Alliance for Clean Energy New York * American Lung Association in New York * Campus Climate Challenge, SUNY Fredonia * Catholic Care for Creation Committee of Buffalo * Citizens Campaign for the Environment * Clean Air Coalition of WNY * Earthjustice * Environmental Advocates of New York * Global Warming Action Network, Syracuse * Great Lakes United * Jamestown Area Concerned Citizens * Natural Resources Defense Council (NRDC) * New York Interfaith Power & Light * New York Public Interest Research Group (NYPIRG) * Northeast Sustainable Energy Association * Pace Energy and Climate Center * Physicians for Social Responsibility (PSR), Washington, D.C * Sierra Club Niagara Group and Atlantic Chapter * UB Environmental Network * Western New York Climate Action Coalition * WNY Sustainable Energy Association

A Proposal to Meet Jamestown's Electricity Needs at a Lower Cost while Creating a Local Green Economy

Presented by Clean Energy for Jamestown December 20, 2009

The recent decision by the U.S. Department of Energy (DOE) opens the door to an exciting new direction for Jamestown's energy planning and economic development. By embracing a new direction and strategy, Jamestown can achieve economic benefits and help create jobs that the local economy badly needs.

A Green Energy and Green Economy Plan for Jamestown

In contrast to building a new power plant with all the uncertainty, risk and long term debt that entailed, Jamestown's Green Plan builds on the fact that 90% of the electricity Jamestown ratepayers consume is already being provided by the New York Power Authority (NYPA) in the form of low cost (\$0.02/kWh delivered) and clean hydro power. A modest solution to a modest problem makes sense because it is proportionate as well as low cost and low risk. A solution which relies solely or primarily on energy efficiency and renewable energy will be environmentally cleaner and enable Jamestown to shut down a dirty coal plant and achieve 100% carbon-free electricity. And, embracing efficiency and renewable provides the path for Jamestown to readily get support from New York State and the federal government.

Fortunately, switching to clean energy sources is also a proven strategy for economic development. Energy efficiency and renewable energy technologies bolster the economy by producing jobs¹ and lowering energy prices and costs over the long run. Jamestown is well-positioned to take advantage of the Green Jobs/Green Economy planning, programming, and legislation now being enacted in New York and nationally.

Any environmentally and economically sound energy program for Jamestown must start with the permanent closure of the existing coal-burning facility. With that as a foundation, an elegant, simple, sensible, and economically sound least-cost Green Plan is readily available and includes the following elements:

1. Supplement low cost NYPA hydro-power with approximately 5.8 MW² of:

- Energy efficiency
- Wind energy (only a few turbines would be required)
- Solar energy
- Occasional purchases off the NYISO Western Zone grid if necessary

2. Meet the thermal requirements of Jamestown's district heating loop by:

- Reducing load through an aggressive energy efficiency program for downtown building owners.
- Providing heat to the loop through alternative means, e.g. the existing
 natural gas turbine operated with single or combined cycle heat recovery,
 one or more natural gas package boilers, or a small biomass boiler or
 cogenerator with the cleanest available technology.

Thus, from a technical perspective, there is an easy fix for meeting Jamestown's energy needs without the continued operation of the existing coal plant. These strategies will reduce emissions, save money, keep electric rates low, and produce green jobs.

New green jobs in Jamestown will include JBPU efficiency program managers and implementation staff, energy auditors, energy educators, electrical and mechanical contractors who implement commercial and industrial energy retrofits, home weatherization specialists and insulators, wind turbine and solar installers, and possibly biomass cogeneration plant installers and operators if the City decides to utilize that technology. These new good paying jobs will boost the local economy as will lower

¹ A recent study "<u>The Economic Benefits of Investing in Clean Energy</u>" (Center for American Progress, June 2009) concluded that 16.7 jobs are created for every million dollars spent on clean energy vs.5.3 jobs for every million spent on fossil fuels. See "<u>Clean Energy Investment Creates Jobs in Every State – Fact Sheets for the 50 States and DC</u>."

² In 2008, the JBPU's ratepayer electric load was an annual average of 61 MW. Of that amount, 55.2 MW was provided by the New York Power Authority and 5.8 MW was either generated by the JBPU's Samuel Carlson coal plant or purchased of the grid.

³ The JBPU has already determined though a study conducted by the Antares Group that sufficient reasonably priced and sustainably sourced biomass fuel (e.g. scrap wood) exists regionally to fuel a biomass plant of sufficient size to heat the downtown loop.

electric rates that also have the effect of boosting the economy. By our estimates, the savings will be in the range of 0.02 - 0.04kWh if electric needs in excess of the NYPA allocation were met by energy efficiency, wind energy, and buying off the grid. Keeping electric rates low will allow Jamestown to hold on to existing businesses and attract new ones.

Resources to Implement a Green Plan

Jamestown city leaders have been extraordinarily effective and successful gaining the support of New York legislators and government officials. This same support is now needed to move forward with a Green Plan. The environmental and clean energy community community also stands ready to support this new direction.

As New York and our nation move aggressively in the direction of a green economy, numerous financial resources are now available to help Jamestown make this transition. These include:

- The New York State Energy Research and Development Authority now has increased funding to invest in energy efficiency and renewable energy across New York State. While most NYSERDA funding previously was sourced from the statewide System Benefit Charge, NYSERDA is currently disbursing funds from a variety of Jamestown-eligible sources including the Regional Greenhouse Gas Initiative allocations sales and federal stimulus monies.
- The New York Power Authority is active statewide promoting and funding energy efficiency and renewable energy. NYPA provides major assistance to energy users embarking on energy conservation performance contracts and is implement large-scale solar and wind energy projects. NYPA has a special relationship with Jamestown, providing 90% of Jamestown's electricity, and is already playing a supportive role helping Jamestown develop a new energy efficiency program. If Jamestown was prepared to act in a more comprehensive way to meet its remaining electric needs through efficiency and renewables, additional support from NYPA would be available. Among other possibilities, perhaps NYPA would agree to site a large photovoltaic array as part of the authority's 100 MW Solar PV Initiative⁴ -- on the campus of Jamestown Community College to support Jamestown's Green Plan while assisting the college meet its climate neutrality goal as a signatory of the American College & University Presidents Climate Commitment.⁵
- The <u>American Recovery and Reinvestment Act of 2009</u> provides \$42 billion in stimulus funding for energy programs (plus \$21 billion in tax credits). New

⁴ See, http://www.nypa.gov/NYPAsolar/invitation.html

⁵ See, http://www.presidentsclimatecommitment.org/

York's portion of these funds is distributed through a variety of mechanisms. Energy program stimulus monies available to Jamestown include those administered through NYSERDA as well as through the federal Weatherization Assistance Program for low income families (which the JBPU could harness to reduce its electric load by improving the thermal efficiency of electrically heated homes in Jamestown which are common because of historically low electric rates) and Energy Efficiency and Conservation Block Grants program. There is also stimulus funding available for public housing though the Housing and Urban Development (HUD) provisions of this legislation. Moreover, legislation associated with stimulus funding also includes a variety of tax credits and energy efficiency and renewable energy bonds which a Jamestown Green Plan might be able to take advantage of.

- The <u>Jamestown BPU Energy Efficiency Program Charge</u>, implemented in April 2009 as a mechanism for funding the JBPU's new energy efficiency program, could be augmented to increase home-grown funding available for efficiency and even renewable energy installations. Examples of the latter would be providing incentives to JBPU ratepayers for photovoltaic, small wind, or geothermal systems which would also require JBPU provisions for net-metering. While increasing the JBPU EEPC is one option, another would be to join the statewide system benefit charge program. Jamestown should analyze the pros and cons of doing that to see if it would be advantageous.
- NYS also recently passed enabling legislation for a Property Assessed Clean Energy (PACE)⁶ program that allows local jurisdictions to provide loans to property owners for installing energy efficiency measures

In addition to the above financial resources, Jamestown can draw upon numerous energy efficiency strategies and models which have been developed nationally and are fully vetted to achieve a highly effective and successful energy efficiency program. Improved efficiency will lower overall energy costs for ratepayers because it keeps rates low while enabling customers to meet their electricity needs with less. An aggressive energy efficiency program would reduce the JBPU's need to construct any generation to make up for closing the Carlson power plant, further reducing costs.

Addressing Other Concerns

• Continued Use of the Downtown District Heating System – The JBPU is justifiably proud of its award-winning downtown district heating system which has primarily run on waste heat from its power plant. However, it does not make sense to continue the operation of an aged, polluting existing coal plant or build a new unneeded one to continue to provide that service. Fortunately, as noted

⁶See http://www.ny.gov/governor/press/press_1120093.html and http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf

above, there are other ways to provide heat to that loop, e.g. by using the JBPU's existing natural gas turbine operated with single or combined cycle heat recovery, one or more natural gas package boilers, or a new relatively small biomass boiler with cogeneration. Providing heat to the loop from these more expensive sources may raise thermal rates for loop customers (which now appear to be subsidized by electric customers) but this drawback pales in comparison to the costs and risks associated with building a new power plant. Higher thermal rates could be offset or neutralized by a JBPU-sponsored program to assist loop customers improve the thermal efficiency of their buildings and thus reduce their need for more expensive heat from the loop.

- Tax Equivalent Payments (TEPs) TEPs made by the JBPU electric division to the City and local school board amount to about \$3.2 million per year and are funded by ratepayers through the price they pay for electricity. TEPs levels are based the assessed valuation of the JBPU and the volume of electric sales. TEPs payment levels can be maintained by revising the formula on which they are based in order to reward energy efficiency.
- Demolition of the Existing Power Plant It has been said that NYS Public Service Commission's permission to the JBPU to establish a fund to pay for the demolition of the existing Carlson plant is contingent upon plans to build a new plant. Undoubtedly the PSC will allow the JBPU to raise funds from ratepayers for this purpose irrespective of whether a new coal power plant is planned or built.
- Power Plant Jobs Approximately 30 people work in the existing Carlson plant and there is an understandable desire to retain these jobs while still operating the JBPU efficiently and cost-effectively for ratepayers. Green Plan requires new staffing for energy efficiency programming which could be accomplished by new hires as well as retraining and reassigning some existing staff. Layoffs could be avoided by normal attrition and by reassigning staff throughout the JBPU organization. Of course, if a small biomass cogeneration plant were built as a Green Plan option, it would require power plant staffing.
- Reliable Electric Service The JBPU's reputation for reliable electrical service has been attributed to its history of self-generation. However, the Carlson plant has often been off-line without any noticeable effect on reliability including for many months during 2009. As previously explained, the vast majority of the electricity the JBPU provides its ratepayers is generated by NYPA. This power is delivered to Jamestown via the regional electric grid. If the grid goes down, even without an old or new power plant the JBPU could meet some of its ratepayer electric load with its 40 MW gas turbine which is rarely operated but could be available for service.

We strongly urge Jamestown city leaders to take advantage of this opportunity to move in a new and promising direction. We are optimistic that if government and community leaders, environmental organizations, and citizen activists join together and support an effort to move ahead with an exciting Green Plan, we can not only meet Jamestown's electric needs but also create green jobs and a new clean energy economy.

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