



# THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

AGENDA ITEM # 5  
PGCPB MEETING OF 1/24/13

Prince George's County Planning Department  
Countywide Planning Division

14741 Governor Oden Bowie Drive  
Upper Marlboro, Maryland 20772  
TTY: (301) 952-4366  
www.mncppc.org/pgco

301-952-3650

## MEMORANDUM

TO: Prince George's County Planning Board

VIA: Fern Piret, Planning Director *F.P.*  
Derick Berlage, Chief, Countywide Planning Division *DB*

FROM: Christine A. Osei, Planner Coordinator, Countywide Planning Division

SUBJECT: MR-12002F Final Staff Report – Keys Energy Center in Brandywine

## **BACKGROUND**

The Land Use Article Section 20-305 of the Maryland Annotated Code requires the Planning Board to review public construction projects for all federal, state, county and municipal governments, and publicly and privately owned utilities through the Mandatory Referral process.

## **PROJECT SUMMARY**

Keys Energy Center, a subsidiary of Genesis Power, LLC, is proposing to construct and operate a 735-megawatt natural gas-fired combined cycle facility on 30 acres of the 180-acre site north of North Keys Road in Council District 9. The site is a former sand and gravel pit, identified as the Bowie Pit. The land is zoned Open Space and is located in the Rural Tier.

## **RECOMMENDATION**

Staff requests Planning Board adoption and transmission to Keys Energy of staff findings and recommendations, which are attached. A summary follows:

- Any disturbance in areas considered in the phase 1 archeology study to have moderate or high archeological potential will require another phase 1 archeological survey for staff review.
- The applicant should seek staff review of its final pipeline route selection prior to construction for evaluation of potential impacts on sensitive environmental areas, historic/archeological resource and existing transportation routes.
- Because the proposed use of graywater is a new concept in the county, the applicant should work with the Washington Suburban Sanitary Commission and other county agencies to address use and disposal of wastewater from the Western Branch Wastewater Treatment Plant.
- The proposed extension of public water to the Rural Tier will require some policy changes given the prohibition of any such extension in the 2002 *Prince George's County Approved General Plan* and the 2008 *Approved Water and Sewer Plan*.
- The applicant should coordinate all transportation access route impacts during the construction phase of the project with the Maryland State Highway Administration and other county agencies.

Attachments

**SCANNED**  
1/17/13



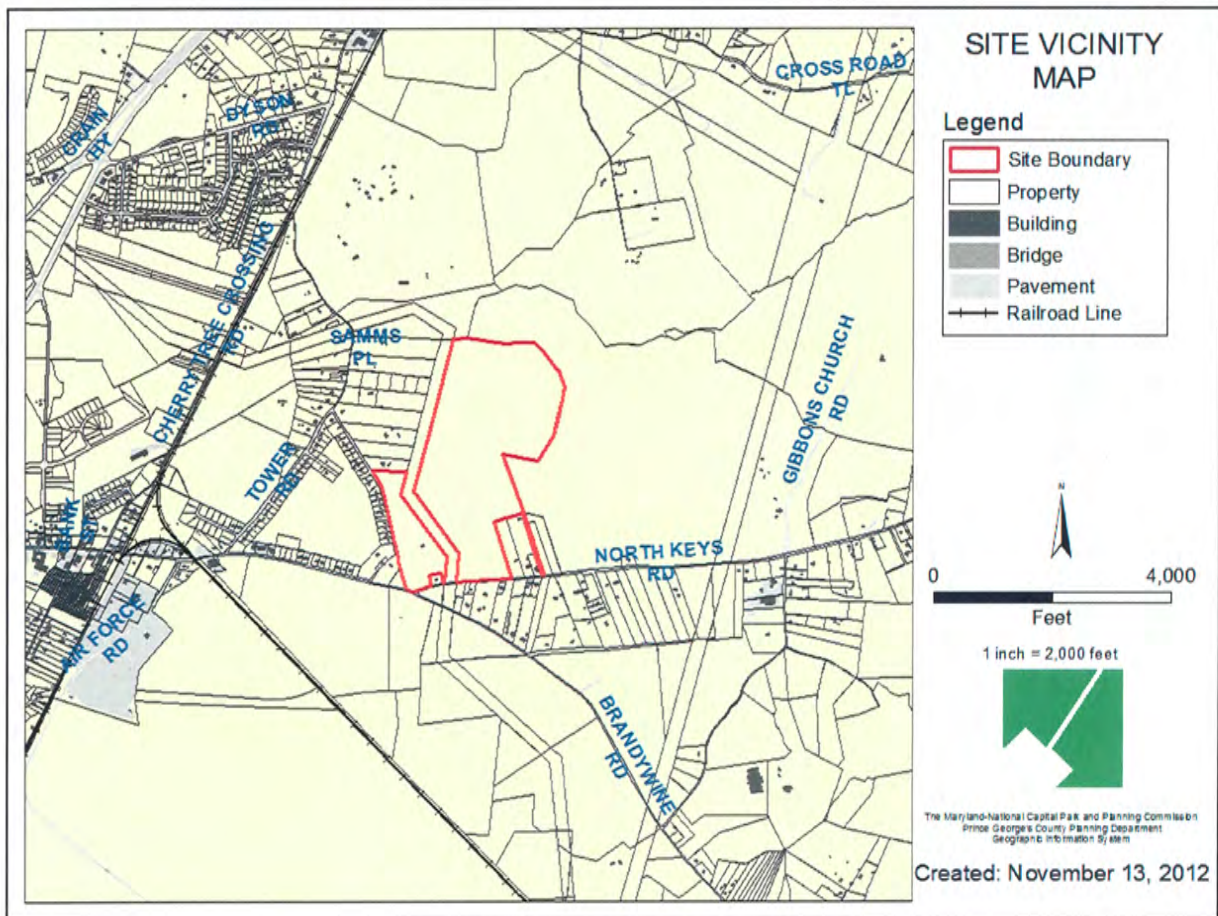
# THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Prince George's County Planning Department  
Countywide Planning Division

(301) 952-3650  
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## Mandatory Referral Review Staff Report

### Keys Energy Center Electric Power Plant (A Subsidiary of Genesis Power, LLC)



### Prince George's County Planning Board Review

Planning Board Date: January 24, 2013

**MR-12002F**

## INTRODUCTION

Keys Energy proposes to construct and operate a new nominal 735-MW, two-in-one (2x1) combined-cycle, natural gas-fired, electric generating plant in Brandywine, Prince George's County, Maryland. The proposed development is located on a 180-acre parcel site formerly used for a sand and gravel mining operation. The power plant will connect to the existing Potomac Electric Power Company (PEPCO)/PJM Interconnection LLC (PJM) transmission line adjacent to the 180-acre site. Keys Energy has requested electrical interconnection rights in the transmission network. The proposed development is slated to increase electrical generation capacity within Maryland and the PJM transmission network using economical, fuel-efficient, state-of-the-art technology, while minimizing environmental impacts to the proposed development site and surrounding area. Keys Energy proposes to use natural gas from Washington Gas, using 24-inch nominal pipe size (NPS) natural gas pipeline extensions that will originate in Charles County at a tie-in point within an existing 36-inch NPS interstate gas pipeline located approximately 7.5 miles south of the Keys Energy site; south of Poplar Hill Road, owned by Dominion Transmission, Inc.

The proposed Keys Energy electric plant will utilize non-potable or graywater to be secured from the Western Branch Wastewater Treatment Plant (WBWWTP), operated by the Washington Suburban Sanitary Commission (WSSC) in Upper Marlboro. The reclaimed water will be used for cooling of the gas propellers. Three different alignments have been evaluated for the potable water and non-potable/Wastewater lines to run from the Keys Energy Center site to WBWWTP, but final selection of one of the three alternatives and the right-of-way needed to install water pipes is pending. Keys Energy is responsible for the design and construction of the reclaimed water supply and effluent sewer water lines. Upon completion of the construction of these lines, ownership and operation will be turned over to WSSC.

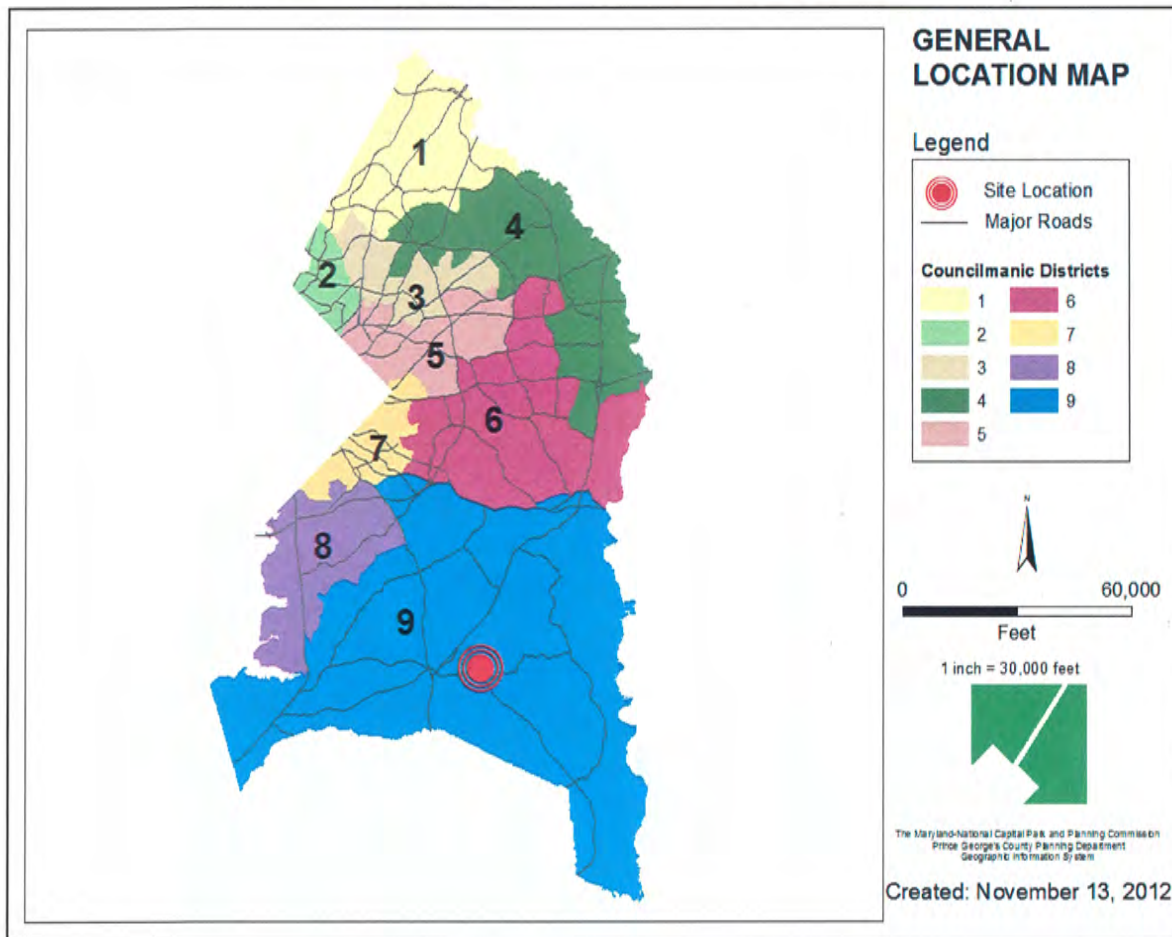
## PROJECT LOCATION

The proposed gas powered electric plant is located on a former sand and gravel pit identified as the Bowie Pit. There were minor reclamation activities in various areas of the property. Some areas of the 180-acre site were farmed for hay since the mining operation stopped. The project area is bounded on the southern half of the west boundary by Indian Head Road, on the northern half of the west boundary by wooded residential lots, on the north and east by previously mined land that is partially wooded, and on the south by wooded residential lots and North Keys Road. The site is vertically traversed by a Potomac Electric Power Company (PEPCO) right-of-way.

The 180-acre site is located in the Rural Tier as designated in the 2002 *Prince George's County Approved General Plan*, north of North Keys Road, and approximately 1.25 miles north of Brandywine in Council District 9. It is currently zoned Open Space (O-S) with electric power facilities identified as a permitted use. The proposed electric plant is seeking access to existing 500-kV transmission line right-of-way located on the western side of the property, as well as existing interstate natural gas transmission pipeline. The power plant will connect to the electrical grid. The natural gas pipeline is proposed to use a right-of-way approximately 7.5 miles adjacent to the property. The permit design, construction, and operation of the natural gas pipeline is the responsibility of the Keys Energy, and not part of the Keys Energy application. The proposed power

plant and associated facilities will be using approximately 30 acres of the 180-acre site for the electric power generation and support facilities.

**Map 1: Keys Energy Center location (Council District 9)**



## PROJECT DESCRIPTION

Keys Energy Center is a subsidiary of Genesis Power, LLC (Genesis Power), which was formed in 1988, established for the specific purpose of developing, constructing, owning, and operating a 735-MW natural gas-fired combined cycle facility in Prince George's County, Maryland. Genesis Power develops, constructs, owns, and operates independent power generating facilities.

The Keys Energy site has access from three roadways: MD 381 (Brandywine Road), US 301 (Crain Highway) and MD 5 (Branch Avenue). The site has direct access from North Keys Road. MD 381 (Brandywine Road) and is a two-lane, undivided, state-maintained east-west collector road that serves the surrounding area and the commercial core of Brandywine, as well as commuters traveling from points south of Prince George's County and other southern Maryland counties.

The closest airport to the site is the Duley Farm Airport and Joint Base Andrews. The Duley Farm Airport is located approximately six miles northeast of the site, and Joint Base Andrews is located approximately six miles northwest of the site; however, it is not available for use by Keys Energy. The closest heliport to the site is the Southern Maryland Hospital Center heliport, which is approximately four miles northwest of the site.

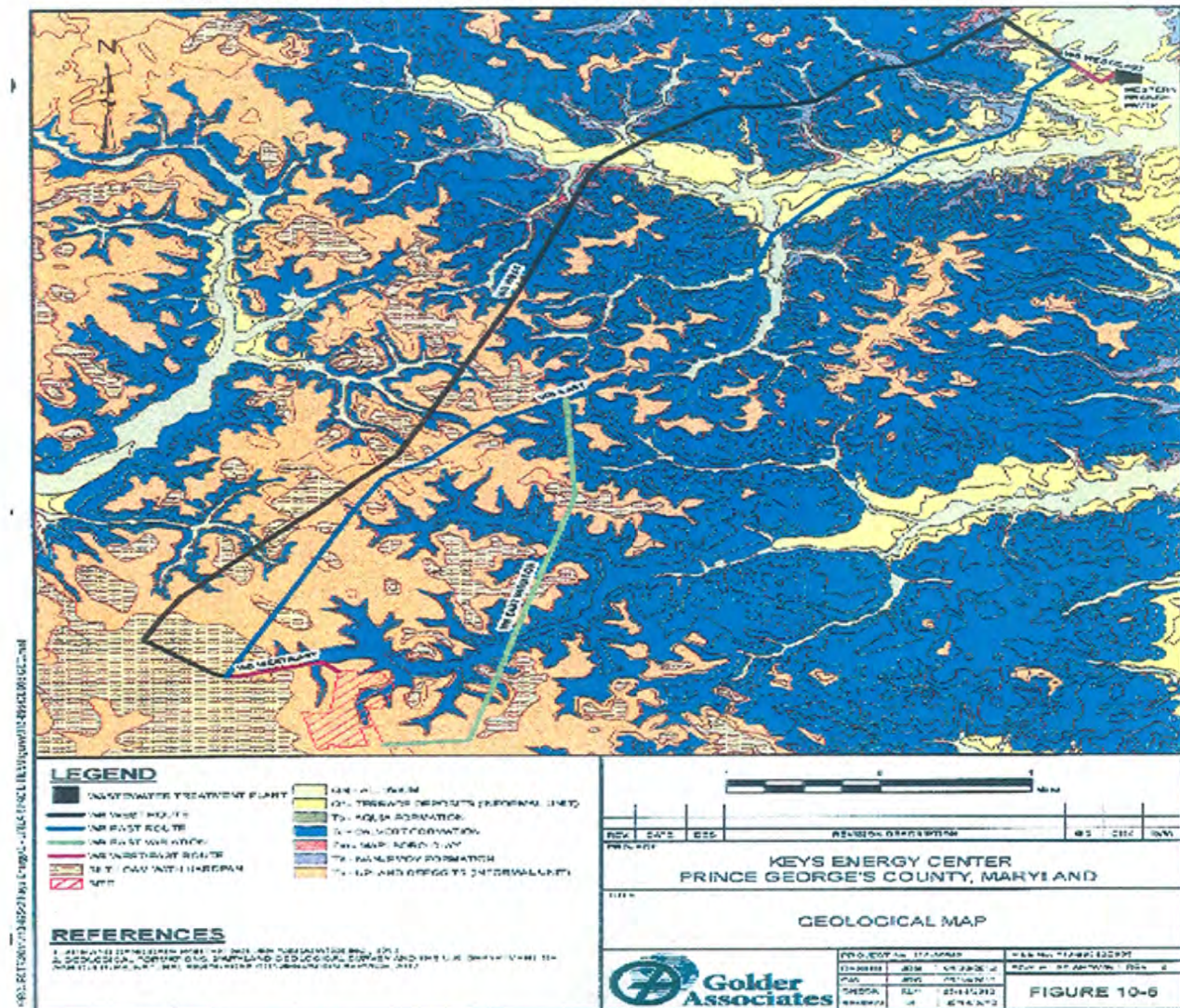
Pipeline Alignments: This section discusses the impact on biological resources regarding the proposed three alignment options to transport non-potable water from WBWWTP to the Keys Energy Center and natural gas lines. The three proposed alignment routes are approximately 10-12 linear miles. The three alternative routes are along US 301, CSX Railroad right of ways (ROW), existing transmission and various roadways to the WBWWTP. A 24-inch nominal pipe size (NPS) pipeline will also be installed to transport natural gas to the site to facilitate the operation of the 735-MW combined-cycle power plant. The natural gas pipeline will originate in Charles County, Maryland, at a tie-in point within an existing 36-inch interstate gas pipeline located approximately 7.5 miles south of the site just south of Poplar Hill Road. The natural gas pipeline will be permitted and constructed separate from this project by Washington Gas.

Potable and Non-potable Water Pipelines: Keys Energy Center also plans to use potable water for consumption by employees at the proposed electric plant. Access to potable water will be connected to WSSC's existing 16-inch water main along MD 381 (Brandywine Road) that terminates at approximately 1,200 feet west of North Keys Road. Potable water usage from this water main will not exceed 400,000 gallons per day (gpd). The proposed use of non-potable water supply and the wastewater utilized at the Keys Energy Center will flow back to the WBWWTP for treatment and disposal. The WBWWTP is located approximately 9 miles away from the Keys Energy site. A 24-inch pipeline will be installed to supply the Keys Energy Center with non-potable water, and an 8-inch return pipeline will be installed to return the wastewater generated by the Keys Energy Center to the WBWWTP. These two pipelines will be installed in the same trench.

Pipeline Routes Impacts: The three proposed wastewater pipeline alignments are described as follows:

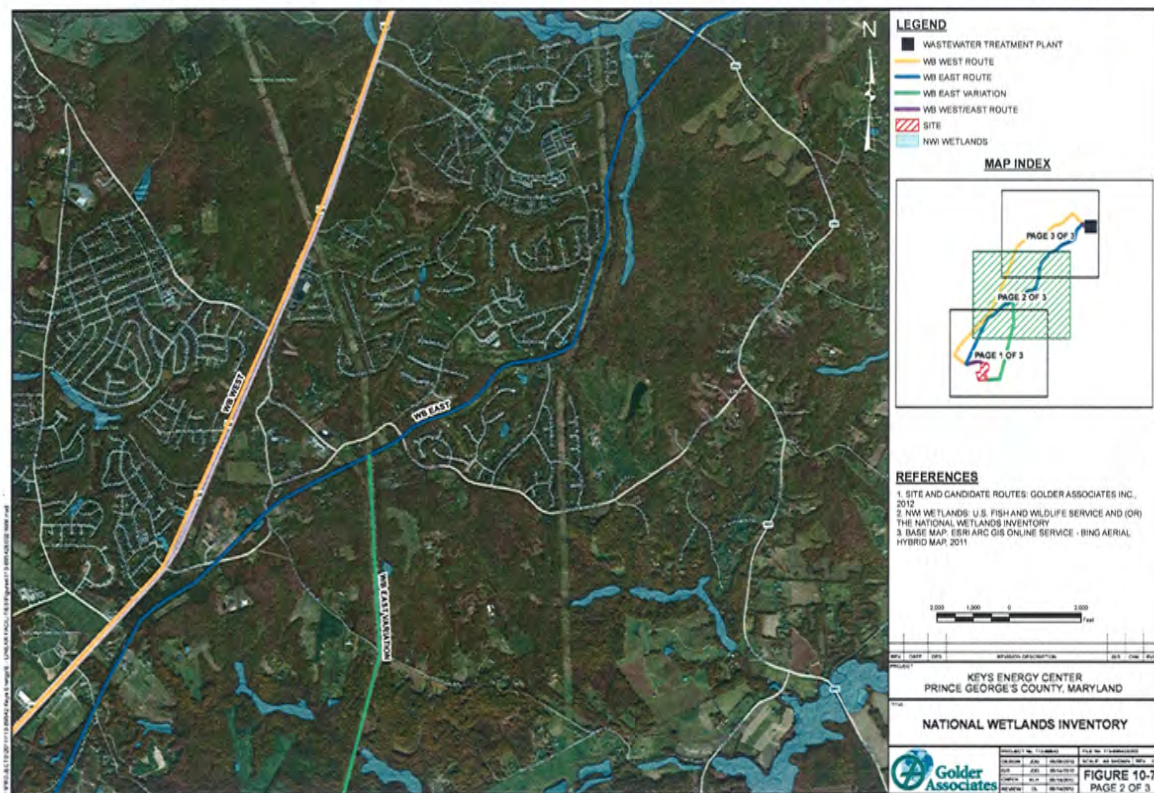
- The Western (WB) West alignment is proposed along US 301 adjacent to wetlands, streams, floodplains, and possible buffer areas.
- The WB East/WB East alternative proposed water pipeline alignments will traverse several streams and wetlands within the Mataponi Creek, Wyvil Branch, Southwest Branch, Charles Branch, Horse Tavern Branch and Western Branch watersheds, all located in the Patuxent River basin.
- The Patuxent River is not a stronghold watershed, but Mataponi Creek is identified as a Tier II waterway.

### Map 2: Alternative Routes - Wastewater Connections from WBWWTP



In some cases, because most of the above proposed alignments are located in existing developed right-of-ways, impact may be limited. The proposed pipeline alignments may require the fill of non-tidal wetland or impact to other waters of the United States and in accordance with the Clean Water Act. This impact would require Section 404 permits from the U.S. Army Corps of Engineers (COE) and Nontidal Wetland Permit from Maryland Department of Environment (MDE). All construction activities for utility lines will be required to restore the ground surface to its original condition. Installation work will be conducted in accordance with erosion control and stormwater runoff laws and regulations to prevent any adverse effects on water quality. National Pollutants Discharge Elimination System (NPDES) permits for stormwater associated with construction activities would be obtained as well as the approval of a Stormwater Management Plan from MDE before any construction activity would begin.

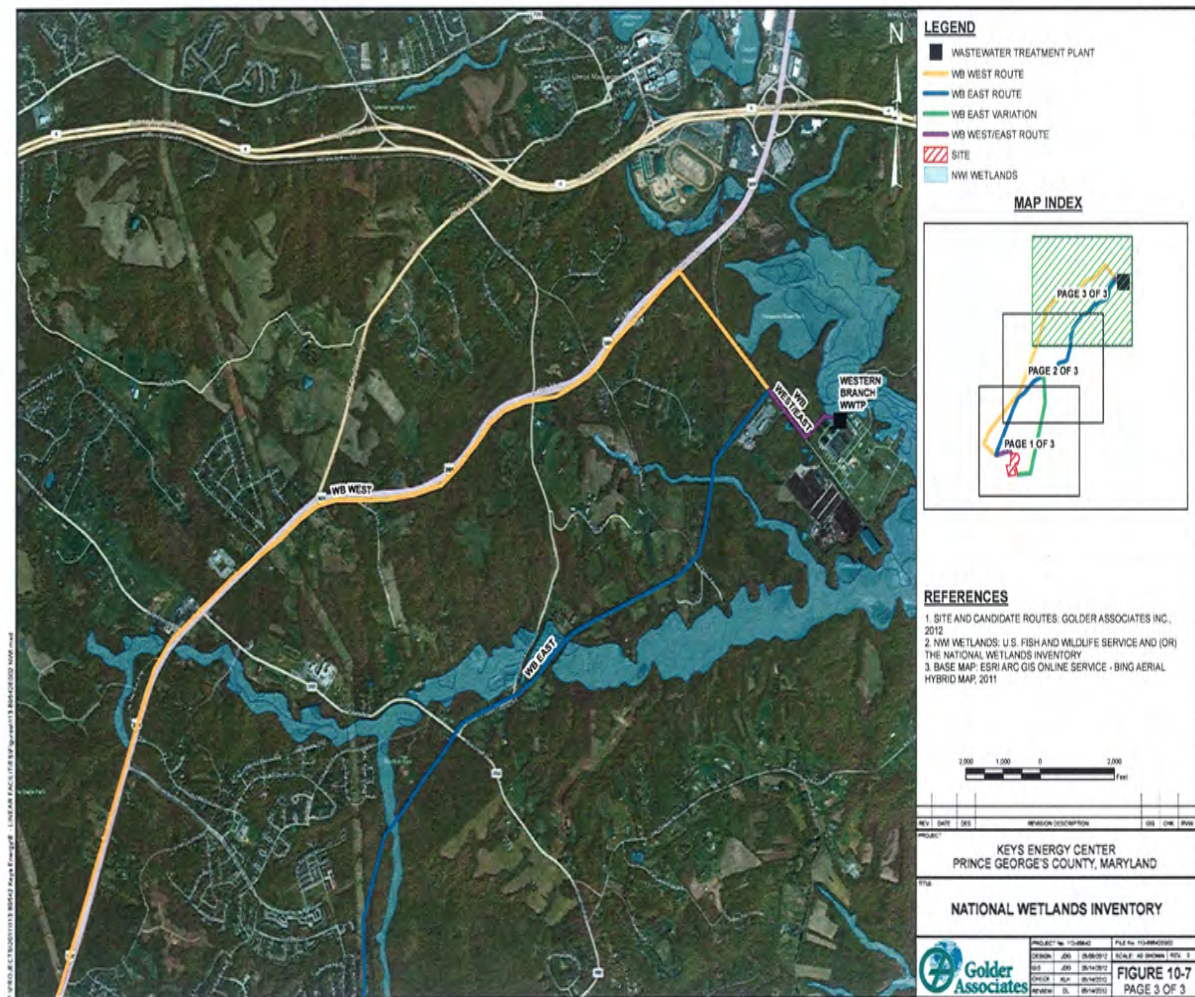
**Map 3: Alternative Routes: Western Branch Wastewater Treatment Plant**



There are wetlands, wetland buffers, streams and floodplains located on all the proposed water pipeline alignments. This project may fill or impact non-tidal wetlands, buffers or waters of the United States (waters), and in accordance with the Clean Water Act these impacts would require Section 404 permits from the U.S. Army (COE) and Non-tidal Wetland Permit from MDE. According to the information supplied, there will be wetland, buffers, streams and floodplain impacts identified for the construction of the water pipeline from the proposed power plant to the wastewater treatment plant. The Western Branch pipeline alignment along US 301 appears to result in the least amount of impact to regulated environmental features.

**Right-of-Way:** The water pipelines will be placed within an easement within an existing right-of-way. The easement width to be acquired will be a 15-foot permanent easement and the temporary construction easement width could vary from 45 to 80 feet, depending on pipe alignment, construction work and safety requirements and prevailing on-site conditions. The temporary construction easement will be a maximum of 30 feet through wetland areas. The temporary construction easement will be parallel and adjacent to the permanent easement. If the water pipelines are placed within road right-of-way, a right-of-way use permit will be needed instead of a permanent easement.

**Map 4: Alternative Routes - Western Branch Wastewater Treatment Plant**



**Characteristics of the Water Pipelines:** There will be two water pipelines placed within the 15-foot permanent easement—a non-potable water supply pipeline and a wastewater return pipeline. The two water pipelines will be laid in a stacked or side-by-side configuration, depending on site design characteristics. The non-potable water supply pipeline will be 24 inches in diameter, and the wastewater return pipeline will be 8 inches in diameter. Both water pipelines will be welded steel with appurtenances, such as valves, flanges, air/vacuum relief valves, capped manual vents and drain expansion joints or loops, thrust blocks and inverted siphons or casings for crossings.

**Wastewater Proposed Routes:** Based on the characteristics of the surrounding area, available existing right-of-way, and the location of the two endpoints, three routes have been established that would allow for multiple variations to be developed between the two endpoints (See Map 2). These routes coincide with existing right-of-way: US 301 (Crain Highway) road right-of-way, PEPCO's transmission line right-of-way and existing CSX railroad right-of-way.

### **PROJECT SCHEDULE, CONSTRUCTION AND STAFFING**

Construction of the facility, from site preparation and grading to commercial operation is expected to take place from spring of 2014 to summer of 2016. Temporary construction offices will be placed on the site. These offices will house approximately 50 employees who will provide management and craft supervision during the construction period. The construction facilities will include office trailers, shipping storage containers for small parts and expendable materials, tool storage vans, warehouse facilities, field time office and brass alley, toilet trailers, change trailers, craft lunchroom, and safety and first aid trailers. Temporary construction power will be installed or upgraded to support construction activities. Power distribution centers will be placed at strategic locations for construction usage. It is likely that some of the temporary power facilities will be maintained to facilitate maintenance needs of the project site.

During mobilization, Keys Energy will meet with local law enforcement and emergency service providers to explain expected manpower and to give an overview of the project's scope of work and projected duration. At that time, major emergency contacts and protocol will be established. Construction of the facility is targeted to commence as soon as the necessary licenses, permits, and financing are obtained from the state and federal entities. To meet the planned in-service date of summer 2016, construction should commence no later than fall of 2013. Construction activities will include: geotechnical testing and soil boring, site preparation and excavation, pile installation pouring of concrete foundations, steel erection, mechanical equipment installation, piping, electrical wiring, and control installations, equipment commissioning, start-up, and testing. Once the power plant and associated facilities are in place, equipment will be put through necessary commissioning, start-up, and testing procedures.

Once the above procedures are completed and any necessary adjustments made, the plant will be ready for commercial operation. During this time, as many as 350 craft and 50 supervisory and technical personnel could be involved. Work will be nominally scheduled for five 10-hour days with minor potential second shift during critical concrete pours or outages. A limited second shift or Saturday work may be established to perform specialty work or to recover schedule for bad weather, or equipment variables. If needed, 50 to 100 construction workers could be present for the second shift operation. The majority of the construction work is expected to be on a direct-hire basis (approximately 70 percent), including the civil, structural, mechanical, piping, and electrical work. Specialty work, such as caisson drilling, stack erection, concrete pumping, and transformer dress-out, will be subcontracted (approximately 30 percent). The project will be executed in compliance with all state and federal labor regulations and guidelines.

**[The following pages contain Maryland-National Capital Park and Planning Commission staff comments]**

## ANALYSIS OF PROJECT IMPACT AREAS

The Maryland National Capital Park and Planning Commission, Prince George's County Planning Department reviewed the Keys Energy Center Electric Plant proposal and provides the following comments:

### 1. ENVIRONMENTAL ASSESSMENT

The proposed development may have significant adverse impacts on environmental resources, including but not limited to air quality, noise, geology and soils, water resources, and biological resources. The following commentary is based on a review of the Certificate of Public Convenience and Necessity (CPCN) environmental assessment (EA) and an interpretation of aerial photographs and maps:

- Soils/Geology: Because most of the site's natural soils were mined and partially reclaimed with other fill materials, some short-term impacts on soils may occur from construction activities. No long-term impacts on soils are expected. It is unknown if there will be any oil tanks for back-up generators for operational uses. These oil tanks, if required, should be placed above ground and not buried.
- Ground and Surface Waters: Wetland fills and stream impacts may be necessary to construct the power plant facility. In addition to the facility itself, the project will require three types of linear facilities: a natural gas pipeline, potable water pipeline, and a non-potable wastewater pipeline. Installation of these facilities may impact on-site and off-site streams and wetlands, as it will be necessary to connect them to off-site sources, which will result in the crossing of several stream systems. Construction on the site needs to be conducted in accordance with erosion control and stormwater runoff regulations to prevent any adverse effects on water quality. NPDES permits for stormwater associated with construction activities would be obtained as well as the approval from the Maryland Department of Environment (MDE) of a Stormwater Management Plan before any construction activity would begin.
- Special Roadways: The proposed project is not subject to the *Prince George's County Landscape Manual* specifications; however, consideration should be given to the design requirements for these roadways, which will preserve and protect the natural and cultural resources within these right-of-ways and also maintain the quality of life for the adjacent and nearby residential properties that have frontage on both roads. The minimum 40-foot-wide buffer was established on the subject site in accordance with the previously approved Special Exception for mining. The project for the power plant does not propose to clear any of the on-site vegetation; therefore, the wooded buffers and the existing viewshed on both North Keys Road and Old Indian Head Road will be preserved. Enhancements of the buffers should be provided where necessary to provide additional screening for adjacent and nearby residential lots.

## 2. TRANSPORTATION ASSESSMENT

The proposed Keys Energy project is consistent with the area and functional master plans that govern transportation. Based on staff findings, traffic impacts in the existing neighborhoods will be minimal once the project has completed the construction phase. Impacts during construction will be more significant, however, and the four conditions in the traffic study are endorsed as a means of alleviating those impacts. The traffic study offers four recommendations that are noted below with brief discussions:

### Excerpts from Keys Energy Transportation Management Plan (TMP)

| TMP Recommendation                                                                                                                                                                                                                                                                                                    | Staff Comments                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| “Develop workforce and truck activity schedules designed to minimize or eliminate overlap with the periods of peak commuter traffic on the public roadway network.”                                                                                                                                                   | This recommendation is endorsed as a means of easing the construction-related impacts at the nearby intersections along US 301 and MD 5.                                                                                                                                                                                                                              |
| “Develop a construction plan that minimizes transportation of construction equipment that may be stored on the site and incorporates on-site construction-related facilities to minimize unnecessary trip activity (i.e., a concrete batch plant to eliminate concrete deliveries, food services for workers, etc.).” | This recommendation is endorsed as a means of easing the construction-related impacts at the nearby intersections along US 301 and MD 5. For the most part, however, this strategy will have its greatest impact outside of peak hours.                                                                                                                               |
| “Provide a police detail to safely and efficiently direct traffic at critical unsignalized intersections during the peak weekday morning and/or evening periods, as necessary.”                                                                                                                                       | (Coordination with the Maryland State Highway Administration SHA) - This agency has responsibility for operations along MD 381. Given the rural, highway-type nature of MD 381, SHA may prefer a temporary signal at either North Keys Road or Cherry Tree Crossing Road, or both. The assignments and analyses will have to be provided to SHA for their assessment. |
| “Identify locations where shoulders may be temporarily widened or lane striping may be modified to provide additional lane capacity and minimize mainline impacts associated with turning vehicles.”                                                                                                                  | Require coordination with SHA - The assignments and analyses will have to be provided to SHA for the agency to assess the need for changes in striping or other modifications.                                                                                                                                                                                        |

The relevant master plans are the 1993 *Approved Master Plan and Sectional Map Amendment for Subregion V* planning areas 81A, 81B, 83, 84, 85A, and 85B) and the 2009 *Approved Countywide Master Plan of Transportation*. MD 381 and North Keys Road are both designated as rural collector facilities within 80-foot future right-of-way. The submitted plan has no structures within the current or future right-of-way, and any future widening could be accomplished with little or no impact on the site. The non-vehicular element of the master plan includes shared use bike routes along MD 381, North Keys Road, and Old Indian Head Road. This would be accomplished with signage;

therefore, the recommendation would have minimal impact upon the site.

### **3. HISTORIC PRESERVATION/ARCHEOLOGY**

The subject property includes a documented property, PG:85B-002, the William H. Early House located in the southwest portion of the property near the intersection of Brandywine Road and Old Indian Head Road. William H. Early was a large landowner and an important developer of the village of Brandywine. This building was first recorded by the History Division of M-NCPPC in 1974 and a Maryland Inventory of Historic Properties (MIHP) form was completed in that year. The William H. Early House was a two-story frame structure of the federal period with a two-bay addition to the north. The older section of the house had a three bay façade with a doorway and transom and sidelights in the south bay. The house was demolished in the late 1970s. There is no information in the Maryland Inventory of Historic Properties (MIHP) form on the outbuildings. William H. Early also operated a store and post office in a separate building on the property that was located closer to Brandywine Road. Remains of this building could also be identified through archeological survey.

The site has not been surveyed for archeological sites. A large portion of the property has been previously impacted by mining activities and it is unlikely that archeological resources will be identified in those areas. However, the southwestern part of the site where the William H. Early House was located was not mined and appears to remain intact. There is a high probability that archeological resources associated with the early occupation of the property will be identified in that area. It is important that the applicant not engage in any disturbance of areas considered in the Phase IA archeological study to have moderate or high archeological potential without a Phase I archeological survey.

### **4. ECONOMIC ASSESSMENT**

The project is also expected to generate significant revenues for the county through sales, income, and property taxes. It is anticipated that a large portion of the construction products needed to build and support the proposed facility would be purchased from Prince George's County businesses. The county has historically had a robust construction sector not only from a labor perspective, but also by producing and providing supplies such as construction equipment (purchase and rental), office trailers, storage units, fencing, concrete, masonry, fill and aggregate, lumber, conduit, cable, and other building supplies. Besides the unquantifiable sales tax benefit, additional employees will most likely be hired by the producers and suppliers of such supplies to support the construction of the proposed facility.

This redevelopment project involves a change in use from an old sand and gravel mine site, into a significant revenue generator for the county as a result of increased property and income taxes. New revenues to the county are estimated to be greater than \$4,000,000 per year. However, the applicant and county may negotiate a payment in lieu of taxes (PILOT), in which case tax revenues may be less.

From an economic development stand point this project plan will have a positive impact on the county by providing additional employment opportunities, increasing the supply of reliable energy

and generating additional revenues to the county. The project is expected to employ on average 200 – 300 construction workers per year for two years and an additional 55 full time employees per year once the plant is operational. The fiscal impact on the county will be significant with over a half million dollars in one time additional income tax revenue from construction workers and \$62,514 on a yearly basis from plant employees and the indirect jobs they generate. The tax revenue generated by the property will increase exponentially from roughly \$3,600 per year to over \$4,000,000 per year, unless a PILOT reduces that amount. Finally the provision of electrical energy in a reliable, efficient, and sustainable manner will be necessary to support the population and economic growth envisioned for the county's future.

## **5. CONSISTENCY WITH APPROVED PLANS**

The 180-acre site is located in the Rural Tier where large-lot residential development is to be carefully balanced with agriculture and preservation of rural character. Traffic Level-of-Service C is recommended for projects within this area. The General Plan recommends that extension of water and sewer services into the Rural Tier be prohibited unless necessary to address existing health problems, or if found to be consistent with other county growth policies. Water and sewer line extensions in the Rural Tier should be designated as controlled access only. The 1993 *Approved Subregion 5 Sectional Map Amendment* retained this property is in the O-S (Open Space) Zone, and the proposed electric generating plant is a permitted use in the O-S (Open Space) Zone. A large industrial use poses compatibility issues in the Rural Tier, but we believe these issues have been addressed.

## **6. EVALUATION OF EXISTING PUBLIC FACILITIES**

The proposed project is less than a mile from Brandywine Fire/EMS Station, located at 14201 Brandywine Road. The station is equipped with 2 Engines, 1 Ambulance, 1 Breathing Air Unit and 1 Hazmat equipment, and is staffed by volunteer/career personnel. The station is included in the county's 2012-2017 Capital Improvement Plan for replacement of the existing station with a new four-bay Fire/EMS station. Also, Police District V is located in close proximity of the project area – located at 6707 Groveton Drive in Clinton.

**2008 Adopted Water/Sewer Plan:** The Adopted 2008 *Water and Sewer Plan* places this property in Water and Sewer Category 6, Individual System. This category consists of all areas outside the limit of planned water and sewer service (Sewer Envelope), and of certain larger tracts of parkland. Development in Category 6 must use permanent individual water supply and wastewater disposal systems (i.e., well and septic systems) or shared facilities and smaller community systems as approved by the county (See Section 5.2.3 in Chapter 5).

The Sewer Envelope boundary is based on topography, existing sewer service areas, and proposed development density according to the area master plans. The Sewer Envelope boundary was established in 1994. The County Council reaffirmed the envelope boundary by adopting it as the template for the Rural Tier boundary adopted in the Commission 2000 *Biennial Growth Policy Plan* and the 2002 *Prince George's County Approved General Plan*. The property is outside the Sewer Envelope and in the Rural Tier as designated by the 2002 *Prince George's County Approved General Plan*. Because public water and sewer connections

not have access to public water connections, unless some policy change is made to extend public water into the Rural Tier.

**2010 *Approved Water Resources Functional Master Plan*:** Although the graywater treatment and use was not included in the 2008 *Approved Water and Sewer Plan*, the 2010 *Approved Water Resources Functional Master Plan* recommends that wastewater, graywater, or rainwater that has been treated to such a high level can be used safely and effectively for non-drinking purposes such as landscape and agricultural irrigation, heating and cooling, and industrial processing. Reclaimed water is available year-round, even during dry summer months or when a drought strains other water resources. Reclaimed water is highly filtered and disinfected and is tested often. It contains only trace amounts of some nutrients and dissolved chemicals. Although reclaimed water is not drinking water, it is safe for human contact, even if unintentionally swallowed or exposed to open cuts. Reclaimed water is distributed through a separate set of purple pipes, which is the nationally designated color marking for reclaimed water pipes, hoses, pumps, and other equipment.

## **COMMUNITY OUTREACH/COMMENTS**

The applicant has conducted extensive outreach to the adjoining area civic associations as well as private property owners. Staff mailed out notification letters to adjoining property owners and civic associations. No written comments were received, except for one telephone inquiry on the Keys Energy Center proposed development.

## **STAFF RECOMMENDATIONS**

- The applicant should seek staff review of its final pipeline route selection prior to construction for evaluation of impacts on sensitive environmental areas, historic/archeological resources and existing transportation routes.
- Any disturbance of areas that are considered to have moderate or high archeological potential in the phase 1 archeology study will require another phase 1 archeological survey for staff review.
- Because the proposed use of graywater is a new concept in the county, the applicant should work with WSSC and other county agencies to address use and disposal of wastewater from WBWWTP.
- The proposed extension of public water to the Rural Tier will require some policy changes given the prohibition of any such extension in the 2002 *Prince George's County Approved General Plan* and the 2008 *Approved Water and Sewer Plan*.
- Applicant should coordinate all transportation access routes impacted during the construction phase of the project with Maryland State Highway Administration and other county agencies.

## **Planning Department Staff Memos Attached**



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Prince George's County Planning Department  
Countywide Planning Division

(301) 952-3650  
www.mncppc.org

December 11, 2012

**MEMORANDUM**

TO: Christine Osei, Planner Coordinator, Countywide Planning Division

VIA: Maria Martin, Supervisor, Countywide Planning Division *MM*

FROM: Jay Mangalvedhe, Senior Planner, Countywide Planning Division *JM*

SUBJECT: **MR-12002F Keys Energy Center**

**Existing Public Facilities**

The proposed project on a 180-acre parcel is located north of North Keys Road approximately 1.25 miles north of Brandywine, MD. Keys Energy Center proposes to construct electric generating plant on the site formerly used for sand and gravel extraction. The parcel is located in Councilmanic District 9 and is in the area classified as Rural Tier and the site can be accessed from Brandywine Road.

**Evaluation of Existing Public Facilities**

The proposed project is less than a mile from Brandywine Fire/EMS Station located at 14201 Brandywine Road. The station is equipped with 2 Engines, 1 Ambulance, 1 Breathing Air Unit and 1 Hazmat and is staffed by volunteer/career personnel. In addition, the County's Capital Improvement Plan for 2012-2017 proposes the replacement of existing station with a new 4-bay Fire/EMS station.

In addition, the project site is served by Police District V, located at 6707 Groveton Drive in Clinton. District V covers the southeastern portion of the county, from Charles County in the south to Calvert County in the east and MD 4 in the north.

The Adopted 2008 Water and Sewer Plan places this property in Water and Sewer Category 6, Individual System.

**2008 Water/Sewer Plan**

The Sewer Envelope is depicted on the Category Maps as a boundary beyond which no community water and sewer facilities will be approved. The Sewer Envelope boundary is based on topography, existing sewer service areas, and proposed development density according to the Area Master Plans. The Sewer Envelope boundary was established in 1994. The County Council reaffirmed the envelope boundary by adopting it as the template for the Rural Tier boundary adopted in the Commission 2000 Biennial Growth Policy Plan and the 2002 General Plan.

**Category 6. Individual Systems**

This category consists of all areas outside the limit of planned water and sewer service (Sewer Envelope), and of certain larger tracts of parkland and open space inside the Sewer Envelope. Development in Category 6 must use permanent individual water supply and wastewater disposal systems (i.e., well and

septic systems) or shared facilities and smaller community systems as approved by the County (see Section 5.2.3 in Chapter 5).

### **2010 Approved Water Resources Functional Master Plan**

Although, the graywater treatment and use was not included in the 2008 Water/Sewer Plan; however, 2010 Approved Water Resources Functional Master Plan recommends that wastewater, graywater, or rainwater that has been treated to such a high level it can be used safely and effectively for nondrinking purposes such as landscape and agricultural irrigation, heating and cooling, and industrial processing. Reclaimed water is available year-round, even during dry summer months or when a drought strains other water resources. Reclaimed water is highly filtered and disinfected and is tested often. It contains only trace amounts of some nutrients and dissolved chemicals. Although reclaimed water is not drinking water, it is safe for human contact, even unintentional swallowing or exposure to open cuts. Reclaimed water is distributed through a separate set of purple pipes. Purple is the nationally designated color marking reclaimed water pipes, hoses, pumps, and other equipment.

***Greywater is nonindustrial wastewater generated from domestic processes such as dish washing, laundry and bathing. Greywater comprises 50-80% of residential wastewater. Greywater comprises wastewater generated from all of the house's sanitation equipment except for the toilets (water from toilets is blackwater, or sewage).***

#### **Wastewater**

***Safe, functional, and efficient wastewater management and sewage disposal systems are critical to the preservation of human, environmental, and economic health.***

#### **POLICY:**

The reuse of reclaimed water including wastewater; grey water; and rainwater for nonpotable purposes offers the potential to reduce the existing and future demands for potable water and support of our natural hydrologic cycle.

#### **STRATEGIES:**

- Capture, treat, and reuse wastewater for nonpotable uses including industry, commerce, agriculture, and irrigation.
- Develop a water reuse program that establishes standards for regional participation. Require all new or failing septic systems countywide to be replaced with the best available technology.
  - Consolidate issue analysis and coordinate with community leaders, environmental groups, regulatory agencies, water/wastewater utilities, business and civic organizations, the general public, and potential agricultural, recreational, commercial, and industrial user groups.
- Evaluate elements of a future reclaimed water program within Prince George's County to include:
  - Identification of regional issues related to developing a reclaimed water program including environmental, public health, financial, regulatory, community, and wastewater system operational issues.
  - Consideration of treatment, transport and reuse standards as part of future reuses strategies.
  - Description of costs, challenges, and benefits associated with reclaimed water including financial, operational, social, and environmental considerations. Evaluation of the

county's building code for regulatory impediments to the reuse of wastewater, graywater or rainwater for residential, commercial, and institutional uses.

- Coordination with WSSC to establish advantages, disadvantages, feasibility, and actions needed to develop a reclaimed water program.
- Identify opportunities for using reclaimed water including:
  - Nonpotable domestic uses
  - Commercial uses
  - Industrial uses
  - Steam flow augmentation
  - Wetlands enhancement
  - Groundwater recharge
  - Irrigation
  - Fire suppression
- Develop policies that facilitate implementation of feasible, beneficial, and economical applications of reclaimed water.



## THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Prince George's County Planning Department  
Countywide Planning Division, Transportation Planning Section

(301) 952-3680  
www.mncppc.org

November 13, 2012

### MEMORANDUM

TO: Christine Osei, Special Projects Section, Countywide Planning Division

FROM:  Tom Masog, Transportation Planning Section, Countywide Planning Division

SUBJECT: Mandatory Referral, Keys Energy Center

The Transportation Planning Section has reviewed the referral noted above. The referral involves the construction of a gas-fired electric generating facility. The overall subject property consists of approximately 169.56 acres of land in the O-S Zone. The property is located north of North Keys Road and east of Old Indian Head Road, and northeast of the points where each roadway intersects MD 381. The plan proposes the generation facility within an area that encompasses about one-quarter of the site.

#### *Review Comments*

A justification statement with all needed backup materials, including a site plan and a traffic study, has been forwarded for review. Regarding the review of the traffic study for the subject site, the following comments are offered for consideration:

- The traffic study is dated May 2012. The study bases the analysis on turning movement counts conducted during March and April 2012. For the purpose of conducting a mandatory review, and without the requirement of making a finding of transportation adequacy, the traffic study is deemed to be acceptable for the scope of this review.
- The study is done in general conformance to the 2002 "Guidelines for the Analysis of the Traffic Impact of Development Proposals," otherwise termed the Guidelines. The results in this memorandum will be presented in that manner. Also, as a point of clarification, studies received at this time are not required to conform to the 2012 "Transportation Review Guidelines, Part 1."
- While the study generally conforms to the 2002 Guidelines, it is problematic in some regards:
  1. The study does not present count sheets, assignment sheets, or analysis sheets. This makes it impossible to confirm the accuracy of the analyses presented. Also, the lack of these materials makes it very difficult to adjust results based on changes that should be incorporated.
  2. The study presents delay at unsignalized intersections as average delay by approach. The Guidelines require that delay for any movement within an unsignalized intersection be 50.0 seconds or less.
  3. The study analyzes signalized intersections using both the critical lane volume (CLV) and the *Highway Capacity Manual* (Transportation Research Board) (HCM) methodologies. While it is understood that many parties may review these analyses, the Planning Board employs the CLV method for reviewing signalized intersections.

4. The study analyzes unsignalized intersections using both the CLV and the HCM methodologies. It shall be noted that the Planning Board employs the HCM method for reviewing unsignalized intersections.
  5. A third northbound through lane along US 301 through the MD 381 intersection is assumed in all analyses. No justification was provided for this assumption, and it is not funded in any capital program or bonded by a private entity.
- The scope of the traffic study is consistent with general scoping procedures used by the Prince George's County Planning Department. The study establishes four critical intersections for review, along with a fifth intersection which is the future site access:
    1. MD 5/Brandywine Road (signalized)
    2. US 301/MD 381 (signalized)
    3. MD 381/Cherry Tree Crossing Road (unsignalized)
    4. MD 381/North Keys Road (unsignalized)
    5. North Keys Road/site access (unsignalized/future)
  - Under existing traffic, the following conditions are noted:

| EXISTING TRAFFIC CONDITIONS      |                                      |       |                                 |    |
|----------------------------------|--------------------------------------|-------|---------------------------------|----|
| Intersection                     | Critical Lane Volume (CLV) (AM & PM) |       | Level of Service (LOS, AM & PM) |    |
| MD 5/Brandywine Road             | 1,708                                | 1,545 | F                               | E  |
| US 301/MD 381                    | 1,098                                | 1,035 | B                               | B  |
| MD 381/Cherry Tree Crossing Road | 14.0*                                | 16.8* | --                              | -- |
| MD 381/North Keys Road           | 13.7*                                | 10.2* | --                              | -- |
| North Keys Road/site access      | future                               |       |                                 |    |

\*In analyzing unsignalized intersections, average vehicle delay for each approach is reported in seconds of vehicle delay. It is noted that the Planning Board's standards require the reporting of delay for each movement within the intersection. According to the Guidelines, delay exceeding 50.0 seconds in any movement indicates inadequate traffic operations. Values shown as "+999" suggest that the parameters are beyond the normal range of the procedure, and should be interpreted as a severe inadequacy.

- The traffic study identifies two approved but unbuilt developments in the study area. It also applies a four-year growth rate of 1.0 percent per year as a means of accounting for through traffic. While the growth rate is acceptable and can be used, the approved but unbuilt development is underestimated. The following developments are within the study area, and should have been factored into the analysis:
  1. Missouri Acres, 41 single family residences
  2. Pleasant Valley, 252 single family residences
  3. Lakeview at Brandywine, 194 unbuilt single family residences

Also, several developments to the south of the study area, but within the Brandywine Road Club area, have been consistently factored into analyses in this area, and should have also been considered for inclusion.

- Under background traffic, the following conditions are noted by staff:

| BACKGROUND TRAFFIC CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                      |       |                                 |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------|---------------------------------|----|
| Intersection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Critical Lane Volume (CLV) (AM & PM) |       | Level of Service (LOS, AM & PM) |    |
| MD 5/Brandywine Road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2,097                                | 1,758 | F                               | F  |
| US 301/MD 381                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1,559                                | 1,393 | E                               | D  |
| MD 381/Cherry Tree Crossing Road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 17.2*                                | 19.9* | --                              | -- |
| MD 381/North Keys Road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15.1*                                | 10.8* | --                              | -- |
| North Keys Road/site access                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | future                               |       |                                 |    |
| *In analyzing unsignalized intersections, average vehicle delay for each approach is reported in seconds of vehicle delay. It is noted that the Planning Board's standards require the reporting of delay for each movement within the intersection. According to the Guidelines, delay exceeding 50.0 seconds in any movement indicates inadequate traffic operations. Values shown as "+999" suggest that the parameters are beyond the normal range of the procedure, and should be interpreted as a severe inadequacy. |                                      |       |                                 |    |

- The analysis for the site includes an analysis of the impact during peak construction, when a large number of workers are expected to be employed at the site, and during post-construction, when the facility will assume regular operations and a relatively few number of workers will be employed at the site.
- The peak construction scenario is based upon 400 workers on the site working shifts between 6:00 a.m. and 6:00 p.m. Trip generation is based upon trip generation data plus several assumptions. Using this methodology, the following trip generation summary for the peak construction scenario is provided:

| Trip Generation Summary, Keys Energy, Peak Construction |              |        |              |     |     |              |     |     |
|---------------------------------------------------------|--------------|--------|--------------|-----|-----|--------------|-----|-----|
| Land Use                                                | Use Quantity | Metric | AM Peak Hour |     |     | PM Peak Hour |     |     |
|                                                         |              |        | In           | Out | Tot | In           | Out | Tot |
| Trips                                                   |              |        | 270          | 99  | 369 | 77           | 97  | 174 |

While it is agreed that estimating the impact of a use such as this one during the construction phase is of value, the study does not give enough detail to determine exactly how the above numbers were obtained. While the AM peak hour seems reasonable, the PM peak hour seems low. Nonetheless, the trip generation noted above is a peak level for a construction phase that is temporary. We would seek greater reliability in trip generation if the level of trip generation would be sustained permanently.

- The full build (post-construction) scenario is based upon 25 permanent workers on the site on a daily basis plus low intensity truck activity. Because this is a gas-fired plant, an extension of a natural gas pipeline will be used to deliver the primary resources to the plant. Trip generation is based upon data in *Trip Generation* (Institute of Transportation Engineers) for the General Light Industrial use (Land Use Code 110). While an argument could be made for the use of rates for Manufacturing (Land Use Code 140), the numbers used show a slightly higher trip generation and therefore represent a worst-case scenario for the use. Using this methodology, the following trip generation summary for the full build scenario is provided:

| Trip Generation Summary, Keys Energy, Permanent Full Build (Post-Construction) |              |        |              |     |     |              |     |     |
|--------------------------------------------------------------------------------|--------------|--------|--------------|-----|-----|--------------|-----|-----|
| Land Use                                                                       | Use Quantity | Metric | AM Peak Hour |     |     | PM Peak Hour |     |     |
|                                                                                |              |        | In           | Out | Tot | In           | Out | Tot |
| Trips                                                                          |              |        | 9            | 2   | 11  | 2            | 9   | 11  |

- A trip distribution to and from the site is used in the traffic study. The distribution used is heavily oriented toward MD 5 (30 percent) and US 301 (16 percent north and 43 percent south). While the distribution is acceptable for the full-build scenario, the peak construction scenario should have used a distribution oriented more heavily toward the Capital Beltway given the temporary nature of the workforce. This change would not, however, have resulted in a change to the overall recommendations.
- With the trip generation and distribution noted above, the following conditions for each scenario are noted:

| TOTAL TRAFFIC CONDITIONS, PEAK CONSTRUCTION (TEMPORARY) |                                      |       |                                 |    |
|---------------------------------------------------------|--------------------------------------|-------|---------------------------------|----|
| Intersection                                            | Critical Lane Volume (CLV) (AM & PM) |       | Level of Service (LOS, AM & PM) |    |
|                                                         |                                      |       |                                 |    |
| MD 5/Brandywine Road                                    | 2,212                                | 1,761 | F                               | F  |
| US 301/MD 381                                           | 1,737                                | 1,461 | F                               | E  |
| MD 381/Cherry Tree Crossing Road                        | 28.2*                                | 24.8* | --                              | -- |
| MD 381/North Keys Road                                  | 24.7*                                | 12.2* | --                              | -- |
| North Keys Road/site access                             | 9.2*                                 | 9.1*  | --                              | -- |

\*In analyzing unsignalized intersections, average vehicle delay for each approach is reported in seconds of vehicle delay. It is noted that the Planning Board's standards require the reporting of delay for each movement within the intersection. According to the Guidelines, delay exceeding 50.0 seconds in any movement indicates inadequate traffic operations. Values shown as "+999" suggest that the parameters are beyond the normal range of the procedure, and should be interpreted as a severe inadequacy.

| TOTAL TRAFFIC CONDITIONS, FULL BUILD (PERMANENT) |                                      |       |                                 |    |
|--------------------------------------------------|--------------------------------------|-------|---------------------------------|----|
| Intersection                                     | Critical Lane Volume (CLV) (AM & PM) |       | Level of Service (LOS, AM & PM) |    |
|                                                  |                                      |       |                                 |    |
| MD 5/Brandywine Road                             | 2,101                                | 1,758 | F                               | F  |
| US 301/MD 381                                    | 1,563                                | 1,397 | E                               | D  |
| MD 381/Cherry Tree Crossing Road                 | 17.4*                                | 20.1* | --                              | -- |
| MD 381/North Keys Road                           | 15.2*                                | 11.1* | --                              | -- |
| North Keys Road/site access                      | 8.6*                                 | 8.7*  | --                              | -- |

\*In analyzing unsignalized intersections, average vehicle delay for each approach is reported in seconds of vehicle delay. It is noted that the Planning Board's standards require the reporting of delay for each movement within the intersection. According to the Guidelines, delay exceeding 50.0 seconds in any movement indicates inadequate traffic operations. Values shown as "+999" suggest that the parameters are beyond the normal range of the procedure, and should be interpreted as a severe inadequacy.

- Operational issues are noted at both signalized intersections in the study area. With regard to this issue, it is noted that the greatest impacts occur during the peak construction phase, which is a temporary situation. Under the permanent full build scenario, a maximum of 11 trips during the

peak hour would affect these intersections, and the Planning Board's Guidelines would not have even required study of these intersections given the size of the impact. The traffic study offers some useful recommendations to ease the impact of construction-related traffic. Otherwise, no improvements at the MD 5/Brandywine Road and the US 301/MD 381 intersections should be required of this applicant.

- The traffic study offers four recommendations. These are noted below and discussed briefly:

**“Develop workforce and truck activity schedules designed to minimize or eliminate overlap with the periods of peak commuter traffic on the public roadway network.”**

Discussion: This recommendation is endorsed as a means of easing the construction-related impacts at the nearby intersections along US 301 and MD 5.

**“Develop a construction plan that minimizes transportation of construction equipment that may be stored on the site and incorporates on-site construction-related facilities to minimize unnecessary trip activity (i.e., a concrete batch plant to eliminate concrete deliveries, food services for workers, etc.).”**

Discussion: This recommendation is endorsed as a means of easing the construction-related impacts at the nearby intersections along US 301 and MD 5. For the most part, however, this strategy will have its greatest impact outside of peak hours.

**“Provide a police detail to safely and efficiently direct traffic at critical unsignalized intersections during the peak weekday morning and/or evening periods, as necessary.”**

Discussion: This requires closer coordination with the Maryland State Highway Administration (SHA); that agency has responsibility for operations along MD 381. Given the rural, highway-type nature of MD 381, SHA may prefer a temporary signal at either North Keys Road or Cherry Tree Crossing Road, or both. The assignments and analyses will have to be provided to SHA for their assessment.

**“Identify locations where shoulders may be temporarily widened or lane striping may be modified to provide additional lane capacity and minimize mainline impacts associated with turning vehicles.”**

Discussion: This requires closer coordination with SHA as well. The assignments and analyses will have to be provided to SHA for that agency to assess the need for changes in striping or other modifications.

- The relevant master plans are the 1993 *Approved Master Plan and Sectional Map Amendment for Subregion V, Planning Areas 81A, 81B, 83, 84, 85A, and 85B*) and the *Approved Countywide Master Plan of Transportation*. MD 381 and North Keys Road are both designated as rural collector facilities within 80-foot future rights-of-way. The submitted plan no structures within the current or future rights-of-way, and any future widening could be accomplished with little or no impact on the site.
- The non-vehicular element of the master plan includes shared use bike routes along MD 381, North Keys Road, and Old Indian Head Road. This would be accomplished with signage; therefore, the recommendation would have minimal impact upon the site.

### **Conclusion**

The Transportation Planning Section has reviewed the referral, and determines that the proposal for Keys Energy Project is consistent with the area and functional master plans that govern transportation. Based

on findings given in this memorandum and information provided in the master plan document, it is determined that traffic impacts in the neighborhood will be minimal once the project has completed the construction phase. Impacts during construction will be more significant, however, and the four conditions in the traffic study are endorsed as a means of alleviating those impacts. More coordination must occur regarding the third and fourth recommendations, however. In that regard, it is advised that the Planning Board recommend the following:

1. It is recommended that the Maryland State Highway Administration review this proposal, and make recommendations regarding traffic control and intersection modifications, as described in the third and fourth recommendation of the traffic impact study (provided as Appendix B to the submittal document), to alleviate the impact of construction phase traffic on nearby roadways.



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

14741 Governor Oden Bowie Drive  
Upper Marlboro, Maryland 20772  
TTY: (301) 952-3796

Prince George's County Planning Department  
Community Planning South Division

301-952-3253  
[www.mncppc.org](http://www.mncppc.org)

November 6, 2012

**MEMORANDUM**

TO: Christine A. Osei, Mandatory Referral Review Project Manager, Special Projects Section,  
Countywide Planning Division

VIA: Cynthia Fenton, Acting Supervisor, Community Planning South Division

FROM: Michael Zamore, Planner Coordinator, Community Planning South Division

SUBJECT: **Mandatory Referral No. 12002F**, Keys Energy Center Pre-Application

**DETERMINATIONS**

General Plan: This use is not consistent with the 2002 General Plan Development Pattern policies for the Rural Tier. The energy center does not preserve the rural character and vistas that currently exist.

Master Plan: This application does not conform to the rural land use recommendations of either the 2009 Adopted *Subregion 6 Master Plan* and *Sectional Map Amendment* or the 1993 *Approved Subregion V Master Plan and Sectional Map Amendment*, which is the current prevailing plan.

**BACKGROUND**

Location: The property is located just north of the intersection of North Keys Road and Brandywine Road, about one mile from Brandywine.

Size: 180.0 acres

Existing Uses: Open space; the site was formerly used for sand and gravel mining.

Proposal: Construct and operate a new nominal 735-MW, two-on-one (2x1) combined-cycle, natural gas-fired electric generating plant to increase electrical generating capacity within Maryland.

## GENERAL PLAN, MASTER PLAN AND SMA

|                              |                                                                                                                                                                                                                                                                                                                    |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2002 General Plan:</b>    | This application is located in the Rural Tier. The vision for the Rural Tier is the protection of large amounts of land for woodland, wildlife habitat, recreation and agriculture pursuits, and preservation of the rural character and vistas that now exist.                                                    |
| <b>Master Plan:</b>          | Approved 1993 <i>Subregion V Master Plan and Sectional Map Amendment</i> . This is the prevailing plan in light of the recent court order that overturned the Approved <i>Subregion 6 Master Plan</i> . It is noted that the subject property was added to Subregion 6 during the most recent master plan process. |
| Planning Area/<br>Community: | PA 85B (Cedarville & Vicinity) in Subregion 6 (2009 Adopted Master Plan) and Subregion V (1993 Approved Master Plan). The subject property is not designated in a living area for Subregion 6. In the 1993 Subregion V master plan the site is designated in the Cedarville Rural Living Area.                     |
| Land Use:                    | Rural                                                                                                                                                                                                                                                                                                              |
| Environmental:               | Refer to the Environmental Planning Section referral for comments on the environmental elements of the 2009 <i>Adopted Subregion 6 Master Plan and Sectional Map Amendment</i> and the 2005 <i>Approved Countywide Green Infrastructure Plan</i> .                                                                 |
| Historic Resources:          | None identified near or on the site.                                                                                                                                                                                                                                                                               |
| Transportation:              | Both the 2009 <i>Adopted Subregion 6 Master Plan and Sectional Map Amendment</i> and 1993 <i>Approved Subregion V Master Plan and Sectional Map Amendment</i> propose to upgrade Brandywine Road to an 80ft. right-of-way with four lanes of traffic between North Keys Road and the Subregion 6 boundary.         |
| Parks & Trails:              | No parks or trails are recommended for this site.                                                                                                                                                                                                                                                                  |
| <b>SMA/Zoning:</b>           | 1993 Subregion V Sectional Map Amendment retained this property in the O-S (Open Space) Zone. An electric generating plant is allowed as a permitted use in that zone.                                                                                                                                             |

## PLANNING ISSUES

### Master Plan

The 1993 Approved Subregion V Master Plan anticipated only limited residential development in the Cedarville area for the short term. More residential units were anticipated for the long term, depending upon how quickly reclaimed mining sites were developed. The master plan emphasized that any development that occurs should be designed to maintain the existing rural character (pg. 100). The

proposed energy center was not anticipated in the master plan and does not contribute to the preservation of rural character in the area.

It is noted that the 2009 Adopted Subregion 6 Master Plan identifies appropriate land uses for the rural land use designation and indicates that the County's intent is for these areas to remain rural and to conserve the areas natural resources. Other than agricultural land and forest the master plan recommends "very low density residential."

Should this application be approved, the applicant should, to the extent possible, retain existing woodlands along the eastern portion of the site to protect the Mattaponi Creek tributary and associated wetlands. Existing woodlands west of Old Indian Head Road and north of North Keys Road, should be retained to screen the energy plant from neighboring homes and preserve the area's rural character. The applicant is further encouraged to significantly expand the hedgerow along the western property boundary from 13809 Old Indian Head Road south to 14276 Old Indian Head Road to create a buffer between the plant and that residential area. These recommendations would ensure conformance with the 2002 General Plan policy to preserve existing woodland resources (pg. 59).

## **OTHER ISSUES**

### **Historic and Scenic Roads**

The 2009 *Approved Countywide Master Plan of Transportation* (MPOT) listed Old Indian Head Road as a historic road, and North Keys Road as a historic and scenic road. This document incorporated recommendations from the 2009 adopted Subregion 6 master plan. In conformance with the MPOT policy (pg. 49) to conserve and enhance the scenic and historic values along special roadways, staff recommends that tree buffers be enhanced and expanded where applicable, to eventually screen the energy plant and maintain the area's rural character. Preservation of existing woodland and vegetation and tree planting efforts should provide sufficient screening to mitigate the visual impacts of structures of the height and mass of the proposed Keys Energy Center, from the line of sight from these roadways. Additionally, efforts should be made to limit the physical impacts of truck traffic on the area's scenic and historic roads and to minimize potential traffic conflicts with local traffic during construction.

### **Water Supply**

The Washington Suburban Sanitary Commission (WSSC) has a Memorandum of Support with Keys Energy Center to supply the electric generating plant with up to 400,000 gallons of potable water per day (gpd) from their 385B zone. Additionally, the plant's reclaimed water requirements are estimated to be in the region of up to 6,800,000 gpd, and the annual average reclaimed water usage is estimated to be at 3,500,000 gpd. It is understood that this reclaimed, or grey water, will come from Charles County.

The WSSC currently has transmission and storage issues in the 385B zone which will serve the Keys Energy Center. According to the WSSC, the electric plant's demand on the potable water system (400,000 gpd) will have minimal impacts to the zone's supply, main transmission mains, and storage facilities in the 385B zone once the following two CIP projects are completed:

- (1) **Old Branch Ave Transmission Main and PRV** (Project Number W-34.02 in our Adopted FY 2013 CIP) - complete in FY17
- (2) **Clinton Storage and Transmission Study** (Project Number W-62.05) and associated projects - portions complete in FY16; FY18

Completion of these projects is not anticipated until FY 17 and FY18. These projects will benefit the proposed power plant by improving the general hydraulic conditions of the zone. Staff encourages the WSSC and the applicant to ensure any outstanding issues are resolved prior to the plant becoming operational.

It is not clear why such a large amount of potable water, a maximum allowance of 400,000 gallons per day, is required for the few staff (25) that are anticipated to operate the facility on a 24 hour basis. According to the report, only non-potable water is required to operate the plant. The WSSC will need to re-evaluate the impacts of the Keys Energy Center should it request additional capacity over and above the maximum allowance of 400,000 gallons per day. WSSC may also need to identify and evaluate the need for additional local improvements to ensure the appropriate fire flow and capacity for the Keys Energy Center. This will be identified and evaluated by the WSSC Development Services Group in their initial Hydraulic Planning Analysis phase.

The Keys Energy Center proposes to use up to 6 million gallon of reclaimed water on an annual basis to cool the turbines of the power plant. Additional opportunities to reduce the demand on the potable water system by replacing potable water with reclaimed water should be pursued. New purple lines for the reclaimed water will need to be laid to connect the Keys Energy Center to the source of the reclaimed water, which was not identified in the application.

#### **Other Community Impacts**

The applicant is encouraged to seek opportunities to reduce overall sky glow in conformance with Policy 5 of the 2002 General Plan (p. 60) by maximizing the use of lighting that reduces glare. Because the proposed electric generating plant will be in proximity to residential dwellings in the Early Manor Subdivision and homes along North Keys Road in Brandywine, it is strongly recommended that the applicant consider site planning and design strategies that minimize spill-over of light into the adjacent community.

Another issue that will require further evaluation is how the two proposed power plants (Panda and Keys), located in proximity to each other in a single community, will cumulatively impact the community. It is anticipated that truck traffic during construction will create significant impacts. Staff recommends a traffic management plan be put in place that will minimize conflicts between residents and truck traffic.

c: Ivy A. Lewis, Chief, Community Planning Division  
Wendy Irminger, Planner Coordinator, Community Planning Division  
Long-range Agenda Notebook

Countywide Planning Division  
Environmental Planning Section

November 6, 2012

TO: Christine Osei, Planner Coordinator, Special Projects Section  
VIA: Katina Shoulars, Supervisor, Environmental Planning Section  
FROM: Chuck Schneider, Planner, Environmental Planning Section  
SUBJECT: MR-12002F Keys Energy Center (subsidiary of Genesis Power, LLC)

The Environmental Planning Section has reviewed portions of the Certificate of Public Convenience and Necessity (CPCN) Environmental Report (ER) dated June 2012 for the Keys Energy Center. The proposed action was evaluated to determine the potential for significant adverse impacts on environmental resources, including but not limited to air quality, noise, geology and soils, water resources, and biological resources. The following commentary is based on a review of the CPCN EA and an interpretation of aerial photographs and maps. A site visit was not conducted. The following comments are provided for your consideration.

**Proposed Activity or Action**

The project is for construction of a new natural gas energy facility with connections for natural gas, potable water, and non-potable/waste water pipelines. Three different alignments have been evaluated for the non-potable/waste water lines to run from the Keys Energy Center site to the Western Branch Waste Water Treatment Plan (WWTP). The Western Branch WWTP is located between 10 to 12 miles from the proposed Keys Energy site. According the EA report, the natural gas and potable water connections are not part of the proposed project submitted in this mandatory referral process. The EA report refers to the non-potable/waste water lines as "water pipelines." Information was given on existing conditions (geology, soils, groundwater resources, surface water resources, vegetation, and ecology) within the various alignment routes and at actual energy facility and how the various environmental conditions are impacted during construction and operations.

**Background**

The subject site was previously reviewed by the Environmental Planning Section beginning in 1985 for a surface mining project referred to as Bowie Pit under the following applications: Special Exceptions SE-3033 for the mining of Phase I, SE-3619 for the mining of Phase II and III, SE-3093 for Phase IV and SE-4194 for Phase V. In 1996 the surface mining operation was extended for a period of five years. In 2001, SE-4429 was reviewed for a renewal of the SE-4194. According to staff's Development Activities Monitoring System (DAMS), the application was dismissed. It is unclear if the application was withdrawn or denied. The most recent review of the site was a Special Exception (SE-4485) application

submitted in 2003; however that application has been dormant with no review activity since 2004. The site has a Type I Tree Conservation Plan (TCPI-019-90); however, it appears the TCPI was never signed. The site also has a Type II Tree Conservation Plan (TCPII-139-95), that was recommended for approval with SE-4194 and dated November 20, 1995.

**Existing Conditions – Keys Energy Center Site (On-site)**

The following is a description of the existing conditions of the subject site as it relates to the soils, vegetation, water resources, noise, air quality, biological resources and special roadways.

The land area of the proposed natural gas power plant (Keys Energy Center) was formerly a sand and gravel pit operation on approximately 180 acres of land formerly identified as the Bowie Pit that has been mined since the early 1980's until the mid-2000's. There have been minor reclamation activities in various areas of the subject property. The open areas onsite have been farmed for hay since the mining operation has stopped. The project area is bounded on the southern half of the west boundary by Indian Head Road, on the northern half of the west boundary by wooded residential lots at, on the north and east by previously mined land that is partially wooded, and on the south by wooded residential lots and North Keys Road. The site is vertically traversed by a Potomac Electric Power Company (PEPCO) right-of-way.

**Soils/Geology:**

The site is located within the Coastal Plain underlain with the Upland Deposits and Calvert formations. This area of Prince Georges County has several sand and gravel pit operations, due to the vast amount of deposited sand material. Since the site has been heavily mined, the original topography is no longer present and varies from 240 to 174 above mean high sea level (msl).

Because of the considerable amount of mining on-site, a large portion of the proposed development is located on soils categorized as Udorthents. This means that the soil material has been altered by disturbance to the extent that the original soil series cannot be identified. The site contains Beltsville, Grosstown-Woodstown, Issue, Widewater, and Woodstown which are hydric or contain hydric inclusions. There are small areas of steep slopes over 15 percent located throughout the site due to the mining activities.

**Ground and Surface Waters:**

The entire site is within the Patuxent River basin in the Middle Patuxent River subwatershed, and drains into the on-site Mataponi Creek. The site contains a wetland system associated with two stream systems and their associated tributaries. The open water wetlands, which can be observed from the PGAtlas 2011 aerial photos, appear to have been created as a result of the past mining operations. According to PGAtlas.com there are no 100 year floodplain areas identified within the project area, and it is unclear if any floodplain studies have been performed on the site during the mining operations. Regional water-supply aquifers vary from twenty to a hundred feet below ground surface, and there are some recharge areas located on-site.

The on-site waters are not within a Stronghold Watershed, but Mataponi Creek is identified as being designated Tier II water.

This project may propose to impact non-tidal wetlands and streams. In accordance with the Clean Water Act, these impacts would require Section 404 permits from the U.S. Army Corps of Engineers (COE) and Nontidal Wetland Permit from MDE. This project is now in the process of having the COE review a Jurisdictional Determination of all on-site Waters of the U. S.

**Vegetation:**

Prior to the site being mined, the property was over 75 percent wooded. The site currently contains woodlands within the riparian buffer areas of the streams in the eastern portion and two areas on the west side of the PEPCO right-of-way. The property contains open grass fields which have been mowed and harvested. No revised NRI or TCP2 was submitted with the package.

**Noise:**

The site is currently not active and as such, does not produce any noise any significant noise levels. The CPCN report included a noise study to determine the existing noise levels in the vicinity of the site. The Code of Maryland Regulations (COMAR) allow a maximum noise level of 65 dBA during the day and 55 dBA during the night for receiving land with residential uses. The proposed use is non-residential; however the noise results of a study measuring the receiving noise onto the site was performed. According to the study provided in the report, the daytime (Leq) noise levels ranged from 37 dBA to 57 dBA. The nighttime (Leq) noise levels ranged from 34 dBA to 46 dBA. Based on these results, the averaged day and night (Ldn) noise level was configured to be 47 dBA, which is significantly below the State standard of 65dBA and 55dBA for receiving land with residential uses. The average ambient noise level was 32dBA.

**Air Quality:**

At this time there are no air quality impacts associated with the subject property. The site is an abandoned sand and gravel pit operation with no air emissions.

**Biological Resources:**

The project site was an active sand and gravel operation and now only 20 percent of site is forested with some areas of pioneering vegetation and mature woodlands. The remaining 80 percent is open grassland. The proposed development will occur within the existing open grassed areas. The flora and fauna found on the former sand and gravel pit are typical of those found in the Atlantic Coastal Plain area. Rare, Threatened or Endangered (RTE) species surveys were performed from February through April 2012. No species were identified in this investigation, but there was no survey data from a spring or summer RTE survey. A letter (not included with the package) from Maryland Department of Natural Resources Wildlife and Heritage Division did not identify any RTE's on-site but stated that forest interior dwelling bird habitat may be present.

**Special Roadways**

The subject site has frontage on North Keys Road, a County designated Scenic and Historic Road, and Old Indian Head Highway, a County designated Historic Road. Scenic and Historic Roads contain natural and cultural resources that should be preserved and protected to the fullest extent possible. During development the existing natural and cultural resources within the right-of-way of Special Roadways should be evaluated for preservation, enhancement and/or protection. The proposed development should give special consideration to these roadways that is consistent with the extensive efforts in enhancing and/or preserving these roadways countywide.

The County's Landscape Manual generally requires a minimum 40-foot-wide buffer when development is proposed on sites that have frontage on Special Roadways. The buffer is required to contain at least 160 plant units (all native species) per 80 linear feet of frontage. The site in its current condition shows a minimum 40-foot-wide wooded buffer along the Special Roadways, which was implemented in accordance with the previously approved Special Exception for mining. In some areas, the buffer exceeds the minimum width. These buffers should be preserved during the development of the site.

### **Environmental Consequences - Keys Energy Center Site (On-site)**

#### **Soils/Geology:**

Because most of the site's natural soils have been mined from the site and partially reclaimed with other fill materials, some short-term impacts on soils may occur from construction activities. No long-term impacts on soils are expected. It is unknown if there will be any oil tanks for back-up generators for operational uses. These oil tanks, if required, should be placed above ground and not buried.

#### **Ground and Surface Waters:**

A review of the site layout included in the CPCN report indicates that wetland fills and stream impacts will be necessary to construct the power plant facility. In addition to the facility itself, the project will require three types of linear facilities: a natural gas pipeline, potable water pipeline, non-potable wastewater pipeline. Installation of these facilities may impact on-site and off-site streams and wetlands, as it will be necessary to connect them to off-site sources, which will result in the crossing of several stream systems.

With regard to the proposed non-potable water pipeline, connection to the Washington Suburban Sanitary Commission's (WSSC) Western Branch Waste Water Treatment Plant (WWTP) is planned. The WWTP is located approximately 9 miles north of the subject site and the applicant is considering one of three routes (WB East, WB West and WB East Variation) to connect to the WWTP that range between 10-12 miles in distance. The three routes are primarily located within existing rights-of ways. Additional discussion of the pipeline alignment is provided in a later section of this memorandum.

Information concerning various aquifers and their groundwater depths and flows was listed in the CPCN report; however, there are no development plans identified in the report that indicate the use of groundwater for drinking or cooling for the power plant. .

Construction will be conducted in accordance with erosion control and stormwater runoff regulations to prevent any adverse effects on water quality. NPDES Permits for Stormwater Associated with Construction Activities would be obtained as well as the approval from the Maryland Department of Environment (MDE ) of a Stormwater Management Plan before any construction activity would begin.

Any fill or impacts to non-tidal wetland or waters of the U.S. must be in accordance with the Clean Water Act. The proposed impacts would require Section 404 permits from the U.S. Army Corps of Engineers (COE) and Nontidal Wetland Permits from MDE. According to the information provided , no wetlands or streams are located in the area of the proposed power plant, laydown/parking, pond, and office area. This appears to be consistent with the approved TCPH that shows the location of the environmental features; however, that plan is from 1995 and the existing conditions could have significantly changed since then. The project is now in the process of having the COE review a Jurisdictional Determination for the overall site for the identification of all on-site waters of the U.S.. The report states that this project will impact over 500 linear feet of a man-made drainage ditch created during the mining process. The onsite stream system is Mataponi Creek, which is classified as Tier II waters by MDE. Any impacts to Tier II waters will require justification statements for the joint agency review process at the time of permit review.

#### **Vegetation:**

According to the report, no woodland clearing is proposed with the construction of the power plant. A review of the proposed layout shows that the proposed development will be located in the open, grassed areas of the site. Because portions of the site are adjacent to residential lots, woodland should be planted,

to the extent possible, to provide adequate buffering and screening from the noise and views of the plant operations.

The proposed project is for a public utility that is expected to operate under an a Certificate of Public Convenience and Necessity issued under the Natural Resources Article 5-1603(f), which could exempt the project from the requirements of the Maryland Forest Conservation Act administered by the Department of Natural Resources (DNR). The DNR may require that the project submit a revised tree conservation plan to the local government (Prince George's County) because the site currently has an approved Type II Tree Conservation Plan (TCPII-139-95) that was approved with a Special Exception application for a sand and gravel mining.

**Noise:**

Short-term increases in noise would result from the use of construction equipment. For construction activities, the State's maximum allowable noise level is 90 dBA for all receiving land uses in the vicinity of the site. The estimated range of noise levels during construction of the plant is from 62 dBA at 1,200 feet to 55 dBA a half mile from the construction site, well below the State standard of 90 dBA. These levels are based on noise measurements from existing natural gas power plants similar to the proposed project. The estimated noise levels at the nearest residential lots were determined to be 52 dBA on the west side and 51 dBA on the south side.

After construction, the operation level will have a slightly raised noise level from the existing adjacent motor vehicle traffic during peak times; however, the noise level will be below State standards for noise mitigation at 65 dBA.

**Air Quality:**

The Clean Air Act, as amended, gives the Environmental Protection Agency (EPA) responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) that set acceptable concentration levels for six criteria pollutants; Particulate Matter (measured as particulate matter and fine particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, ozone, and lead. While each state has the authority to adopt standards stricter than those established under the federal program, Maryland accepts the federal standards.

Federal regulations designate Air Quality Control Regions (AQRs) in violation of the NAAQS as nonattainment areas. Federal regulations designate AQCRs with levels below the NAAQS as attainment areas. According to the severity of the pollution problem, ozone nonattainment areas can be categorized as marginal, moderate, serious, severe or extreme.

Prince George's County, and the proposed Keys Energy Center, is within the National Capital Interstate Air Quality Control Region (AQCR 47). AQCR 47 is in the ozone transport region that includes 12 states and the District of Columbia. The Environmental Planning Section (EPS) has designated Prince George's County as follows: Moderate nonattainment for the 1997 8-hour ozone (O<sub>3</sub>); nonattainment for the 1997 fine particulate matter (PM 2.5); and attainment for all other criteria pollutants.

The proposed action could affect air quality through airborne dust and other pollutants generated during construction and demolition. Air quality impacts would be considered minor unless the emissions would contribute to a violation of any federal, state or local air regulations.

**Biological Resources:**

The proposed power plant location is within former sand and gravel pit operation and the reclaimed pit grasslands area. No woodlands are proposed to be cleared as part of this project. Woodland conservation may be required to be addressed through the local regulating authority (Prince George's County).

The existing habitat on-site provides a diverse habitat for plants and animals that are common in Prince George's County, but does not support federally or state-listed species.

**Special Roadways**

The proposed project is not subject to the Prince George's County Landscape Manual; however, consideration should be given to the design requirements for these roadways which will preserve and protect the natural and cultural resources within these rights-of way and also maintain the quality of life for the adjacent and nearby residential properties that have frontage on both roads.

The minimum 40-foot-wide buffer was established on the subject site in accordance with the previously approved Special Exception for mining. The project for the power plant does not propose to clear any of the on-site vegetation; therefore, the wooded buffers and the existing viewshed on both North Keys Road and Old Indian Head Road will be preserved. Enhancements of the buffers should be provided to provided where necessary to provide additional screening for adjacent and nearby residential lots.

**Existing Conditions - Off-site Water Pipeline Alignment**

This section discusses the impacts on noise, air quality, soils/geology, water and biological resources regarding the proposed previously discussed alignment options to transport non-potable water from Western Branch WWTP to the Keys Energy Center and to send waste water from Keys Energy Center to Western Branch WWTP. The three alignment routes are approximately 10 to 12 linear miles. These various pipeline alignments will travel along Maryland Route 301, railroad right of ways (ROW), existing transmission ROW, and various roadways to the WWTP to Keys Energy Center.

**Noise:**

The construction noise will be temporary when the water lines are installed along the alignment locations. The duration of episodic noise will be over a two-week period. Following construction of the pipeline, no additional noise is anticipated from the pipeline during active operations.

**Air Quality:**

The air around the pipeline construction process will contain some pollutants during the short installation process at each location. These temporary airborne pollutants will not last long because the construction equipment will proceed to the next point to complete the installation process.

**Soil/Geology:**

The three alignment routes cross various soil lines and elevation changes to go from the Keys Energy Center power plant facility to the Western Branch WWTP. The work is proposed within existing ROW's and easements with previously disturbed soil areas.

**Ground and Surface Waters:**

There are three alignments for the proposed water pipeline project. The WB West alignment is shown going along Maryland Route 301 adjacent to wetlands, streams, floodplain, and possible buffer areas. The WB East/WB East Alternative water pipeline alignments will traverse several streams and wetlands

within the Mataponi Creek, Wyvil Branch, Southwest Branch, Charles Branch, Horse Tavern Branch and Western Branch watersheds, all located in the Patuxent River basin. The Patuxent River is not a Stronghold Watershed, but Mataponi Creek is identified as a Tier II waterway.

Because the alignments are primarily located in existing developed rights-of-ways, impacts may be limited because crossings currently exist in the locations where the alignments traverse these waters. This project may require the fill of non-tidal wetland or impacts to other waters of the United States and in accordance with the Clean Water Act, these impacts would require Section 404 permits from the U.S. Army Corps of Engineers (COE) and Nontidal Wetland Permit from MDE.

**Biological Resources:**

The two alignments for the water pipelines are located in existing ROW's and easement areas that have been maintained and mowed to prevent woody tree growth. The vegetation found in these areas is pioneering and disturbance area species comprised of saplings and herbaceous plants. No RTE species surveys have been performed on these alignments, but it is unlikely that a RTE species are located on an adjacent roadside or railroad ROW.

**Environmental Consequences - Off-site Water Pipeline Alignment**

**Noise:**

Short-term increases in noise would result from the use of construction equipment. No long-term increases in the overall noise environment would be expected from implementing the proposed action.

**Air Quality:**

The proposed action could affect air quality through airborne dust and other pollutants generated during construction. Air quality impacts would be considered minor unless the emissions would contribute to a violation of any federal, state or local air regulations.

**Earth/Geological Resources:**

Short-term impacts on soils would be expected from construction activities. No long-term effect on soils would be expected.

**Ground and Surface Waters:**

All construction activities for utility lines are required to restore the ground surface as it was originally and re-grade such that no ponded areas are created. Installation work will be conducted in accordance with erosion control and stormwater runoff laws and regulations to prevent any adverse effects on water quality. NPDES Permits for Stormwater Associated with Construction Activities would be obtained as well as the approval from of a Stormwater Management Plan from MDE before any construction activity would begin.

There are wetlands, wetlands buffers, streams and floodplains located on all the proposed water pipeline alignments. This project may fill or impact non-tidal wetlands, buffers or waters of the United States (waters), and in accordance with the Clean Water Act these impacts would require Section 404 permits from the U.S. Army Corps of Engineers (COE) and Nontidal Wetland Permit from MDE. According to the information supplied, there will be wetland, buffers, streams and floodplain impacts identified for the construction of the water pipeline from the proposed power plant to the wastewater treatment plant. The WB West pipeline alignment along Maryland Route 301 appears to result in the least amount of impacts to regulated environmental features.

**Biological Resources:**

Because all of the alignments options are located within existing rights-of way, woodland clearing for the pipeline is not expected.

**Conclusion**

Thank you for the opportunity to comment on the CPCN Environmental Report for the construction of the Keys Energy Center natural gas power plant in the Brandywine area of Prince George's County Maryland. If you have questions regarding these comments, please contact the Environmental Planning Section at 301-952-3650.

I:\Environ\Interagency Coordination \MR-12002F Keys Energy Center EA.acs.doc

November 13, 2012

**MEMORANDUM**

**TO:** Christine A. Osei, Mandatory Referral Project Manager,  
Special Projects Section, Countywide Planning

**VIA:** <sup>SA</sup> Steven Adams, Urban Design Supervisor, Urban Design Section

**FROM:** <sup>RG</sup> Ruth Grover, Planner Coordinator, Urban Design Section

**SUBJECT:** Mandatory Referral/Keys Energy Center

The Urban Design Section is in receipt of a narrative statement and elevation drawings for the proposed Keys Energy Center, which is being reviewed as part of the Mandatory Referral Review Process pursuant to Maryland Annotated Code, Article 28, Section 7-112 and Section 27-294 of the Prince George's County Zoning Ordinance. The plans provided are of insufficient detail for us to provide detailed comments on site design, landscaping, architecture and tree canopy. Therefore, at the present time, we have no general comment on the subject project.

We do, however, have one specific recommendation regarding the landscaping for the project. We would suggest that North Keys Road and Brandywine Roads, both historic roads on the periphery of the site and any adjacent conflicting land uses, be provided with a buffer equal or greater than that required by Section 4.7 of the *Prince George's County Landscape Manual*.



## THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Prince George's County Planning Department  
Historic Preservation Section

(301) 952-3680  
www.mncppc.org

October 22, 2012

### MEMORANDUM

TO: Christine Osei, Planner Coordinator  
Special Projects Section  
Countywide Planning Division

VIA: Howard Berger, Supervisor  
Historic Preservation Section  
Countywide Planning Division

FROM: Jennifer Stabler, Archeology Planner Coordinator  
Historic Preservation Section  
Countywide Planning Division

SUBJECT: **MR-12002F Keys Energy Center**

### Findings

The subject property includes a documented property, PG:85B-002, the William H. Early House located in the southwest portion of the property near the intersection of Brandywine Road and Old Indian Head Road. William H. Early was a large landowner and an important developer of the village of Brandywine. This building was first recorded by the History Division of M-NCPPC in 1974 and a Maryland Inventory of Historic Properties (MIHP) form was completed in that year. The William H. Early House was a two-story frame structure of the Federal period with a two-bay addition to the north. The older section of the house had a three bay façade with a doorway and transom and sidelights in the south bay. The house was demolished in the late 1970s. There is no information in the MIHP form on the outbuildings. William H. Early also operated a store and post office in a separate building on the property that was located closer to Brandywine Road. Remains of this building could also be identified through archeological survey.

The subject property has not been surveyed for archeological sites. A large portion of the property has been previously impacted by mining activities and it is unlikely that archeological resources will be identified in those areas. However, the southwestern part of the site where the William H. Early house was located was not mined and appears to remain intact. There is a high probability that archeological resources associated with the Early occupation of the property will be identified in that area.

### Conclusions

The applicant has submitted a Phase I cultural resources assessment for the Keys Energy Center, prepared by R. Christopher Goodwin & Associates, Inc. The consultant reviewed possible impacts to cultural resources from construction of the Keys Energy Center and a water/wastewater pipeline that may extend for approximately 12 miles to the WSSC Water Treatment Plant in Upper Marlboro. Staff concurs with the conclusions of the applicant's archeological consultant, as outlined on pages 49 and 51 of the

Phase IA report, *Cultural Resources Assessment for the Keys Energy Center, Prince George's County, Maryland*.

"Project Boundary: Any project impacts to areas that are considered to have moderate or high archeological potential, including all areas west of the PEPCO transmission corridor, and all wooded terraces of the tributary of Mataponi Creek in the Project Boundary, should be preceded by appropriate archeological survey."

"Water/Wastewater Pipeline: Once the actual route is chosen, a systematic pedestrian survey should be conducted of the alignment to determine the extent of prior disturbance within the planned pipeline corridor. Any areas that are outside of previously disturbed portions of the CSX right-of-way should be subjected to systematic shovel test survey at intervals no greater than 20 m (65.5 ft.)."

Prince George's County generally uses a 15 m (50 ft.) survey interval for shovel test pits. Otherwise, historic preservation staff is in agreement with the archeological consultant's recommendations.

### **Recommendations**

1. If the applicant is proposing any type of ground disturbance in the areas considered in the Phase IA archeological study to have moderate or high archeological potential, then a Phase I archeological survey should be required.
2. The applicant shall inform Historic Preservation staff of which water/wastewater pipeline alignment they will use. Historic Preservation staff will then provide recommendations on the impact of the pipeline alignment on historic and archeological resources.

November 28, 2012

**MEMORANDUM**

TO: Christine Osei, Project Manager, Mandatory Referral Process

VIA: Maria Martin, Planning Supervisor, Special Projects, Countywide Planning Division

FROM: Theodore W. Kowaluk, Senior Planner

SUBJECT: Keys Energy Center (MR-12002F)

Staff has reviewed the Keys Energy Center as required under the department's mandatory referral process. The facility is located 1.25 miles north of Brandywine, Maryland and by all indications will have a positive impact with regard to jobs, the county's economy, and providing a reliable energy resource for future residents and businesses. The project is also expected to generate significant revenues for the county through sales, income, and property taxes.

A revenue figure for sales tax has not been provided because the state's distribution formula for retail sale taxes makes it difficult to determine a reliable figure. However, it should be noted that a large portion of the products required to build and support the proposed facility will be purchased in Prince George's County. The county has historically had a robust construction sector not only from a labor perspective but also by producing and supplying supplies such as construction equipment (purchase and rental), office trailers, storage units, fencing, concrete, masonry, fill and aggregate, lumber, conduit, cable, and other building supplies. Besides the unquantifiable sales tax benefit additional employees will most likely be hired by the producers and suppliers of such supplies to support the construction of the proposed facility.

Over the life of the construction phase the project is projected to result in an average annual construction workforce of 200 to 300 workers over a two year period. As mentioned above the construction sector has historically been a significant employer in the county representing our fourth largest sector currently employing approximately 37,000 persons. Unfortunately the employment sector has been adversely affected by the recent recession and the housing bubble so much so that between 2008 and 2012 employment in this sector has declined by 11 percent or approximately 4,600 employees.<sup>1</sup> This project will represent a significant boost for employment in the construction sector through the direct employment of construction workers at the site and the producers and suppliers of construction material needed for the project. Furthermore, once completed the new facility is expected to employ approximately 25 employees in high wage jobs. Staff estimates that this facility will also result in an additional 30 indirect jobs to provide goods and services to the plant and additional employees for a total full time employment impact of 55 new jobs. From 2002 to 2012 the county has actually experienced an overall

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<sup>1</sup> Economic Modeling Specialists Incorporated (EMSI), 2012

decline of jobs in the county of approximately two percent, this project will add additional jobs to the county workforce at a critical time.<sup>2</sup>

In addition to much needed jobs these jobs will also provide additional revenue to the county in the form of income taxes. The table below provides a conservative analysis of the income tax revenue the county is expected to receive from this project.<sup>3</sup> During the two years it takes to construct the plant the

| Jobs             | Employees | Average Wage | % Employees County Residents | Total Annual Wages | County Income Tax Revenue |                  |
|------------------|-----------|--------------|------------------------------|--------------------|---------------------------|------------------|
|                  |           |              |                              |                    | One Time (2 years)        | Annual Recurring |
| Construction     | 250       | \$58,300     | 70%                          | \$10,202,500       | \$652,960                 |                  |
| Plant Operations | 25        | \$114,355    | 40%                          | \$1,143,550        |                           | \$36,594         |
| Indirect         | 30        | \$30,000     | 100%                         | \$900,000          |                           | \$28,800         |

county stands to gain over a half million dollars in additional income tax revenue. After the plant is completed the county is expected to realize an additional \$65,394 in income tax revenue on a yearly basis.

The proposed project involves the redevelopment of an old sand and gravel mine site, into a significant revenue generator for the county. Currently the approximately 180 acre property has a total assessed value of \$374,100 or \$2,200 an acre resulting in annual property tax revenue for the county of roughly \$3,600. With the \$700 million proposed improvement the property is expected to be assessed at approximately \$416 million or \$2.4 million per acre resulting in net new property and business property tax revenues greater than \$4,000,000 per year. As an additional comparison if the land were developed as single family homes with one house per five acres selling at \$600,000 a piece the net fiscal benefit to the county is expected be \$198,479 per year in additional revenue.<sup>4</sup> Because the Section 7-514(c) of the Maryland Tax-Property Article allows utilities to seek a payment in lieu of taxes (PILOT), it cannot be assumed that at this time the applicant will pay full property taxes.

As noted in the applicant's submission the Maryland Public Service Commission (MPSC) has recognized "the need for new electrical capacity in the Southwest Mid-Atlantic Area Council (SWMAAC) region" which includes Maryland. Approximately 40 percent of Maryland's generating capacity comes from coal fired plant and 70 percent of those coal fired plants are more than 40 years old and thus at "high risk" for retirement.<sup>5</sup> Furthermore, Maryland continues to import a substantial amount of its electricity needs from out-of-state generation and transmission resources. From 2005-2009 Maryland on average imported around 30 percent of its electricity needs and in 2009 alone that amount grew to 35 percent. With the region's expected population and employment growth, and the potential retirement of older generating capacity the reliance on out-of-state generation will most likely continue to increase unless new in-state

<sup>2</sup> Maryland Department of Labor, Licensing, and Regulation, 2012

<sup>3</sup> EMSI, 2012 Average wage rates for Prince George's County by industry sectors

<sup>4</sup> M-NCPPC Fiscal and Economic Impact Model, 2011

<sup>5</sup> Existing Electrical Generating Units in the United States, 2005 Energy Information Administration

generating capacity is produced. Providing reliable, efficient, sustainable, and potentially lower cost electrical energy is critical to the economic wellbeing of the county and the state as a whole.

From an economic development stand point this proposed project will have a positive impact on the county by providing additional employment opportunities, generating significant additional revenues to the county, and increasing the supply of reliable energy. The project is expected to employ on average 200 – 300 construction workers per year for two years and an additional 55 full time employees per year once the plant is operational. The fiscal impact on the county will be significant with over a half million dollars in one time additional income tax revenue from construction workers and \$62,514 on a yearly basis from plant employees and the indirect jobs they generate. The tax revenue generated by the property will increase exponentially from roughly \$3,600 per year to over \$4,000,000 per year. Finally the provision electrical energy in a reliable, efficient, and sustainable manner will be necessary to support the population and economic growth envisioned for the county's future.

Staff is available to answer any questions or concerns you may have with regard to this memorandum.