

Renewable Energy Committee Recommendations to the New Orleans City Council

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Definition of Renewable Energy:

Renewable Energy is energy derived from resources that are regenerative, rapidly replenished, or for all practical purposes cannot be depleted. Renewable sources of energy include biomass, geothermal, hydroelectric power, wind, photovoltaic, and solar thermal energy.

Renewable Energy resources potentially applicable within the City of New Orleans include biomass from landfill gas, municipal solid waste gasification, and wood-waste; geothermal power generation; hydroelectric power from water flows; wind power generation at a small scale; photovoltaic (solar electric) power generation and solar thermal energy (solar hot water). These renewable energy resources can be used within all types of buildings including residential, commercial and public facilities to offset electric power, heating and cooling needs for the built environment.

Introduction:

Renewable Energy is energy derived from resources that are regenerative, rapidly replenished, or for all practical purposes cannot be depleted. Renewable energy technology is readily available and often times has the potential to be economically competitive with traditional fuel sources. Nonetheless, investment in renewable technologies in New Orleans has been very limited, which leaves the city in an underdeveloped position relative to other cities of comparable size. The lack of application of renewable energy technologies leaves the city vulnerable due to its dependence on finite fuel sources with high risk of future price increases.

The Renewable Energy Committee (the committee) was convened in response to this need to diversify the energy matrix of the city of New Orleans and promote viable new technologies. Local community members have volunteered their time to participate in this committee and examine the circumstances of New Orleans in order to gauge what impediments have hindered the development of renewable energy sources. The committee examined the incentive structures currently used in the US and throughout the world to promote investment in renewable energy generators in order to develop policy recommendations to mitigate the factors that have limited the growth of a renewable energy industry in New Orleans.

Renewable energy resources frequently require legislative and regulatory assistance in order to overcome the barriers that prevent their proliferation. Existing legislation in Louisiana and the city of New Orleans create disincentives for investment in renewable technologies, and incumbent energy generators and distributors are too invested in status quo energy sources to consider renewable sources a viable option.

Nonetheless, the development of renewable energy resources offers many benefits to local stakeholders. Installation of renewable energy generators would diversify the city's energy matrix, reducing the effect that rising oil prices will have on energy costs within the city. Renewable energy sources are economically viable on both the small and commercial scales, which will allow the city to receive its energy from numerous local sources, thereby preventing dependence on one producer. This will stabilize the energy market and limit the debilitating effect that disruptions that individual generators cause to the city's energy supply.

Additionally, legislative policy that encourages investment in renewable energy technology will foment the development of local energy generators, which will economically benefit New Orleans by reducing transmission costs and employing the local workforce. Local community members will produce the energy that their neighbors consume. This will keep money within the city and allow demand for energy to determine the development of new renewable energy sources in the city.

The following report compiles the recommendations that this committee feels will best serve the city of New Orleans, including ratepayers, energy generators and energy distributors. Each recommendation outlines the steps that should be taken for

policy implementation, the goals of the policy, and both benefits and costs. We request that the Advisors of the City Council Utility Committee prepare a fiscal note identifying the net cost to ratepayers of the recommendations of this committee, including all costs and benefits that will affect the ratepayer. The committee strongly encourages the New Orleans City Council to implement these recommendations in order to increase the city's energy stability, reduce energy costs, encourage economic development, and increase the city's environmental profile.

Renewable Portfolio Standards

Requiring that a certain percentage of a utility's power plant capacity or generation come from renewable sources by a given date

Abstract:

Incentive Type: Renewable Portfolio Standard

Eligible Renewable Technologies: Solar-Thermal, Photovoltaics, Landfill Gas, Wind, Biomass, Geothermal, Municipal Solid Waste, Anaerobic Digestion, Hydroelectric, Tidal Energy, , Ocean Thermal, Biodiesel, Fuel Cells using Renewable Fuels

Applicable Sectors: Investor-Owned Utility, Electric Service Providers, Community Choice Aggregators, IPP

Standard: Regulatory mandate to establish that a percentage of load be purchased from renewable sources and to increase the percentage of renewable retail sales by at least 1% per year beginning with 10% by the end of 2010; goal of 20% by end of 2020

Technology Minimum: No

Effective Date: January 1, 2010

The New Orleans City Council should enact a Renewable Portfolio Standard (RPS) program that requires each retail seller of electricity to increase its purchase of renewable power to at least 10% of its load from competitively priced, eligible renewable-energy resources by the year 2010. The Council should mandate that these energy sellers work toward the realization of this goal by purchasing from local power generators and only purchasing from energy producers outside of greater New Orleans should they be unable to achieve the mandated standard by relying strictly upon local sources.

Secondly, the Council should require retail sellers of electricity to increase their purchase of renewable energy by at least 1 percent of retail sales per year beginning in 2010, so that 20% of their retail sales are served with eligible renewable energy resources by 2020. Councilman Thomas and the Council Utility Regulatory Committee should establish a committee of experts to assist in establishing the mechanisms for implementation and enforcement of these goals.

Additionally, the Council can develop RPS compliance rules for investor owned utilities (IOUs), electric service providers, small utilities and community choice aggregators. Publicly-owned utilities should be held responsible for implementing and enforcing an RPS that recognizes the intent of the Council to encourage renewable resources, while taking into consideration the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement.

The Committee's role would be to:

- Certify eligible renewable resources that meet statutory requirements;
- Design and implement a tracking and verification system to ensure that renewable energy output is counted only once for the purpose of the RPS and for verifying retail product claims in Louisiana or other states; and

- Allocate and award supplemental energy payments (SEPs) to eligible renewable energy resources to cover above-market costs of renewable energy.

The Committee should establish Guidebooks describing its RPS program requirements:

- The Renewable Portfolio Standard Eligibility Guidebook
- The New Renewable Facilities Program Guidebook
- The Overall Program Guidebook

The Committee should be charged with:

- Establishing the standard terms and conditions to be used by all IOUs in contracting for eligible renewable energy resources.
- Implementing flexible rules for compliance with annual renewable procurement targets, such as applying excess renewable procurement in one year to a deficit in another year. If a retail seller fails to procure sufficient renewable energy, the Council should impose penalties.
- Reviewing and approving each IOU's procurement plan and its process for selecting the lowest cost bidders of renewable energy that best fit that utility's resource needs. IOUs will use these processes to select winning bidders from their solicitations to procure renewable electricity.
- Determining market price referents (MPRs) for electricity from non-renewable sources. The MPR establishes a benchmark at or below which approved RPS bid contracts will be considered reasonable. If a contract is executed as a result of a competitive RPS solicitation and priced above the MPR, it may be eligible to receive supplemental payments from the City

ISSUE ADDRESSED

Establishing the RPS will provide the City with a vehicle to promote development of renewable resources within its market and provide residents with their desired access to local renewable resources. By establishing these benchmark goals, the local utility will benefit through the diversification of its energy sources and the reduction of brown and black outs. At the same time, the community will benefit from the reduction of environmental effects from power plants and in having more security in its power sources. It is the contention of this committee, that to successfully enact an RPS, a long term provider of a significant percentage of the renewable power will have to be chosen. It is the finding of this committee that significant contributions of renewable power do not come from single dwellings, but rather from large facilities. It is therefore recommended that a large supplier of renewable power be identified by the committee in order to further its goals of achieving the renewable portfolio standard.

WHICH AREAS OF LOCAL GOVERNMENT CAN ENACT AND IMPLEMENT

This committee believes that the Council, with its regulatory authority, has the ability to enact such a policy and require the administration to establish an enforcement division to monitor the implementation of this policy. The advisors to the Council Utility Regulatory Committee should establish a committee whose job it is to find ways to implement the RPS and assign specific roles to each affected agency to do so. The energy commission's role should be to do the following:

1. Certify eligible renewable resources that meet the criteria contained in the bill.
2. Design and implement a tracking and verification system to ensure the proper tracking of energy for the RPS
3. Allocate and award supplemental energy payments to eligible parties for any expenses to cover above market costs

WHAT ARE THE EXPECTED BENEFITS

The establishment of an RPS would provide an incentive for developers to build generation in this market based on renewable resources. Such a program as an RPS provides the developer some level of assurance that if the power generated is competitively priced it will be sold, while imposing a minimal burden on the rate payer that there would be a likely source to take the power for retail sale. It can also spur competition in the renewable market, as each provider of the renewable source percentage will ultimately be required to compete for their portion of this market.

WHAT ARE THE COST ELEMENTS

The cost to be burdened from this will largely fall on the public. This, in many scenarios, creates a stigma that causes some to feel as though they are carrying the burden for many. The solution to this lies in programs such as green tariffs that allow for consumers to more directly see the benefit of their investment. Cost issues associated with the RPS needs to be studied further however, the basic considerations would be the cost of the renewable power facility, the price of the power delivered and the facility's reliability and the capacity factor. These issues should be further researched by a committee established by the energy commission.

Green Tariffs

Providing Consumers with the Option to Purchase Green Power

Abstract :

Allow a special rate schedule be accessible for those subset of electric customers that wish to receive green electricity by instituting a blended rate which will be composed of a minimum of 51% green power from the following sources: biomass (including landfill gas), geothermal, solar (photovoltaics, concentrated solar power), water (freeflow hydropower, ocean currents and thermal, wave, and tidal), and wind.

Allow a pure rate for 100% green energy.

ISSUE ADDRESSED

Establishment of two rate structures for green power. This policy insures that green power is available for customers and that the specified rate is not bundled with other fees or extraneous costs by the electricity provider.

RECOMMENDATION

Establishment of a multiple rates for green power, certification of green power by percent 'green' and rate payer protections.

WHICH AREAS OF LOCAL GOVERNEMNT CAN ENACT AND IMPLEMENT

The City Council has the authority to establish such a rate structure.

WHAT ARE THE EXPECTED BENEFITS

Insures optimum consumer choice and creates a market incentive for green power.

WHAT ARE THE COST ELEMENTS

Cost to city and utility would be a requirement of public education so that ratepayers would know of the availability of Green Tariffs. Additionally, the utility would be required to facilitate the ease of signing on to the program. Some funds would be required to be expended by the utility and the City to quantify use of green energy, establish reporting on a monthly basis of the number of ratepayers requesting green power, quantify the amount of MWhs contracted for, and document the issues related to the purchase of green power and the ratepayers' perception of the dedication of the utility to green power.

WHAT ARE THE METRICS

Number of ratepayers signing up for green power programs with a low number of complaints on ease of access to the program.

ROLE OF THE MARKET

Once available, allows green power providers to contact the utility on their green power pricing, reliability, and long term price stability.

Feed-In Tariffs

Establishing a standard pricing regime and simplified eligibility and contracting for renewable energy electricity generation

Abstract:

Incentive Type: Feed-in Tariffs

Eligible Renewable Technologies:

Applicable Sectors: Renewable Energy Electricity Producers, Local Electricity Distribution Companies, Photovoltaic Homeinstalls

Standard: Mandate to establish a standard pricing regime and simplified eligibility, contracting and other rules for small renewable energy, electricity generating projects.

Technology Minimum: No

Authority 1:

Effective Date:

The New Orleans City Council should enact a Feed-in Tariff program that would require retail sellers of electricity to purchase from electricity generators who use renewable sources according to a standard pricing regime. All entities which generate electricity from renewable sources would be eligible to sign a contract guaranteeing a fixed payment rate for each kilowatt hour that they supplied to the grid, with this rate adjusted annually according to inflation. Councilman Thomas and the Council Utility Regulatory Committee should establish a committee of experts to assist in establishing the mechanisms for implementation and enforcement of these goals.

The Committee's role would be to:

- Certify eligible renewable resources;
- Design an attractive contract to encourage new investment in electricity generation from renewable sources and a diversification of the New Orleans energy matrix; and
- Assist local distribution companies to generate additional funds to aid in covering the above-market cost of purchasing renewable energy electricity at the fixed rate.

The Committee should establish Guidebooks describing the requirements for and estimated costs associated with participation in the Feed-in Tariff program:

- The Feed In Tariff Eligibility Guidebook
- The New Renewable Facilities Program Guidebook
- The Overall Program Guidebook

The Committee should be charged with:

- Drafting the application and contract for participation in the Feed-in Tariff program;

- Facilitating easy access to program information;
- Informing potential participants of the costs associated with establishing and maintaining their renewable electricity generating infrastructure and the costs of connection to and metering by the distribution system.

ISSUE ADDRESSED:

Establishing Feed-in Tariffs will encourage investment in renewable energy technology, and increase the energy independence of the city. Providing a platform to allow both large and small generators of renewable energy the ability to have a ready market for their power, thus making financing of their projects readily available.

WHICH AREAS OF LOCAL GOVERNMENT CAN ENACT AND IMPLEMENT

This committee believes that the Council with its regulatory authority has the ability to enact such a policy and require local electricity distributors to purchase energy from renewable energy generators.

WHAT ARE THE EXPECTED BENEFITS

Feed-in Tariffs will provide renewable energy electricity producers with the security to invest in their technology. By establishing a fixed price that will increase according to inflation, lending institutions and investors will consider projects to be more attractive and financially sound. Additionally, the simplification of the contracting and metering processes allows small corporations and individuals, along with large corporations with the resources to establish an economy of scale, to contribute to the electricity distribution system in an environmentally beneficial manner. The fixed price also stabilizes future energy prices by diversifying the energy matrix and establishing a greater independence from fossil fuels.

WHAT ARE THE COST ELEMENTS

The cost elements need further study; however, the basic considerations would be the “all-in” cost of each facility, the price of the power delivered and the facility’s reliability and capacity factor.

Energy Management Fund

Encouraging public facilities to improve their energy efficiency and increase their use of renewable energy sources

Abstract:

As city budgets become tighter, and as the New Orleans city budget has additional constraints due to rebuilding infrastructure, it becomes increasingly difficult to address energy efficiency, preventive maintenance of energy consuming equipment, and considerations for use of renewable energy technologies on an annual and ongoing basis. Creating a revolving low- or no-interest loan fund to provide capital funding for public facility improvements specifically for efficiency and renewables will allow the city to improve energy infrastructure, reduce ongoing energy and maintenance costs, and use the cost savings to replenish the fund for further improvements and cost saving projects.

ISSUE ADDRESSED

Lack of adequate ongoing funding for energy efficiency upgrades, preventive maintenance to address energy performance degradation, and implementation of renewable energy and advanced technologies in New Orleans public facilities.

RESPONSIBLE SECTORS

City energy manager / administration or quasi-public agency

WHAT ARE THE COST ELEMENTS

Initial Costs- \$500K research, administrative and setup
Operational Costs- \$5 million investment for public facilities could yield 10-20% return annually.

WHAT ARE THE EXPECTED BENEFITS

Lowered energy costs for public facilities reduce strain on city resources, and provides leading example for private sector. Bundling renewable energy and efficiency projects allows for a feasible rate of return. Further financial analysis is required, but a revolving fund that can be replenished with energy and energy related cost savings would allow energy efficiency upgrades without an additional allocation on an already strained city budget, as well as reduce the burden on city budgets for unexpected maintenance on energy consuming equipment.

CITY RESOURCES REQUIRED

This could be done with City resources, or with private funding in a public-private partnership (see Cambridge example). One possible scenario is that a partnership

with Entergy could be developed to cost-share the initial seed money required for the fund, and Entergy could partner with the city to identify demand-side management opportunities that would help them manage the loads on their system.

A city official or small city office will also be required to manage the fund, with assistance from city (or other) accounting, and determine annual project priorities, distribution mechanism, and repayment of loans.

EDUCATION AND OUTREACH

Education needed for city staff, public facilities managers

POLITICAL FEASIBILITY

May require the creation of additional office/entity. Politically beneficial if energy and maintenance costs can be managed without a substantial increase to city budgets.

OTHER KEY CITY EXAMPLES

Cambridge, MA Energy Alliance, Ann Arbor Energy Office

Retail Choice and Power Purchasing Agreements

Encouraging independent renewable power production and allowing for the independent sale of the electricity produced

Abstract:

Policy that encourages Power Purchase Agreements between small power producers and Entergy, small power producers and ratepayers, and ratepayers and Entergy in order to foment the development of renewable energy electricity generation throughout the city of New Orleans. Diversification of electric generation benefits ratepayers and the utility, without requiring investment by Entergy.

ISSUE ADDRESSED

1. Current lack of renewable energy in the electric generation mix of Entergy - reducing dependence on depleting and/or imported sources of fuel, hedging against volatile fossil fuel costs (i.e. ensuring price stability for the utility and the consumer), offsetting future demand increases without the large investment in conventional power plants.
2. Lack of affordability for individual home or business owners to install renewable energy electricity generation.

RECOMMENDATION

A Power Purchase Agreement is a contract between an independent power producer and an end user (typically an electric utility) which specifies terms of the electricity sale, such as price per unit, length of contract, quantity to be sold/purchased, and ownership of environmental attributes such as Renewable Energy Credits and their value. Entergy is currently the only power producer allowed to sell electricity to residents of the city of New Orleans. Policy should be implemented that allows and encourages small independent power producers (homeowners, commercial building owners, etc.) to install renewable electric generation and sell the electricity to Entergy, or that allows third-party ownership of renewable electric generation systems, with the owner able to sell directly to the consumer.

This would allow residents and small business owners to install and operate small renewable electric generation systems such as solar PV with Entergy as the off-taker. The cost of the system would be covered by the price of electricity sold, applicable Federal (and potentially state) production tax credits, and sale of the Renewable Energy Credits. An additional policy consideration to benefit this is to allow customers a choice of electric rate structures – a time-of-use rate would benefit those who use electricity along typical demand schedules, while a more standard block rate would be more appropriate for others. The second element would allow small power producers to develop renewable electricity generation and sell either directly to Entergy or to consumers. For example, an owner of a capped landfill could use the methane to power a generator with the primary off-taker being an industrial plant or a residential

neighborhood (or Entergy). Another example would be that a financier could purchase and install solar PV systems for all the homes in a new housing development, receive the tax credits and value of the RECs, and sell the electricity at a reduced price to the homeowners.

WHICH AREAS OF LOCAL GOVERNMENT CAN ENACT AND IMPLEMENT

City Council has the ability to require Entergy to comply with this policy. There will likely be city permitting and planning requirements. In addition, a standard interconnection agreement will need to be developed and approved (there are many precedents and models of this agreement as this is becoming more common practice nationwide).

WHAT ARE THE EXPECTED BENEFITS

Advance planning for a national or state RPS reduces costs to Entergy and the consumer; diversification of electric generation – increased reliability and reduced generator fuel price volatility; potential positive human health impacts (avoided power plant emissions); no cost to Entergy.

WHAT ARE THE COST ELEMENTS

TBD

WHAT ARE THE METRICS

A power purchase agreement model, and in some cases consumer retail choice regarding source of electricity generation, are usually techniques for a utility to achieve their RPS requirements. Another approach may simply be to establish policy requiring Entergy to purchase a certain percent of their electricity from small power producers.

ROLE OF THE MARKET

The market will dictate which technologies are viable for electric generation. For example, solar PV may be the most viable for an individual homeowner or small business owner, but a landfill owner may choose to install a turbine or cogeneration system powered by landfill methane gas. Allowing customers a choice between conventional electricity generation and clean energy at a competitive price will generate revenue and spur further investment in clean electricity generation.

Assessing Existing Green Ordinances - City of New Orleans

Investigated existing environmentally-related codes in order to determine what new ordinances need to be promoted to encourage renewable energy

Abstract:

These steps need to be taken by the City Council Utility Committee and/or their Advisors:

Review city zoning ordinances, building codes, executive orders, etc. to identify additional ordinances required for support of Renewable Energy.

Identify any specific ordinances, codes, executive orders, and legislation that establish renewable energy incentives for municipal or other government-funded buildings.

Review procedures to eliminate any barriers to renewable energy.

There are a small number of existing city executive orders, ordinances and pieces of legislation that address environmental policies including:

- City of New Orleans Environmental Conservation Policy Memorandum No. 103 (July 17, 2001)
- City of New Orleans Executive Order MHM01-017: The Council on Conservation in City Government (March 19, 2001)
- Historic District Landmark Commission (In historic districts, consult with the HDLC first about visible elements like solar on roofs.)
- City of New Orleans Net Metering Ordinance (March 2007)
- Louisiana Senate Bill 90 – Solar and Wind Tax Incentives (July 2007)

ISSUE ADDRESSED

There are policies and legislation that encourage green operations and renewable investment as opposed to restricting it. Additional policies and incentives should be assessed and introduced.

WHICH AREAS OF LOCAL GOVERNMENT AND ENACT AND IMPLEMENT

Council Utility Committee
Department of Safety and Permits
Office of Recovery Management
Office of City Attorney
Implementation - Contractors

WHAT IS REQUIRED TO IMPLEMENTATION OF RECOMMENDATION

Could reinvigorate the now defunct Council on Conservation for review.

Review could be entirely outsourced if small amount of funding available.

EDUCATION AND OUTREACH

Briefings to City Planning Commission, department heads on any necessary amendments to zoning/codes.

Simple exercise, but multiple ordinance updates are being considered involving other environmental/energy issues and they should be coordinated.

WHAT ARE THE EXPECTED BENEFITS

Prevents barriers to onsite generation of renewables from municipal codes and ordinances and legislation.

WHAT ARE THE COST ELEMENTS

One time study and report cost of \$25-100K.
No operational costs.

WHAT ARE THE METRICS

Renewable companies being established in the city/Parish.

ROLE OF THE MARKET

Financing renewals, implementing technologies, and promoting renewable energy options.

WEBSITES

www.dsireusa.org

Greater New Orleans Homebuilders Association Green Building Standard

<http://www.nahbrc.org/greenguidelines/theguidelines.html>

ASHRAE Standard 189

http://www.energycodes.gov/comcheck/89_compliance_manual.stm

International Code Council and Green Building

<http://www.iccsafe.org/news/green/index.html>.

Preservation Resource Center

www.prcno.org

National Trust for Historic Preservation,

www.nthp.org

Net Metering Compendium

Enforcing that facilities connected to the grid that produce their own clean energy to be credited for any excess electricity that they produce

ANALYSIS OF CITY'S NET METERING ORDINANCE

Abstract:

Establishes a consumer-friendly way purchasers of clean, on-site distributed energy systems (advanced batteries and controls, combined heat and power (CHP), fuel cells, heat engines, mini-generation (natural gas), micro-hydropower, modular biomass, photovoltaics, and small wind), can be connected to the electric grid (at sizes typically under 2 MW) and be credited on their electric bill at retail rates for energy generated as long as the amount generated is not in excess of consumption.

ISSUE ADDRESSED

The installation of on-site distributed energy systems.
Following the Federal Energy Regulatory Commission (FERC) NOPR guidelines for interconnection and successful programs such as in the State of Texas.

RECOMMENDATION

Base interconnection rules on that recommended by the Federal Energy Regulatory Commission FERC, and net-metering rules by State of TX. These rules are user-friendly, overseen by Public Service Commission, and reliable. New Jersey and Colorado have similar rules.

WHICH AREAS OF LOCAL GOVERNMENT CAN ENACT AND IMPLEMENT

New Orleans City Council acting as utility regulator.

WHAT ARE THE EXPECTED BENEFITS

Provides incentives for large building-based or site-based, clean energy systems to provide incremental electric power to the electric grid. This should stabilize supply and minimize swings in electric rates or electricity shortfalls,

WHAT ARE THE COST ELEMENTS

On-site distributed energy systems will generate costs for the utility, as well as increasing oversight costs of the utility's regulators, because they must establish systems, track 'netting' of power and insure the customer is credited appropriately — while insuring that the electricity grid is functioning smoothly.

WHAT ARE THE METRICS

Rising number of building/facility interconnected systems every month.

ROLE OF THE MARKET

To offer customers certified clean energy systems and interconnection equipment under appropriate UL (Underwriters Laboratory) and IEEE (Institute of Electrical Engineers) requirements.

Recommendations on Net Metering Tariff's:

1. Expand current max limits to match those allowed in New Jersey (i.e., 1000 kW for residential and 2000 kW for commercial)
2. Have ENO pay retail rates (~ \$12 MW-hr) for excess electricity generation until RPS targets are met. Although these rates are only about half of what the small-scale New Jersey customer receives, it is a low-cost — yet powerful incentive for the New Orleans' rate-base to become actively involved in pursuing a Sustainable Energy Future as defined by the New Orleans' Energy Policy Task Force's Mission Statement.

Avoided Cost

The current rate at which Entergy pays for energy generated in excess of consumption in the Net-Metering Ordinance is priced at avoided cost.

Avoided Costs is defined as the incremental costs to an Electric Utility of electric energy or capacity or both that, but for the purchase from the Net Energy Metering Facility, such utility would generate itself or purchase from another source.

Where the electricity generated by the net metering customer exceeds the electricity supplied by the Electric Utility, the net metering customer shall be credited, during the next billing period, for the excess kilowatt hours generated. For the final month in which the net metering customer takes service from the Electric Utility, the Electric Utility shall issue a check to the net metering customer for the balance of any credit due in excess of amounts owed by the customer to the Electric Utility. The payment for any remaining credits shall be at the Electric Utility's avoided cost. That avoided cost shall be clearly identified in the Electric Utility's net metering tariff.

Energy Avoided Costs (ENO and ELL)

2008	<i>¢/kWh</i>	<i>Summer</i>	<i>Winter</i>	2011	<i>¢/kWh</i>	<i>Summer</i>	<i>Winter</i>
On-Peak		6.479	5.626	On-Peak		4.781	4.444
Off-Peak		4.393	4.211	Off-Peak		3.969	4.111”

This clearly shows that ENO has established a rate structure where avoided cost does not include anything but the very least cost source associated with generating capacity. While this rate structure is a standard method supported by most utilities, it is not very representative of the cost the consumer actually pays ENO for energy services.

However, as it turns out, the price paid at “Avoided Cost” at this time happens to be less than 50% of the average retail price. This is too low.

RECOMMENDATION:

1. ENO pays retail rates (~ \$12 MW-hr) for any excess generation on an annual basis until the RPS is fulfilled. Payment shall be in the form of a check to the customer.

Remote/Displaced Generation

Net-Metering Customers may install / sell and rent generation equipment anywhere in the parish.

ISSUES ADDRESSED

- I. PV equipment works better when facing the south or even better if tracking. Unfortunately, in New Orleans, few roof hips face south or allow for tracking at low cost.
- II. Historic homes are less appropriate for PV systems. In many cases, such a system would violate the requirements of the historic standard.
- III. PV equipment, if improperly installed, can threaten the durability of a roof.
- IV. A PV system can be purchased too big. With the current net-metering law, substantial economic value is lost if the PV system generates more energy than the home it is associated with consumes. If the PV system associated to a home is not tied to the same piece of real-estate, the homeowner can independently sell or rent the excess generation to a neighbor to insure that the equipment always receives the maximum return on investment.
- V. Without the provision to sell or rent excess capacity to a neighbor, the homeowner has no incentive to conserve energy in the home. Since such steps usually cost much less than PV equipment’s cost to generate energy, fixing a system on a home disincentivizes conservation.
- VI. With this provision, it is possible for a landlord owning a duplex or a multi-family complex to also install a single, PV array large enough to accommodate all of the apartments and change the percentage of that array rented by each tenant on a

monthly basis. The landlord can rent to a particular tenant a percentage of the array at a rental cost equal to a fraction (say 90%) of the retail value of the electricity generated by that part of the array, but not to exceed the annual consumption of that apartment. This allows the landlord to amortize the debt associated with the PV purchase and the tenant to effectively receive electricity at a price discounted to just below retail. When coupled with Louisiana's recently enacted SB90 and the Federal Energy Policy Acts of 2005 and 2007, which allow the Landlord to buy-down the amortized cost per kWh to less than 90% of the current retail price, both the Landlord and tenant enjoy positive cash flows.

VII. Many critical buildings like hospitals and schools could greatly benefit from having more than adequate PV equipment to run them in a crisis, but the economics of such purchases are not currently justifiable. This can happen if, for example, the landlord, as in the previous example, installs the PV equipment on the hospital or school.

RECOMMENDATION

Allow a net-metering customer to install, sell or rent PV equipment on real-estate discontinuous with the home or building "served" by that energy generator. The energy-generating equipment need not be installed on real-estate owned by the same owner as the building it "serves". Neither must the energy generation associated with an array of panels have independent inverters or meters to be deemed by the utility to be separate PV arrays for accounting purposes.

For example: A home at 123 First Street can install a 3 kW PV system on the roof of a building at 456 Main Street. The owner of the home and building need not be the same person. Under current interpretation of the net-metering law, this action would be prohibited from obtaining the credit. Under this proposal, it would be acceptable.

Moreover, at any time, the owner of the PV system can sell or rent any part of the equipment to any entity. If that new owner or renter of part of the PV system has a building in New Orleans, then he will become a net-metering customer by simple application to Entergy and get the benefit of the energy generated just as if that equipment were installed on his building. Because of the last sentence in the proposal, the array does not need to be rewired with a different set of connections, inverters or meters. The only effect will be accounting within the records of the utility company.

Abolish the Minimum Usage & Connection Fees

Connection fees should be included in the base rate for energy.

ISSUE ADDRESSED

I. When a customer makes a major effort to lower his or her consumption (whether actual consumption via Conservation & Energy-efficiency alone or net consumption via Conservation, Energy-Efficiency and On-Site Electricity

Generation, i.e., via Net-Metering), as the net consumption gets closer to zero, the residual bill arising from the connection fee can become a major percentage of the remaining bill. If this part of the bill does not decrease proportionally with consumption, the rate-payer has less economical incentive to save the last few kWh per month, in fact, the disincentive increases the closer the actual bill gets to zero.

- II. The situation is even more of a problem for a net-metering customer. During months when electricity consumed is less than the electricity generated, the net value of the electricity generated can be negative!

For example: If the consumption – production = - 50 kWh, then the net value of the electricity is $50 \times \$0.10 = \5.00 – the connection fee of \$10 = -\$5.00.

Photovoltaic systems are already challenged economically by the fact that without subsidies it generates electricity at about \$0.40 / kWh. During the months when production is less than 100 kWh more than consumption, the PV is in fact providing no economic benefit to allow the homeowner to pay off (amortize) the original capital investment.

- III. The net-metering law requires that the consumer who participates in Net-metering receive the retail value for the electricity generated. By eliminating the connection fee, more value is available to pay for the PV system.
- IV. A home that has a net-zero consumption in the current system will not have a zero annual bill. But if the connection fee is abolished and included in the base-rate, then a home with a net-zero consumption will have a zero annual energy bill.

Inclining Block Rates

Rates should be Inclining as in Austin Energy.

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When a customer uses more energy than the smallest block in the rates, the remaining electricity is sold at a lower cost. This discourages conservation.

“Block rates for electric service are those in which the per unit price changes with increasing monthly usage. Usage levels are defined by blocks, or successive ranges of monthly consumption. In the most-common form of block rate, the declining block, the per-unit-price decreases with each successive block. The declining block rate traditionally has been used because, according to proponents, it effectively satisfied the need to recover fixed charges early in the rate. Thus, the high initial blocks recovered virtually all the fixed costs and the latter blocks primarily recovered variable costs. Further, the rate was administratively simple and required a minimum of metering equipment. Finally it was also considered advantageous to provide a

lower rate to high-volume customers since it was presumed that these loads provided overall benefits to the system. Currently, however, the declining block is undergoing substantial criticism. The three major criticisms are: (1) there exists some question whether the decline in price with increasing use reflects commensurate decreases in utility costs; (2) it is claimed that the declining-block rate structure fosters unnecessary load growth, impeding conservation efforts; and (3) the rate is said to favor large users and discriminate against small users.

For an extended version of the previous recommendations concerning net-metering, please visit the following websites.

http://www.osti.gov/energycitations/product.biblio.jsp?osti_id=5161182
http://www.theregengroup.com/images/Net_Metering_Ordinance_A_Compendium.doc