Items and Timeline:

1. **Develop a program to provide increased funding to Homewise and other qualified entities (via tapping $6M of the City's Water Utility Reserve Fund, bonds, QECBs, or other mechanisms) to increase energy efficiency programs and the installation of solar systems in the community: February**
2. **Explore ways to support cost effective options for solar energy purchasing and leasing, and making residential solar more affordable: March**
3. **Explore solar leasing programs with no money down for low-income families, and ways to mitigate risk for extreme low income populations: March**
4. **Identify opportunities to streamline solar installation permitting within the city: March**
5. **Create incentives for the use of smart energy control devices to provide real time energy information: March**
6. **Research the existing studies about how effective energy efficiency programs, such as the Federal Low Income Weatherization Program and the Low-income Home Energy Assistance Program (LIHEAP), have been in meeting the needs of low-income families, and determine how to augment such resources for fixed income Santa Feans: March**
7. **Provide energy efficiency assistance to low-income families through partnerships with New Mexico Gas Company, PNM and nonprofit providers such as International Center for Sustainable and Appropriate Technology: March**
8. **Identify programs administered by the Mortgage Finance Authority to assist low-income families with energy efficiency measures: April**
9. **Hold a Summit for banks and solar companies to look for cost effective leasing/financing option for solar DG: April**
10. **Work with solar companies to find out how to increase installations: April**
11. **Research existing rebate programs, such as the City water rebate program, to emulate when creating ways to incentivize and encourage the purchase of energy efficiency appliances (Energy Star): May**
12. **Initiate discussion with Historic Review Panel to take advantage of energy efficiency and renewable energy opportunities: June**
13. **Consider measures to discourage large households' excessive use of water and energy: June**
14. **Marketing: City of Santa Fe to support solar and energy efficiency marketing efforts (also included in Section V Education, below): July**
15. **Advocate for the extension of state tax and federal solar income tax credits, set to expire at the end of 2016: Ongoing**

V. EDUCATE AND INFORM THE PUBLIC ABOUT AVAILABLE PROGRAMS AND THE COST-EFFECTIVENESS OF SOLAR AND ENERGY EFFICIENCY MEASURES

To help ensure the success of the programs and projects recommended in this document, it will be important to inform and educate the public and commercial building owners about the benefits of embracing and implementing energy efficiency measures and installing solar energy systems on their homes or buildings. Moderate to low-income populations should be a specific focus of any education campaign undertaken, as the benefits of such energy programs have a tremendous impact on their household's bottom line.

An aggressive, well-funded advertising, marketing and technical assistance campaign would help make homeowners and business owners aware of the types of energy efficiency programs available to them, in addition to better understanding the cost-effectiveness and benefits of installing a solar energy system.

Educating and informing the public about the cost-effectiveness and benefits of solar power is especially important over the next fiscal year, as the 30% federal income tax credit and the 10% state tax credit for solar system installations expire at the end of 2016. Those tax credits, when combined with favorable financing, can make a solar system cash neutral, or even cash positive, from the first month of system ownership.

In 2014, the City Council adopted Resolution No. 2014-48 and the County Commission adopted Resolution 2014-49, establishing a cooperative "Solarize Santa Fe!" public outreach, marketing and technical assistance initiative (Attachment A in the appendix), however, funds were not allocated by the City to the effort in FY14-15.

Much like the City's Water Conservation Program which received $60,000 in FY14-15 to implement its marketing campaign, consideration should be given to allocate $30,000 in FY15-16 towards establishing a joint City-County public information campaign focused on "Solarize Santa Fe!" and energy efficiency programs. With an equal amount of funding contributed by Santa Fe County, a sufficient amount of resources will be achieved, providing for a visible, persistent campaign over the course of a year.

Lastly, developing a partnership with Santa Fe Public Schools to explore how to best integrate energy and environment education into the schools should be taken into special consideration. Such a program can be a resource and channel for not only educating children, but also their parents about the advantages of energy efficiency and renewable energy programs.

Actionable Items and Timeline:

1. **In partnership with the County, allocate $30,000 in FY15-16 to create a public information campaign focused on energy efficiency programs, "Solarize Santa Fe!," the benefits and affordability of solar energy, and the financing mechanisms that can increase number of solar installations: <u>May-June</u>**
2. **Work with solar companies to identify what they need from the City beyond an ad/marketing campaign to increase installations dramatically: <u>April</u>**
3. **Partner with Santa Fe Public Schools to explore educational programs in schools: <u>May</u>**

VI. UTILIZE CREATIVE FINANCING OPTIONS

Funding any and/or all of the programs and projects recommended is critical to making them a reality. In particular, identifying unique sources of funding can help broaden the pool of resources the city can leverage when developing any of its programs. From crowd-sourcing to federal grants to unique bond offerings, all financing mechanisms should be explored. A matrix of such solutions is located at the end of this section; however, two specific sources of funding are highlighted and summarized here.

Qualified Energy Conservation Bonds (QECB)

QECBs: Local governments can seek approval of the State Board of Finance for interest-rate buy downs on bonds floated through the bond market to provide low cost financing to pay for either 1) reducing energy consumption in publicly owned buildings by at least 20 percent; 2) implementing green community programs; or, 3) backing rural renewable electricity projects.

Traditional bonds may be used by state, local and tribal governments to finance certain types of energy projects. CHP systems that use municipal solid waste or biomass as feedstock appear to be eligible, in addition to fuel cells and micro-turbines. However, QECBs can be used for a variety of purposes, including community energy conservation programs. A maximum of 30% of QECB allocations may be used for private activity purposes. There is no expiration date for QECBs and they can be issued as long as there is an available allocation.

Currently, there is $20M allocated to the State from Federal subsidies for use with QECBs; the State Board of Finance approves applications for QECBs.

Property Assisted Clean Energy (PACE)

PACE programs help business owners pay for the upfront costs of energy efficiency retrofits or the use of renewable energy technologies, which the property owner then pays back by agreeing to increase their property taxes by a set rate over about 20 years. This allows property owners to begin saving on energy costs while they are paying for their energy improvements. This usually means that property owners have net gains even with increased property tax. A challenge with PACE funding is lien priority; PACE loans are subordinate to the primary mortgage, however, the loans can be taken over at the time of sale. It is recommended that the use of PACE funds be focused on commercial owner-occupied projects.

Santa Fe County has already created a Special Assessment District for PACE. By State statute, only renewable energy projects are covered under this financing mechanism; energy efficiency measures cannot.

Actionable Items and Timeline:

1. **Identify approximately $4-5M in energy efficiency and renewable energy projects that can utilize QECBs, such as performance contracting with an ESCO: February/March**
2. **Create a pilot project with Homewise or other qualified financing institutions to design and implement an energy efficiency and/or renewable energy program for homeowners, leveraging QECBs: March**

3. **Partner with Santa Fe Public Schools to identify potential use of QECBs to fund solar and efficiency projects at schools: April**
4. **Once a project has been identified and developed, work with the City Council to pursue the use of QECBs via resolution: April**
5. **Investigate the development of commercial PACE program with the County, which would include the possibility of using QECBs as a source of funding: May**
6. **Meet with solar companies to help identify additional finance mechanisms that would be attractive to commercial entities: May**
7. **Educate commercial property owners as to the benefits of adding energy efficiency and renewable energy to their properties: TBD**
8. **Initiate a joint resolution with the County to support the use of PACE funding for energy efficiency and renewable energy projects: TBD**

FINANCING MATRIX

ACTIONABLE ITEMS	POTENTIAL FUNDING SOURCES									
	ESCO	BONDS (G.O., CERB, QECB, etc.)	PACE	ON-BILL FINANCING	PPA	PRIVATE SECTOR	NONPROFIT SECTOR	FEDERAL FUNDS	IMPACT INVESTING	CROWD SOURCING
Section I										
Develop a Building Energy and Water Performance Reporting Pilot Project	X	X	X			X	X	X		X
Section II										
Pursue Energy Performance Contracting	X	X			X					
Section III										
Scale-up Solar on City Facilities	X	X			X			X		
Develop Community Solar Program				X	X	X	X			X
Partner with Schools to Fund Solar Projects		X			X	X	X	X	X	X
Section IV										
Increase Energy Efficiency Programs with Third Party		X	X	X		X	X	X	X	X
Incentivize Use of Smart Energy Controls			X	X		X	X	X		
Provide EE Assistance to Low-income Population				X		X	X	X		X
Section V										
Create Public Information/Education Campaign on EE and Solarize Santa Fe!						X	X (City & County Govt.)			X

APPENDIX

Table 1: Potential Economic Stimulus Impact of Achieving a Goal of 10,000 Residential Solar Energy Systems in Santa Fe

Number of current customers	762
Total kW installed	3,250
Avg. size per customer current	4.265091864
Households	50,000
Penetration	2%
Goal	20%
Goal households	**10,000**
Avg. system size (kW)	4.265091864
Avg. cost per system (kW)	$5,000
Total cost	$21,325.46
Tax credits	40%
Net cost	$12,795.28
Local value to community	50%
Per system local value	$10,662.73
Local value total	$106,627,297
Multiplier	4
Total value to Santa Fe	**426,509,186**
Total installations (goal)	10,000
Persons per installation	3
Installations per year, per team	36
No. of years	3
No. of installations needed per year	3,333
No. of teams	**93**
No. of new jobs per year (93x3)	**278**
Multiplier	4
Total new jobs	**1,111.11**
Tax	1.31%
Tax benefit to Santa Fe	**5,595,801**

Attachment A: ***Solarize Santa Fe!***

Solarize Santa Fe!

Free **Solar Power!!**
(Just Add: 1 Very Affordable Solar System)

"Solarize Santa Fe!" **is a 2015 County and City cooperative campaign to educate the public about how incredibly cost-effective solar power is these days.**

Today there is a "perfect storm" of **solar electric systems costing 60%** ***less*** **than they did just 5 years ago** combined with substantial financial incentives. A solar system will reduce or eliminate your energy utility bills and add significant resale value to your home or business. There are some excellent low interest, longer term financing options available that can make your monthly loan payments about or even lower than the reduction to your monthly electric, natural gas or propane expenses – meaning that a **solar system can be close to "cash neutral" or even, in some circumstances, "cash positive" from the moment it is installed. Many solar system owners receive monthly checks** ***from*** **their electric utility!** Unlike coal or natural gas-derived electric generation, the "fuel" used by a solar system, the Sun, is free and will remain free (i.e. you're immune from future utility rate increases.) Guaranteed!!

Two Types of Solar Systems

- A **solar photovoltaic ("PV") electric system** uses panels placed on your roof, ground-mounted, or as a "solar carport" to convert the sun's *light* (not heat) into electricity. Energy you don't use is credited to you as it passes through your utility meter and out onto the utility grid. In addition to your meter spinning "backwards" (called "net metering", PNM will currently pay customers an additional 3.5 cents per kilowatt-hour (kWh) of solar electricity produced. But that incentive is decreasing over time.

- A **solar thermal system** generally uses roof mounted collectors for water heating or space heating (adaptable to radiant floor, baseboard and forced-air systems) → saving natural gas, propane or electricity depending on your current heating source.

Choosing the size of a solar PV system depends on what percent of your electricity use you want to generate from solar and/or your ability or desire to pay for the system outright or finance it via a loan. A 3 kilowatt (kW) photovoltaic system can generate about 440 kilowatt-hours of electricity during an average month, enough to completely meet the power requirements of an average-size home. Obtain a 12 month usage history from your utility to determine your average per month electric usage.

For a **solar thermal water heating system**, one 4'X10' collector can satisfy 75-85% of a typical home's hot water needs. Solar space heating requirements are specific to each home. If you're using electricity or propane (both being much more expensive than natural gas) for water or space heating, solar thermal systems can be particularly attractive.

Costs

As with most home improvements, it's best to obtain bids from three different contractors. Note that **both solar PV and solar thermal systems can take advantage of 30% federal and 10% state income tax credits and are also exempt from paying the state's 8+% sales tax. Better hurry,**

though, as the tax credits are in effect only through the end of 2016! Many PV solar companies also offer 10 year "worry free" warranties covering the entire solar system.

- A **solar PV system** costs (installed) generally around $3500 to $4500 per kilowatt of capacity – most 3 kW systems will cost about $10,500-13,500. The after-tax-credit net cost of a $12,000 system is just $7,200. Ground-mounted and carport systems are generally somewhat more expensive than roof-mounted systems.

- A typical **solar water heating system** for a family of four costs from $7,000 to $10,000 including installation. The after tax credit net cost is $4,200-6,000.

Financing Your Solar System

Some solar PV companies offer a one year interest free loan for the amount of the anticipated income tax credits. Using a 3 kW, $12,000 PV roof-mounted system example, such a loan would cover the $4,800 of anticipated tax credits. You never make monthly payments on this loan; you just pay it off once you receive your refunds. Also, Homewise (983-9473, www.Homewise.org), a non-profit lending organization offers 4% loans to City of Santa Fe residents, for up to 20 years, for homeowners that have a gross annual income of less than $104,000 per year. Citizens in the unincorporated areas of Santa Fe County can obtain a 6% loan. Interest expense on Homewise loans can be "Schedule A" deducted from your income taxes! If you don't qualify for a Homewise loan, check with your existing lender, a local credit union, or a solar installation company.

PV System Financing Examples ($12,000 gross cost, 3 kW PV system, approximately $60/month reduction to a PNM utility bill) Note: Similar savings can be realized for a solar hot water system.

1) $4800 anticipated tax credit amount covered by a 1 year, interest free loan offer from solar company (no payments), $7,200 financed at 6.5% for 15 years using a loan available from many of the solar companies. Monthly loan payment: $63. **With a $60 monthly utility bill reduction, your solar system ends up as a net cost of just $3/month!**

2) $12,000 loan from Homewise:

- City Residents: 4%, 20 year loan = $73/month payments. $13/month net cost.
- County Residents: 6%, 20 year loan= $86/month payments. $26/month additional cost.

However, you have a $4800 income tax refund coming to you in the next year!! You can use that $4800 to take a great vacation, or, if you would like, Homewise will apply your $4800 tax refund to your loan (at no cost) to reduce your loan payments. The City resident 4% loan payment would drop to $44/month (for a $16/month net cash benefit) and the County resident 6% loan drops to $52/month ($8/month net benefit).

Since your monthly loan payments are fixed, your net monthly financial benefit increases as electric, natural gas and/or propane costs increase over time. In short, you won't be affected by future utility rate increases. Also, keep in mind that solar increases the resale value of your home!

For Free Advice: Call Craig O'Hare, Energy Programs Specialist (505) 992-3044 cohare@santafecountynm.gov See: www.santafecountynm.gov and click on "Solar Power" under "Services" for a list of solar companies.