What is Potomac River Green?

It's an innovative concept for transforming the 25-acre site of an old coal- fired power station in Alexandria, Virginia into a vibrant riverfront park and a clean energy and jobs center.

Once implemented, the local community would have ready access to a large section of the river that has been largely closed off since the 1930s. And the new energy center would create a focus for business start-ups, R&D, consultants, trade groups and local venture capital firms in the greater Washington D.C. area. In addition, Potomac River Green includes approximately 600 new LEED-certified homes and over 200,000 square feet of office and retail space.

Who is behind the concept?

The concept was devised by a Washington D.C. non-profit, the American Clean Skies Foundation (ACSF), with the help of Alexandria architects, Cooper Carry and the Sustaingrup, an urban development consultant. The concept also draws on the work of Westpath Realty and RKG Associates, an economic development group with considerable experience in the northern Virginia market.

Potomac River Green is intended to help Alexandria move beyond the decade long environmental debate over the power plant's future. The concept also showcases the potential for redeveloping other high-value sites now becoming available across the U.S. as tens of old coal-burning generating plants shut down due to changing environmental and economic conditions. See this related ACSF report.

What is the plan for the power plant?

It would be retired and then demolished. The plant, known as the Potomac River Generating Station (PRGS), dates from the 1940s and, as documented by the City, has long struggled to meet applicable clean air and water laws. In May, for example, the plant was fined $275,000 for a variety of environmental violations and, in July, D.C. Mayor Vincent Gray said the city was concerned about the impact of SO2 and other pollutants on city residents. The PRGS now operates at less than 20% of its capacity and may face additional economic

challenges to meet the stricter pollution controls recently proposed by the EPA.

How does Potomac River Green take account of Alexandria's unique history and circumstances?

Potomac River Green will celebrate Alexandria's riverfront heritage by removing the last major barrier to creating an unbroken riverfront park from King Street, on the south, to the federally owned Dangerfield Island Park and marina to the north (see this map). Once the development is completed, local residents also will be able to enjoy a host of new recreational and education amenities along the Potomac (e.g. many acres of new playing fields, a bike rental and changing station, a river taxi terminal and small boat dock.)
In 2008, Alexandria adopted an Eco-City charter, which commits the City to promoting "social well-being ... supported by a strong economy and sustained by a healthy environment." Potomac River Green reflects that vision and, in addition to creating an eco-friendly new project, will contribute tens of millions of dollars to the local economy by providing jobs and a stronger tax base. More on this below.

But isn't the power plant still needed to keep the lights on?

No. The regional power grid, known as PJM (short for Pennsylvania- New Jersey-Maryland), has more than enough electricity from other generating facilities to supply service to Alexandria and Washington D.C. even during peak summer demand.

In September 2007, PJM advised the federal government that the PRGS would no longer be required for reliability purposes once the local Washington D.C. utility, Pepco, upgraded certain transmission facilities. Most of these upgrades were completed in 2009. The D.C. Peoples Counsel also has concluded that the PRGS is not necessary for the supply of electricity to Washington, D.C.

In addition, in July 2011 a new reliability study, commissioned for Potomac River Green, confirmed that retirement of the PRGS should not raise any reliability issues for Washington, D.C.

The PRGS is a merchant (non-utility) plant which sells power on a wholesale basis to PJM. It has never provided power directly to Alexandria or

Washington D.C. residents -- that is the job of the local electric distribution and service companies, Pepco (for Washington) and Dominion Virginia Power (for Alexandria).

So assuming the plant is no longer needed, how will the site be redeveloped?

There are several potential options. As outlined in the Potomac River Green concept, the first step is likely to include an agreement between the City of Alexandria, GenON Energy Inc. (GenON), the Houston-based owner of the power plant, and Pepco, the Washington utility. Pepco retained ownership of the underlying property when it sold the PRGS to GenOn's predecessor, the Mirant Corporation, in 2000; Pepco also owns a two-acre parcel used for one of its electrical substations just behind the PRGS.

The agreement would likely provide for the orderly retirement and demolition of the plant, and for cleaning up any environmental hazards on the site. It would replace the 2008 Agreement that the City signed with Mirant to resolve long-standing complaints about the plant's air pollution. That agreement permitted the PRGS to continue operating, provided the plant met certain emission limits.

The 2008 Agreement also required Mirant to establish a $32 million escrow to meet the cost of additional air pollution controls. Some of these funds, which are still held in escrow, could be used to defray the cost of retiring the plant and remediating the site.

A new agreement might also address the terms on which GenON and Pepco would make the property available for development, subject to protection of the Pepco substation, and the City's approval of certain zoning and other conditions.

Why would GenON and Pepco make such an agreement?

Because it would make good financial sense for all concerned. The prime riverfront site occupied by the Potomac plant is now worth much more for real estate development than for power generation. If GenON and Pepco help repurpose the site, they are likely to share some of that value.

In addition, GenON would be able to avoid the significant capital expenditures it now faces to continue operating the plant; it might also reduce potential liabilities associated with the plant's closure. As for Pepco, Potomac River Green presents an unanticipated opportunity to profit from the sale of a 1940s property that is now carried at a minimal value on its balance sheet.

Because the PRGS property has been historically treated as a regulated asset, however, it is likely that Pepco's ratepayers would receive a share of any profits Pepco earned from selling the property, just as the PSC ordered when the plant was previously sold to Mirant a decade ago.

What happens to the workers now employed at the plant?

As with prior Mirant plant closures, such as the Potrero Power Plant in San Francisco, the approximately 150 employees at the plant could be offered relocation or buy-out packages. Overall, Potomac River Green will create far more jobs than will be lost from retiring the plant. An economic development study commissioned by ACSF found that the project would create approximately 900 new jobs on the site and over 2000 jobs indirectly (off-site).

How much will it cost to make Potomac River Green a reality?

Costs for the development plan are estimated at to be approximately $450 million. However, actual costs will depend, in part, on the expenses associated with the property buy-out and site remediation which, at this point, are uncertain. Costs associated with downsizing and/or relocating the substation which is part of Pepco's local transmission network must also be factored in.

Like other large urban development projects, Potomac River Green will be constructed in phases. Following demolition of the power station, the first phase will likely include the new riverfront park and a number of residential units. The clean enterprise center, museum, commercial space, retail establishments and restaurants would likely be added in a second phase. Additional details can be found in the PRG report.

How long will it take?

Assuming the power station is retired in 2013, construction could begin in late 2015, and would likely last for several years. Some buildings would be

completed within a year or two, with the first phase of residences and the main energy center completed by 2017.

What community benefits will the plan provide?

As noted, Potomac River Green will create hundreds of new jobs; much needed recreation space; new restaurants; a "green" community center; approximately 600 sustainable in-town housing units; and provide a $27 million dollar plus boost in city and state taxes. Potomac River Green will also inject over $1.5 billion of new spending into the regional economy.

These and other benefits are detailed in the economic development report that RKG Associates completed in June 2011 for Potomac River Green.

How does Potomac River Green fit with the City's proposed waterfront development plan?

The PRG concept is designed to complement Alexandria's evolving plans for the local waterfront. There is currently an active dialogue between the City and local residents regarding the provisions of the new draft Small Area plan for waterfront development that was released in February 2011. And while the City's plan is primarily focused on properties that lie considerably south of the Potomac power plant, the waterfront access, green space, recreation and community-oriented features of Potomac River Green should be compatible with any Small Area plan ultimately adopted by the City. In any case, because construction at PRG would not begin for several years, it seems logical for the City to consider an appropriate Small Area plan and re-zoning for the power plant site following adoption of any new waterfront plan on the south.

What would the clean energy center do and who would work there?

The energy center would provide a focus for R&D, investment and commercialization of alternative energy technologies in the Washington D.C. area. The U.S. Department of Energy's Advanced Research Projects Agency (ARPA-E), the Pentagon, local power companies, consulting companies, smart grid businesses and venture capital firms already employ hundreds of area residents who are involved in building America's next generation electricity systems. The new center would provide the opportunity for greater collaboration and growth, creating a shared space to incubate new businesses.

Enhancing America's energy choices and security is one of the defining challenges of our age, and the Washington area is already deeply involved, both on the public and private side. As yet, however, there is no central geographic focus for these activities. Potomac River Green could provide that focus.

What about the plan's environmental benefits?

Shutting down the Potomac power station will put an end -- once and for all -- to the deadly air pollution the Alexandria community has long experienced from the plant as well as the large environmental costs related to the mountain top removal coal the PRGS uses. Closure will also end the years of traffic disruption and dust caused by the coal trains and coal ash removal trucks servicing the site.

Potomac River Green will provide a showcase for green, sustainable residential and commercial buildings with a low or zero net energy footprints. The buildings will also demonstrate the latest energy efficient heating and cooling technologies including geothermal heat pumps, fuel cells, micro-gas turbines and photovoltaic arrays. In addition, refueling facilities for CNG and electric vehicles are an integral part of the plan.

Tell me more about the plan's health benefits.

Despite its limited operation, in recent years, the Potomac plant burned approximately 400,000 tons of coal annually -- enough to fill a freight train that is over seven miles long. Much of the coal comes from surface mining in Appalachia, which can have a devastating impact on local watersheds and wildlife.

Burning all this coal also generates a lot of air pollution, even taking into account the emission controls now installed at the plant. Based on EPA data, in 2010, the PRGS emitted 1,417 tons of SO2 and 1,451 tons of NOx, which contribute to acid rain and harmful ozone levels, as well as over 60 tons of fine particulate matter, mercury and other toxic metals which are associated with asthma, lung diseases and heart attacks.

Epidemiological Studies have shown that cardio vascular and cancer deaths

are strongly correlated with dirty air, especially higher concentrations of small particulate matter (PM2.5). Based on these studies, The Clean Air Task Force's September 2010 report, "The Toll from Coal: An Updated Assessment of Death and Disease from America's Dirtiest Energy Source," estimated the PM2.5-related benefits of reducing emissions from coal plants. Their updated report estimated that over 5 years, the emissions generated at the Potomac plant might have lead to over 175 premature deaths, as well as hundreds of heart attacks and severe asthma incidents. Closing the plant, thus, is likely to save lives, reduce chronic illnesses in the community and avoid numerous hospital admissions.

Will ACSF be involved in the property development?

ACSF is an educational non-profit that seeks to advance clean energy options for America. It is not a property developer.

ACSF created the plan for Potomac River Green to catalyze the retirement of the PRGS and help "green" the local power grid. The Foundation will continue educating people about the potential for transforming the PRGS site into a clean energy gateway. Implementing that vision, however, will largely depend on the City of Alexandria, local citizens, GenON, Pepco and, of course, private developers.

What are the next steps?

The City of Alexandria has already begun to talk with GenOn about the future of the Potomac plant. Earlier this year, GenOn also told its stockholders that the company expects to retire some plants it owns rather than make significant additional capital expenditures to meet new pollution controls. Hence, we expect that during the next year GenOn (and Pepco) will consider a timetable for decommissioning the Potomac plant and remediating the site.

How can I keep up with Potomac River Green's progress?

Please follow our blog to keep up to date on community meetings and other activities related to the future of the Potomac River Generating Station.

You may also want to work with local community groups that are campaigning to retire the Potomac plant. You can learn more about their activities here.