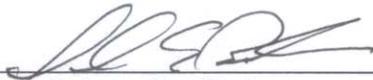


# Baltimore County Liquefied Natural Gas Task Force

## Final Report

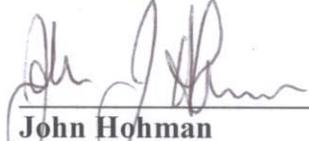
9 January 2007

The undersigned members of the Baltimore County Liquefied Natural Gas Task Force agree that this final report results from a fair and open process and that the overall conclusions and recommendations in this report reflect our views.

  
**Joel Baker, Co-Chair** 1/9/07  
Date  
Joint – Science/Environ/Energy

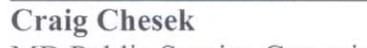
  
**Brad Heavner** 1/4/07  
Date  
Joint – Science/Environ/Energy

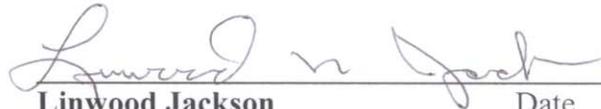
  
**Sharon Beazley, Co-Chair** 1-4-07  
Date  
Senate – Citizen

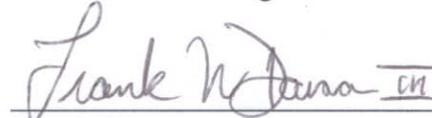
  
**John Hohman** 1/4/07  
Date  
Joint – Science/Environ/Energy

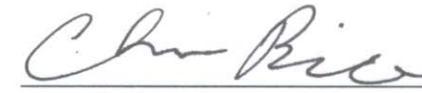
  
**Dunbar Brooks** 1-4-07  
Date  
Senate – Citizen

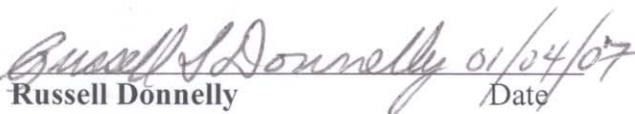
  
**Frederick Hoover** 1/4/07  
Date  
Joint – Science/Environ/Energy

  
**Craig Chesek** Date  
MD Public Service Commission  
– Chairman's Designee

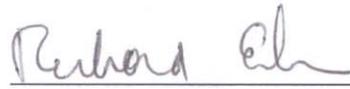
  
**Linwood Jackson** 1/4/07  
Date  
House – Citizen

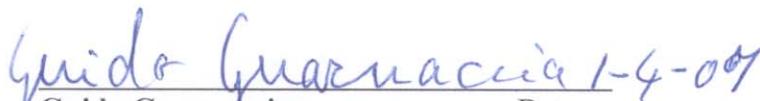
  
**Frank Dawson** 1-4-07  
Date  
DNR – Secretary's Designee

  
**Chris Rice** 1/4/07  
Date  
MD Energy Administration  
– Director's Designee

  
**Russell Donnelly** 01/24/07  
Date  
House – Citizen

  
**Fred Thiess** 1/6/06  
Date  
Senate – Citizen

  
**Richard Eskin** 1/7/07  
Date  
MDE – Secretary's Designee

  
**Guido Guarnaccia** 1-4-07  
Date  
House – Citizen

Whereas we believe that:

1. The economically-challenged communities surrounding the Sparrows Point Peninsula have endured generations of environmental pollution, and;
2. The transportation network and demographics of the surrounding communities make emergency response and evacuation of the surrounding neighborhoods very difficult, and;
3. Dredging, processing, and disposal of large volumes of contaminated sediment during construction and operation of the proposed LNG facility will release pollutants into the Chesapeake Bay, and;
4. The proposed LNG facility will likely have minimal direct impact on energy supplies and costs in Maryland, and;
5. The economic impact of the proposed LNG facility on Maryland in terms of jobs will likely be minor;

The undersigned members of the Baltimore County Liquefied Natural Gas Task Force conclude that construction and operation of a liquefied natural gas terminal and facility on the Sparrow Point Peninsula, Baltimore County, does not serve the long-term interests of the citizens of Maryland.

Note: Agency representatives were not asked to sign, recognizing that could conflict with their official responsibilities.

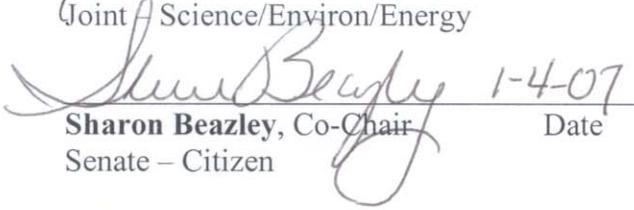
The undersigned members of the Baltimore County Liquefied Natural Gas Task Force agree that this final report results from a fair and open process and that the overall conclusions and recommendations in this report reflect our views.

  
Joel Baker, Co-Chair  
Joint Science/Environ/Energy

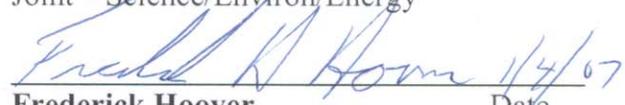
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Brad Heavner  
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Date

  
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Senate - Citizen

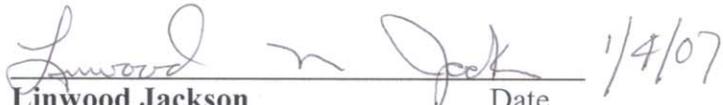
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Frederick Hoover  
Joint - Science/Environ/Energy

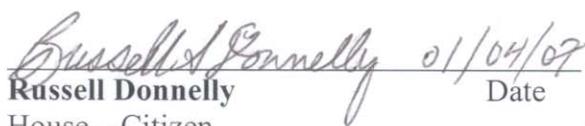
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Dunbar Brooks  
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House - Citizen

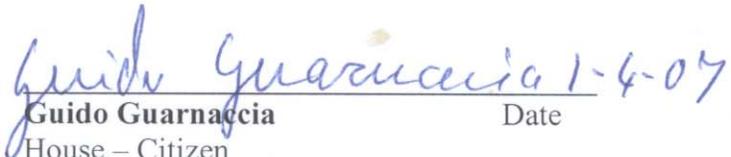
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Russell Donnelly  
House - Citizen

01/04/07  
Date

  
Fred Thiess  
Senate - Citizen

1/4/07  
Date

  
Guido Guarnaccia  
House - Citizen

1-4-07  
Date

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**Preface**

This report of the Baltimore County LNG Task Force was written before the formal application has been made to the Federal Energy Regulatory Commission (FERC) to build and operate a facility at Sparrows Point. During the 'pre-filing' phase, the potential applicant prepares and submits to FERC a series of Resource Reports that describe in general terms the nature of the project. FERC, the U.S. Coast Guard, and others comment on and evaluate these reports in preparation for the Draft Environmental Impact Statement should the project go forward. During the deliberations of the Task Force, the potential applicant revised several Resource Reports and therefore the background information was constantly evolving. Many of the specifics relating to the proposed facility, especially operational decisions under the jurisdiction of FERC and the U.S. Coast Guard had not yet been made when this report was prepared. Until a formal application has been submitted to FERC, and there is sufficient time to review the specifics of the facility, the Task Force findings and recommendations in this report remain provisional.

## **Baltimore County Liquefied Natural Gas Task Force Final Report**

### **Executive Summary**

The Baltimore County Liquefied Natural Gas Task Force was established by Senate Bill 996 during the 2006 General Assembly to study issues concerning a proposed facility on the Sparrow Point Peninsula, Baltimore County. AES Sparrows Point LNG, LLC proposes to construct and operate liquefied natural gas (LNG) import, storage, and re-gasification facility on 80 acres on the Sparrows Point Peninsula. LNG would arrive at the LNG Terminal via ship, be offloaded to three shore-side storage tanks, re-gasified, and transported to consumers via an 87 mile pipeline through Baltimore, Harford, and Cecil Counties, MD and Lancaster and Chester Counties, PA.

In addition to the LNG facility, in its pre-application submission AES proposes to build a Dredge Material Recycling Facility at Sparrows Point to process dredged sediment during the 18 to 24 month construction phase. This facility would dewater and stabilize dredged sediment into a form suitable for shipping off site using 220 truck trips per day. AES is also considering construction of a natural gas-fired electricity generating station near the LNG facility.

Local concern about potential LNG facilities in Maryland led to a number of efforts by local and state officials to influence the approval process. Specific concerns from the community include health, safety, and quality of life issues. Permitting of LNG facilities is coordinated by the Federal Energy Regulatory Commission (FERC), with input from a number of Federal and State agencies. Governor Ehrlich designated the Maryland Department of Natural Resources Power Plant Research Program as the lead agency to coordinate the State's response to the potential LNG facility at Sparrows Point.

This report is based on pre-filing materials submitted to FERC by the applicant, as the formal filing was not available when this report was due. Many of the specifics relating to the proposed facility, especially operational decisions under the jurisdiction of FERC and the U.S. Coast Guard had not yet been made when this report was prepared. Until a formal application has been submitted to FERC (anticipated for early January 2007), and there is sufficient time to review the specifics of the facility, the Task Force findings and recommendations in this report remain provisional.

### **Overall Recommendations**

1. The Task Force has identified several major issues of concern for which the applicant has not indicated adequate solutions. Maryland should advise FERC, and use existing State law and permitting authority to the maximum extent possible, to require that unless and until solutions to these critical issues are found, the State would not consider that the safety of the surrounding communities and environmental integrity have been adequately protected as required by the relevant laws. The most significant of these issues include:

- a. Notification, transportation and evacuation capabilities for the surrounding communities are clearly inadequate.
  - b. The feasibility of processing the required volume of dredged material in a legal and safe manner with existing technology and legal limitations on dredged material disposal in this area is doubtful.
  - c. Established principles of environmental justice would be violated.
2. The applicant should be required to pay all costs borne by the State and local governments for environmental, security and safety protection resulting from any proposed facility.
  3. An environmentally, socially, and economically responsible comprehensive development plan for the entire Sparrows Point Peninsula should be prepared by Baltimore County, with State assistance if requested,. Any development on the Sparrows Point Peninsula should not conflict with current and planned environmental restoration efforts and should result in net environmental benefit.
  4. To ensure future economic viability and energy security, Maryland should develop a comprehensive energy policy that balances supply and demand.
  5. Maryland and Baltimore County should continue to be advocates for the local communities. All available legislative and judicial avenues to direct responsible development of the Sparrows Point Peninsula should be investigated.
  6. A state ombudsman should be designated to communicate the status of development of Sparrows Point to the public.

## **Findings**

1. Economically distressed communities that surround the proposed facility have for generations borne the brunt of environmental pollution in the Sparrows Point area. The community believes that the proposed LNG facility is not compatible with proposed industrial and commercial activities in the Sparrows Point area, and that the facility poses a significant risk to health, safety and quality of life to a community that has already borne more than its share of such impacts.
2. There is considerable public concern about the potential risks of LNG traffic in the Chesapeake Bay and of the terminal, storage, and re-gasification facility at Sparrows Point.
3. Much of FERC's and the USCG's assessments of risk from LNG plants are based on a report conducted by Sandia National Laboratories which is derived largely on models and assumptions. These models have not been verified at the scale of the proposed LNG facility.
4. Adequate communication to the public during an emergency is a major concern due to lack of effective means of public notification due to insular or non-English speaking communities.

5. The road system is inadequate for evacuating public from the area in a reasonable amount of time. Several potentially affected communities have only a single road for evacuation.
6. Many local residents rely completely on public transportation. Baltimore County does not have sufficient resources to respond to a major emergency at an LNG plant.
7. FERC will determine land exclusion zones around the proposed plant based on site-specific calculations and recommendations from the Sandia report as established by National Fire Protection Act 59A: *Standard for the Production, Storage, and Handling of LNG*.
8. The USCG has not yet submitted its Waterway Suitability Report (WSR), which will provide recommendations to FERC on the size of any marine safety and security zones around LNG tankers in Chesapeake Bay.
9. The USCG has not yet made a recommendation via the Waterway Suitability Report on whether or not the Chesapeake Bay Bridge and/or the Key Bridge will have to be closed to traffic during the transit of LNG tankers in the vicinity.
10. The volume of dredged material generated by the proposed project would greatly exceed the already limited capacity for harbor material disposal.
11. Unconfined disposal of spoil from Baltimore Harbor is prohibited outside of Baltimore Harbor; unconfined disposal of spoil from a "Baltimore County tributary" is prohibited within five miles of the Hart-Miller-Pleasure Island chain; and a contained disposal site may not be approved within the same five mile limit.
12. The applicant has indicated that they will propose to build an on-site facility to process the dredge material prior to shipping off-site. There is no facility in the region to process the dredged sediment into a product that could be classified as an innovative use and therefore no precedent for permitting such a facility.
13. The limited capacity to dispose of Baltimore Harbor sediments requires careful prioritization of Harbor dredging projects.
14. Suspended sediments, toxic substances and nutrients will be released during dredging. The quantity released will depend on the nature of the dredging technique used, which must be designed to minimize pollutant release to the water column. Even using the best available dredging and disposal technologies, the large volume of materials handled will result in an overall large release of contaminants.
15. Baltimore Harbor, including some areas surrounding the proposed facility, has poor environmental quality due to excessive levels of nutrients and toxic pollutants. During the past 10 years, considerable resources have been spent to assess and manage these problems, and substantial efforts to improve the Harbor continue.
16. The Patapsco River is the site of a significant amount of commercial fishing activity. Between 2003 and 2006, an annual average of approximately 85,000 pounds of fish and shellfish were commercially harvested from the Patapsco River.
17. Approximately 500 charter boat trips per year originate in Baltimore Harbor for recreational fishing, sightseeing, and other services.

18. The use of natural gas typically has less overall environmental impact than other fossil fuels, including coal.
19. Current LNG imports at Cove Point will be more than three times the projected natural gas consumption in Maryland after the approved expansion of Cove Point. The citizens of Maryland disproportionately bear the costs of environmental impacts, security, and emergency preparation and response for LNG they do not need.
20. While the proposed facility will increase natural gas supplies to the mid-Atlantic and Northeastern U.S., greater energy security could result from reducing energy demand through modernizing equipment in the region. Such reductions would have other positive environmental benefits beyond not constructing and operating the proposed facility.

### **Recommendations**

1. A comprehensive long-range Master Plan for the development of the Sparrows Point Peninsula should be developed by Baltimore County, with assistance, if requested, from the State.
2. Maryland should assure that the cumulative and interactive impacts of the combined activities on Sparrows Point are evaluated once the formal application has been filed with FERC.
3. Maryland should strongly recommend through the comment process that:
  - a. FERC and USCG take into account all studies on the risks of LNG not incorporated into the Sandia report, including those not publicly available and those of other countries.
  - b. When FERC and USCG interpret any findings based on models and assumptions to estimate the level of risk from the proposed LNG facility, they should include safety factors adequate to account for uncertainties in the models. They should use calculations from any recognized authority that provide the largest safety factor.
  - c. FERC and USCG should require experiments on the hazards of LNG releases on the scale that would be experienced by a catastrophic failure of a tanker or land based storage tank before any final decisions are made on this application.
4. Maryland should strongly recommend through the comment process to FERC that The Emergency Response Plan:
  - a. Must include an effective and rapid means of notifying and evacuating the public in the event of an emergency. This plan must specifically address the road capacity for evacuation and evacuating those dependent on public transportation, and be acceptable to local and State agencies. This should include on-going public education efforts on notification and evacuation methods, as well as on-going drills for emergency responders.
  - b. Must clearly identify the applicant as the responsible party for covering both the direct costs to respond to an emergency and the indirect costs of planning and preparation.

5. Marine safety and security zones are calculated based on safety and security issues and must not be compromised to accommodate impacts on recreational and commercial activities. If the impacts to recreational and commercial activities are unacceptable, then Maryland should recommend to FERC that the project must not move forward.
6. Maryland should continue to prioritize the use of disposal capacity in Baltimore Harbor for required maintenance of navigation channels.
7. No dredge sediment disposal/process operation should be permitted until disposal capacity is clearly and legally documented and the regulatory path defined.
8. Because Harbor sediments typically contain bioaccumulative contaminants, any discharge permits must consider the potential for long-term impacts in addition to acute impacts.
9. Maryland should work through existing regulatory authorities and voluntary incentives to insure that any new major activity in the Sparrows Point area is 'environmentally positive' (i.e., the area's environmental quality is better than if the project did not occur).
10. Maryland should ensure, through the Water Quality Certification and the Consistency Determination, that the proposed activity is consistent with existing Harbor-wide remediation and restoration programs.
11. Maryland should be a strong advocate for the residents of the surrounding communities, ensuring that any development on the site is consistent with the principals of environmental justice.
12. Maryland should strongly recommend through the comment process that FERC, with input from Maryland DNR, should accurately calculate the economic and cultural impacts to the recreational and commercial communities resulting from the inevitable loss of access to the waterway, and require that the applicant compensate these communities appropriately.
13. Maryland should adopt a comprehensive energy strategy that balances supply-side (increased energy production) and demand-side (increased efficiency, conservation) policies.
14. Since this facility would push the region toward a supply-side response to energy demand and thereby undermine demand-side strategies, the applicant should be required to invest heavily in statewide energy conservation programs in Maryland.

## **Baltimore County Liquefied Natural Gas Task Force Final Report**

### **I. Background**

I.A. Overview of the Potential LNG Facility at Sparrows Point. AES Sparrows Point LNG, LLC proposes to construct and operate a new liquefied natural gas (LNG) import, storage, and regasification facility on 80 acres on the Sparrows Point Peninsula in Baltimore County. LNG would arrive at the LNG Terminal via ship, be offloaded to three shore-side storage tanks, re-gasified, and transported to consumers via an 87 mile pipeline through Baltimore, Harford, and Cecil Counties, MD and Lancaster and Chester Counties, PA. The facility at Sparrows Point would consist of a marine terminal, three on-shore storage tanks, and the equipment to convert LNG to gas. The three storage tanks would each be 170 feet high and 270 feet in diameter and contain 42 million gallons (160,000 cubic meters) of LNG. Operating at full capacity would require offloading a ship every two to three days. In addition to the LNG facility, in its pre-application submission, AES proposes to build a Dredge Material Recycling Facility at Sparrows Point to process dredged sediment during the 18 to 24 month construction phase. This facility would dewater and stabilize dredged sediment into a form suitable for shipping off site. The Dredge Material Recycling Facility would occupy 5 acres of upland property adjacent to the LNG facility. Transport of the processed dredge material offsite would require 220 truck trips per day away from the site. AES is also considering construction of a natural gas-fired electricity generating station near the LNG facility.

Local concern about potential LNG facilities in Maryland led to a number of efforts by local and state officials to influence the approval process. Specific concerns from the community include health, safety, and quality of life issues. The project description has changed over time and is significantly different than what was initially presented to the communities.

I.B. Legislative History. During the 2005 and 2006 Maryland General Assembly Sessions bills were proposed to limit the siting of LNG facilities within the State. During legislative analysis of SJ 16 in the 2006 General Assembly session, "...an advice of council letter from the Attorney General's office (17 March 2006) states that specified legislation introduced in the 2006 legislative session restricting the construction or operation of an LNG facility in Maryland is preempted by federal law. According to the letter, the federal Natural Gas Act has long been understood as preempting state authority to regulate the siting and operation of LNG facilities which are under the jurisdiction of the Federal Energy Regulatory Commission (FERC)." (Department of Legislative Services, Fiscal and Policy Note for Senate Joint Resolution 16, Maryland General Assembly 2006 session). Although by law, FERC has primary jurisdiction to authorize the construction and operation of proposed LNG facilities, the State of Maryland exercises delegated federal permitting authority under the Clean Water Act, the Clean Air Act, and the Coastal Zone Management Act. To the extent that State and local laws are applicable to the Project, they too must be satisfied by the applicant<sup>1</sup>. The Maryland

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<sup>1</sup> Because the Natural Gas Act grants FERC exclusive jurisdiction over permitting the siting of proposed terminals and pipeline, some State and local laws may be preempted and not enforceable. However, the

Department of Natural Resources Power Plant Research Program was designated by Governor Ehrlich as the lead agency to coordinate the State’s response to the potential AES LNG facility at Sparrows Point.

Senate Bill 996, passed in 2006, established the Baltimore County Liquefied Natural Gas Task Force (the Task Force). The task force consists of

1. four members from the scientific, environmental, and energy communities, jointly appointed by the President of the Senate and the Speaker of the House of Delegates,
2. the Chairman of the Public Service Commission or the Chairman’s designee,
3. the Secretary of the Environment or the Secretary’s designee,
4. the Secretary of Natural Resources or the Secretary’s designee,
5. the Director of the Maryland Energy Administration, or the Director’s designee,
6. three members nominated by the Senator representing the Maryland legislative district in which the proposed liquefied natural gas facility in eastern Baltimore County is proposed to be sited, subject to approval of the President of the Senate, and three members nominated by the Delegates representing the Maryland legislative district in which the proposed liquefied natural gas facility in eastern Baltimore County is proposed to be sited, subject to approval of the Speaker of the House of Delegates. The Task Force elected co-chairs and was staffed by the Departments of the Environment and Natural Resources.

<b>Table 1. Baltimore County Liquefied Natural Gas Task Force</b>	
Joel Baker (co-chair), Science/Environment/Energy	Sharon Beazley (co-chair), Senate-appointed citizen
Dunbar Brooks, Senate-appointed citizen	Craig Chesek, Secretary’s Designate, Maryland Public Service Commission
Frank Dawson, Secretary’s Designate, Department of Natural Resources	Russell Donnelly, House-appointed citizen
Richard Eskin, Secretary’s Designate, Department of the Environment	Guido Guarnaccia, House-appointed citizen
Brad Heavner, Science/Environment/Energy	John Hohman, Science/Environment/Energy
Frederick Hoover, Science/Environment/Energy	Linwood Jackson, House-appointed citizen
Chris Rice, Secretary’s Designate, Maryland Energy Administration	Fred Thiess, Senate-appointed citizen

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State’s delegated authority under the listed federal statutes is expressly applicable to the construction and operation of the proposed Sparrows Point Terminal as well as any other laws that may be applicable to any federal agencies authorities and responsibilities related to LNG terminals. 15 USC §717(b)

Senate Bill 996 charged the Task Force to study the following:

1. the risks and hazards of a liquefied natural gas production, storage, or regasification facility;
2. the kind and use of the proposed production, storage, or regasification facility
3. the current and projected population and demographic characteristics of the location of the proposed production, storage, or regasification facility;
4. the current and proposed land use near the location of the proposed production storage, or regasification facility
5. the natural and physical aspects of the proposed location
6. the emergency response capabilities near the proposed facility location;
7. the need and appropriate distance for remote siting;
8. the effect of the proposed facility location on recreational and commercial boating and fishing and crabbing in the area;
9. the impact on the environment, especially on water quality, due to the quality of the dredged material from the large scale dredging that is intended to be undertaken to accommodate the ships transporting the liquefied natural gas; and
10. the impact on the ability of residential property owners near the proposed facility to retain access to their properties by way of the waterway.

The Task Force shall report its findings and recommendations to the Governor and General Assembly on or before December 2006.

I.C. Scope of Task Force. The Task Force first met on September 5 2006 at the Maryland Department of Environment in Baltimore. At that meeting, Dr. Joel Baker and Ms. Sharon Beazley were elected co-chairs, the overall procedures for the Task Force meetings were discussed, and it was determined that the Task Force would focus primarily on the Sparrows Point facility and not the proposed 87 mile pipeline. The Task Force decided to hold open meetings, allowing interested observers to attend the scheduled meetings and, at the discretion of the co-chairs, participate in the discussion. Task Force information, including meeting schedules and minutes, presentation graphics, and background materials are available to the public *via* a dedicated web site ([http://www.mde.state.md.us/ResearchCenter/lng\\_taskforce.asp](http://www.mde.state.md.us/ResearchCenter/lng_taskforce.asp)). During the first meeting, the Task Force reviewed the ten items in SB 996 and created three subcommittees charged with addressing the specifics of each issue.

<b>Table 2. Baltimore County LNG Task Force Subcommittees (issue numbers refer to section designations in SB 996).</b>		
<b>Subcommittee</b>	<b>Issues to be Addressed (from SB 996)</b>	<b>Subcommittee Members</b>
Land Use	3. Current and projected population and demographics 4. Current and proposed land use 5. Natural and physical aspects	Beazley, Rice, Brooks, Thiess
Environmental Impacts	8. Effect on boating, fishing, and crabbing 9. Environmental impacts, especially on water quality due to dredging 10. Impact on water access	Baker, Donnelly, Eskin, Heavner
Risk and Safety	1. Risks and hazards 2. Kind and use of facility 6. Emergency response capabilities near the facility 7. Need and appropriate distance for remote siting	Chesek, Hoover, Hohman, Guarnaccia, Dawson, Jackson

Seven Task Force meetings have been held to compile information on these topics. Each subcommittee was charged with drafting ‘findings’ and recommendations based on the material presented at these meetings.

<b>Table 3. Baltimore County LNG Task Force Meeting Schedule</b>	
September 5, 2006	Organizational
October 4, 2006	Land Use
October 18, 2006	Risk and Safety
November 1, 2006	Environmental Effects
November 17, 2006	Review of draft findings
December 20, 2006	Finalize draft report
January 4, 2007	Final approval of report

**II. Legal and Regulatory Status.**

Several state and federal laws are relevant to the construction and operation of a liquefied natural gas facility in Maryland. The Federal Energy Regulatory Commission (FERC) has overall authority for permitting LNG facilities through the National Gas Act. Maryland state agencies provide comments on the pre-filed resource reports, on the application, and on the subsequent Environmental Impact Statement to FERC via the Department of Natural Resources’ (DNR) Power Plant Research Program (PPRP). The State laws applicable to an LNG facility assure Maryland citizens of a process protective of the appropriate uses of their natural resources, and consistency with other coastal plans. The federal laws may have other goals including energy security and reliability.

IIA. Applicable State Laws or Actions. There are several key laws that need to be addressed by the Maryland Department of the Environment (MDE) with respect to various aspects of allowing a facility at Sparrows Point. These laws govern the construction of the facility, any dredging or dredge material placement or use, and the construction of the pipeline, which is a necessary component of the LNG facility. A summary list of relevant federal and state requirements is provided in Table 4. Processing of these permits will not begin until MDE and the U.S. Army Corps of Engineers (USACE) receive the complete permit application.

*II.A.1 Nontidal Wetlands and Waterways Permit (Environment Article, Title 5, Subtitle 9) and State Tidal Wetlands License (Environment Article, Title 16, Subtitle 1-5).* The nontidal wetlands and waterways permit issued in conjunction and consultation with the USACE must be obtained for any impacts to nontidal wetlands or waterways associated with the project as Sparrows Point or the proposed pipeline. The review process requires avoidance and minimization of impacts, and mitigation is required for unavoidable impacts to these resources.

A State Tidal Wetlands License, issued by the Board of Public Works (BPW) based on a report and recommendations from MDE, is also required for any proposed dredging and dredge material disposal. Expansion or deepening of a channel would be considered a new project as opposed to maintenance dredging.

Environment Article, Sections 5-1102 and -1103 place certain limitations on the disposal of dredge material from within Baltimore Harbor. Unconfined disposal of spoil from Baltimore Harbor is prohibited outside Baltimore Harbor; unconfined disposal of spoil from a "Baltimore County tributary" is prohibited within 5 miles of the Hart-Miller-Pleasure Island chain; and a contained disposal site may not be approved within the same 5 mile limit.

*II.A.2. Section 401 Water Quality Certification.* The State must also issue a Water Quality Certification under Section 401 of the Clean Water Act that certifies that any federally permitted discharges to jurisdictional waters and wetlands will not violate the State's water quality standards.

*II.A.3. Discharge Permits.* After dredging and deposition of dredge material in a disposal facility, the dredge material needs to be "de-watered." As the sediment settles and the water collects at the surface, this water is discharged back in the Bay or tributary. This discharge requires a State discharge permit from MDE.

*II.A.4. Coastal Zone Management Act's Consistency Review.* The Coastal Zone Management Act establishes that a state with an approved coastal zone management program can oppose "federal activity" that the state considers inconsistent with its coastal zone management program (15 USCA § 1456(c)). "Federal activities" include activities both within and outside of the coastal zone that affect land use, water use, or natural resources of the coastal zone (15 USCA 1456(c)(1)(A)). "Federal activities" include activities performed directly by a federal agency or a contractor on behalf of the agency,

activities that are not performed by a federal agency, but that require federal permits or licenses, and federal assistance to state and local governments (15 USCA §1456(c)(3)(A)).

An applicant for an activity requiring a federal permit or license must provide in the application to the federal agency a certification that the proposed activity complies with the State's approved coastal zone management program (id). At the same time, the applicant must also provide a copy of the certification to the State, along with all necessary information and data (id). Each State must establish procedures for public notice of the activity, and public hearings, if the State thinks such hearings are appropriate (id).

At the "earliest practicable time," but no later than six months after receipt of a copy of the applicant's certification, the State must notify the licensing federal agency whether the State concurs or objects to the applicant's certification (id). The State's concurrence will be conclusively presumed if it fails to notify the licensing federal agency within 6 months of receiving the applicant's certification (id). The federal agency cannot issue the required permit or license until the State has concurred with the applicant's certification, unless the Secretary of Commerce finds, after reasonable opportunity for detailed comments from the federal agency and the State, that the activity "is consistent with the objectives of this chapter [chapter 33 of Title 16 of the United State's Code, the Coastal Zone Management Act] or is otherwise necessary in the interest of national security."

*II.A.5. Critical Areas Law (Baltimore County)* The establishment or expansion of the following uses is prohibited in all Chesapeake Bay Critical Areas<sup>2</sup>:

- A. Solid or hazardous waste collection or disposal facilities
- B. Sanitary Landfills
- C. Permanent sludge hauling, storage or disposal facilities other than those associated with wastewater treatment.
- D. Transportation facilities and Utility transmission facilities, except those necessary to serve uses permitted in the underlying zone per the Baltimore County Zoning Regulations. Such uses may be permitted only in intensely developed areas and only after the activity or facility has demonstrated that there will be a net improvement in water quality to the adjacent body of water (Bill No. 9-1996).
- E. Non-maritime heavy industries, except those uses permitted in the underlying zone as authorized by these regulations. Such uses may be permitted only in intensely developed areas, as defined by the Baltimore County Code, and only after the activity or facility has demonstrated that there will be a net improvement in water quality to the adjacent body of water.

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<sup>2</sup> Section 105, Prohibited Uses in Chesapeake Bay Critical Area, (Bill No. 32-1988) Baltimore County Zoning Regulations updated 08-15-2006.

Table 4: Summary of federal and State regulatory requirements, responsibilities or authorities.				
Action	Agency	Authority	Prerequisites	Basis for Approval
Overall authority to approve Onshore Facility (LNG Terminal)	FERC	NGA Section 3	Requires completion of an Environmental Impact Statement	Project is not inconsistent with the public interest
Approval of Pipeline	FERC	NGA Section 7	Same	same
Approval of Safety and Security of Facility and	U. S. Coast Guard	Port and Waterways Safety Act, 33 USC §1221 <i>et seq.</i> and the Maritime Transportation Security Act, 46 USC 70101 <i>et seq.</i>	WSA that meets the requirements of NV05-05.	
Approval of dredge and fill in navigable waters	Corps of Engineers	Rivers and Harbors Act Section 404 of the Clean Water Act	Joint federal/state permit application	Avoidance and minimization of impact and mitigation of unavoidable impacts
	Board of Public Works	State Tidal Wetland Act §16-201 <i>et. Seq.</i>		
Impacts to nontidal wetlands and waterways	Corps of Engineers	Section 404 of the Clean Water Act	Joint federal/state permit application	Avoidance and minimization of impact and mitigation of unavoidable impacts
	MDE	State Nontidal Wetlands Protection Act §5-901 <i>et seq.</i>  Waterway Construction Act §5-501 <i>et seq.</i>	Joint federal/state permit application	Avoidance and minimization of impact and mitigation of unavoidable impacts
Air quality impacts*	MDE	Clean Air Act	Air quality permit application	Meets the requirements of the Act and implementing regulations
Water Quality impacts*	MDE	Clean Water Act, Section 401 Water Quality Certification	Joint federal/state permit application	That any federally permitted discharges from the facility will not violate the State water quality standards.
Proposed federal activities (i.e., FERC approval)*	MDE	Section 307 of the federal Coastal Zone Management Act, 15 USC §§1451 <i>et seq.</i>	Application for FERC approval and EIS	Requires compliance with all <i>enforceable</i> policies of the State's Coastal Zone Management Program
Proposed construction of LNG facility	MDE	Coastal Facilities Review Act §14-501 <i>et seq.</i>	Coastal Facilities Review Act permit application (will include application for all applicable State permits)	Local certification and compliance with all applicable State permits.

\*Note: All non-federal permit processes are subject to FERC coordination rules found in 18 CFR §§153, 137, 375 and 378.

II.B. Timeline. All permitting of the proposed LNG facility at Sparrows Point will follow a timeline established by FERC<sup>3</sup>. The permitting process begins when an applicant expresses the intent to file for a permit by submitting a ‘pre-filing’ letter to FERC. Subsequently, the applicant prepares a series of Resource Reports that describe the general nature of the proposed facility, the potential impacts on local communities, the environment, *etc.* Meetings are held to inform the local communities of the potential facility. The Resource Reports form the basis for FERC to prepare the draft Environmental Impact Statement should the application be filed. State and federal agencies and other interested parties gather information and review the Resource Reports prior to the formal permit filing, but only after a full and complete application is received by FERC is it possible to complete the impact assessment.

For the AES Sparrows Point LNG facility, the pre-filing date was March 24, 2006, and the formal application may be filed in early January 2007. Within 30 days of the filing, the State of Maryland has the opportunity to file an advisory report with FERC identifying the State’s concerns. This will be done through the Power Plant Research Program at DNR in coordination with all applicable State agencies. Maryland’s cabinet was advised of this opportunity during a meeting on December 19, 2006 and all departments have agreed to fully participate in the development of this advisory report.

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<sup>3</sup> The Energy Policy Act of 2005, amended the Natural Gas Act to provide FERC with authority to set a schedule for all federal agencies and all state agencies acting under federal authority to set schedules for the completion of all permitting activities required to site an LNG facility. Further, the administrative record created by these permit actions are required to be maintained by FERC so that all state permit actions must be coordinated through FERC. FERC issued a final order implementing this authority on October 19, 2006 so that State permitting activities undertaken for Sparrows Point will be subject to the established coordination process.

<b>Table 5. Timeline for LNG Permitting</b>				
<b>Date</b>	<b>Applicant</b>	<b>Federal</b>	<b>State</b>	<b>LNG Task Force</b>
24 March 2006	Pre-filing letter sent to FERC			
March	Prepare Draft Resource Reports	1. Review Draft Resource Reports (FERC)  2. Prepare Preliminary Draft Environmental Impact Statement (FERC)  3. Prepare Waterways Suitability Report (USCG)	Review Resource Reports with comments to FERC	
April				
May				
June				
July				
August				
September				First Meeting
October				Risk & Safety Land Use
November				Environmental Draft Findings & Recommendations
December				Draft Report Report Due 31 December
8 January 2007 <sup>1</sup>	File application at FERC		1. Within 30 days of filing, submit advisory report to FERC detailing State and local safety concerns  2. Prepare water quality certification required for a wetlands license  3. Prepare analysis of coastal zone management consistency	
February		Prepare Draft Environmental Impact Statement		
March				
April				
May		Issue Draft Environmental Impact Statement (FERC)	Comment on Draft EIS	
June				
July				
August		Issue Final Environmental Impact Statement (FERC)		
September				
October		Issue Order (FERC)		

<sup>1</sup>Anticipated filing date. All subsequent dates estimated from this date.

**III. A description of the local community, land use and a characterization of a potential LNG facility at Sparrows Point.**

Issues in SB 996	
3.	the current and projected population and demographic characteristics of the location of the proposed production, storage, or regasification facility;
4.	the current and proposed land use near the location of the proposed production storage, or regasification facility
5.	the natural and physical aspects of the proposed location

III.A. Background.

*III.A.1. The Surrounding Communities.* The socioeconomic characteristics of the communities (as defined by U.S. Census Designated Places [CDP]) adjacent to the proposed facility are:

a. Total Population	71,554
b. Population Density (persons per square mile)	5,541
c. Total Housing Units	30,149
d. Percent of Population 5 years or older with disability	24%
e. Percent of Families in Poverty (1999)	6%
f. Percent of Families with female householder	19%
g. Percent of Individuals in Poverty	8%
h. Median Housing Value (1999)	\$103,650
i. Median Household Income (1999)	\$43,359

Approximately 5,000 people live within 2 miles of the proposed facility, including the communities of Turner Station, Watersedge, and Carnegie Plats. These are the nearest residential communities to the proposed facility. The nearest community is Turner Station, whose border is 1.1 miles from the facility. Turner Station is an eighty percent African-American, economically distressed community located in southeastern Baltimore County (census tract 4213.00).

The major communities surrounding the proposed facility (Dundalk and Edgemere) contain the highest concentration and absolute number of U.S. Housing and Urban Development (HUD) subsidized units within Baltimore County. HUD regulations prohibit funding new housing projects within a HUD-defined acceptable separation distance (ASD) from a hazardous facility. Siting a LNG facility may jeopardize future HUD funding to the surrounding communities should HUD determine that housing falls within the ASD.

*III.A.2. Current Land Use.* In addition to the residential communities already identified, the Dundalk and Edgemere areas contain commercial, industrial, office, mixed use, institutional and open space land uses. The predominant character of these two major communities is residential. The Sparrows Point Peninsula and its Sparrows Point

Industrial Park is a unique location within Baltimore County singled out exclusively in the most recent Baltimore County Master Plan. The current land use of the Sparrows Point Industrial Park and site of the proposed LNG facility is zoned 'Manufacturing Heavy'.

The current industrial sites operating at the Sparrows Point Peninsula include:

- a. Mittal Steel
- b. ATEC Hydraulics
- c. Mobile Dredge
- d. Onyx Environmental Services
- e. Air Products and Chemicals
- f. Multi-Serv
- g. Kinder Morgan
- h. LaFarge
- i. Kroff Materials Reprocessing
- j. Barletta Willis Corporation
- k. Senesco
- l. Airgas
- m. North America Ship Recycling
- n. MP Industries
- o. three industrial landfills (Grays and Coke Point Landfills and ER&WR Wood Waste Processing Facility)

*III.A.3. Proposed Land Uses on Sparrows Point Peninsula.* In addition to the potential LNG facility, a number of other industrial activities have been proposed or are in the planning stages for the Sparrows Point peninsula, including (a) the AES dredge materials innovative reuse facility, (b) the Ecron ethanol plant, (c) the expansion of the Multiserve and Fritz screening plants to reprocess slag, (d) the expansion of the Kroff facility for hazardous materials and waste oil recycling, and (e) the AES proposed electricity co-generation plant.

*III.A.4. Characteristics of Proposed Site.* A 1997 Consent Decree required assessment, design, and remediation of the Sparrow Point site. Industrial activities on the site have contaminated the soils with a wide range of pollutants, including: antimony, arsenic, cadmium, chromium, copper, iron, lead, manganese, nickel, tin, zinc, ammonia, benzene, cyanide, ethyl benzene, ethylene glycol, cyanide, hydrogen sulfide, PAHs including naphthalene and pyrene, PCBs, pentachlorophenol, phenols, sodium phenolate, styrene, sulfuric acid, toluene, trichloroethylene, xylene, coal tar, oils, lime sludge, waste alkaline rinses, mill scale and ship yard wastes. In June 2006, pursuant to the consent decree, the shipyard area, which includes the footprint of the proposed LNG facility, was removed from the consent decree (letter of June 15, 2006 from Robert E. Greaves, Chief, EPA General Operations Branch and Kendl P. Philbrick, Secretary of MDE to Robert Abate, Manager, Safety, Health and Environment, ISG Sparrows Point LLC). SPS Shipyard LLC, the site owner, subsequently submitted an application for the property to the Voluntary Cleanup Program (VCP). SPS Shipyard is completing its environmental

assessment of the property and will develop a Response Action Plan. Under the VCP cleanup will be accelerated relative to the priority that the area was assigned under the consent decree.

Much of the Sparrows Point site is constructed land created by filling nearshore areas with a variety of materials. A geotechnical survey performed in July 2006<sup>4</sup> indicates that the site is underlain by existing fills containing concrete rubble and steel slag. The fills are underlain by up to 84-feet of soft, compressible, alluvial soils. These soils are likely not suitable for foundation support without soil improvement methods such as stone columns, requiring that new structure be supported by driven H-pile foundations.

### III.B. Issues.

The Task Force identified three important issues related to land use and demographics in the area:

1. The proximity of economically distressed communities that have for generations borne the brunt of environmental pollution in the Sparrows Point area.
2. The compatibility of the proposed LNG with current and proposed industrial activities in the Sparrows Point area.
3. The existing contamination of the Sparrows Point industrial area.

In addition to the LNG facility at Sparrows Point, the proposal involves an 87-mile pipeline from the facility to southern Pennsylvania. The Task Force did not evaluate the impacts of the pipeline.

### III.C. Recommendations

- III-1. Maryland should insure that the evaluation of the LNG facility abides by state and federal Environmental Justice policies<sup>5</sup> as directed by Presidential Executive Order 12898<sup>6</sup>.
- III-2. Baltimore County, with assistance from Maryland if requested, should develop a comprehensive long-range Master Plan for the development of the Sparrows Point peninsula.
- III-3. Maryland should strongly urge FERC to fully consider the current and proposed industrial activities adjacent to the proposed LNG facility, especially with regards to cumulative impacts. In particular, FERC should consider whether an LNG facility and an ethanol production plant can be sited in close proximity to each other. Any subsequent proposal to

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<sup>4</sup> Schnabel Engineering North, LLC. Preliminary Geotechnical Engineering Study, Ethanol Plant, Lloyd Point, Sparrows Point, Baltimore Maryland. July 11, 2006.

<sup>5</sup> For an example, see the Department of Energy's Environmental Justice policy at [http://www.lm.doe.gov/env\\_justice/documents/envjus2.htm](http://www.lm.doe.gov/env_justice/documents/envjus2.htm)

<sup>6</sup>Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Executive Order 12898 issued February 11, 1994.

construct an electric generating unit should also be considered together with the LNG facility in conducting the required risk assessment.

- III-4. The Task Force recommends complete remediation of the Sparrows Point site prior to construction to prevent the release of toxic contaminants that could affect the local residents. Contaminated materials should be completely removed from the Sparrows Point Peninsula. Maryland should recommend that FERC make this a condition of the license.
- III-5. Maryland should require an independent geotechnical and engineering analysis of the proposed LNG facility to insure the design and construction methods contain an adequate margin of safety for building on debris-filled soils.

**IV. An analysis of risk and safety issues of a potential LNG facility at Sparrows Point**

Issues in SB 996	
1.	the risks and hazards of a liquefied natural gas production, storage, or regasification facility;
2.	the kind and use of the proposed production, storage, or regasification facility
6.	the emergency response capabilities near the proposed facility location;
7	the need and appropriate distance for remote siting;

IV.A. Background

A Risk and Safety Committee of the Task Force was established to evaluate potential human health and safety issues of the proposed AES facility at Sparrows Point. Given that charge, the Committee, chaired by DNR Acting Assistant Secretary Frank Dawson, contacted key regulatory authorities responsible for evaluating human health and safety issues in the licensing process, as well as local and State agencies responsible for emergency preparedness and response, and requested presentations and discussion before the full Task Force. In response to that request, presentations were made to the Task Force at their October 18, 2006 meeting by the following:

- Mr. Terry Turbin (LNG Engineering Branch, Federal Energy Regulatory Commission)
- Lieutenant Commander Laura Weems (Project Chief Waterways Management, United States Coast Guard, Sector Baltimore)
- Mr. Richard Muth (Director, Baltimore County Office of Homeland Security and Emergency Management)

Each presenter was asked in advance to address a series of questions specific to their areas of expertise and responsibility. Mr. Turbin and LCDR Weems were asked to address the FERC and USCG roles respectively, how those agencies assess risk of LNG ship traffic and facilities, and how the results of those assessments are factored into the licensing process. Mr. Muth was asked to address Baltimore County’s plans and

capabilities for planning for and responding to an emergency at an LNG facility in Sparrows Point.

#### IV.B. Issues.

Based on the invited presentations and follow-up discussions by the full Task Force and the Risk and Safety Committee, three major issues of concern were identified.

1. Calculation of Safety Zones: The USCG and FERC will calculate safety zones and procedures around LNG ships in transit, ships while berthed at the terminal, and the land around the terminal itself. These may or may not include a requirement to close the Chesapeake Bay Bridge and Key Bridge while LNG ships transit beneath or near the bridges. The Task Force was concerned that these calculations will be based in large part on assumptions and models that may not adequately protect public health. There was also concern that the safety zones around LNG ships in transit may be reduced to accommodate recreational and commercial traffic on the water, and thereby further increase the risk to the public. In addition to the methods typically used by FERC to calculate safety zones around the LNG facility, the U.S. Department of Housing and Urban Development (HUD) provides guidance for locating residences and any other facility or area where people may congregate an acceptable separation distance (ASD)<sup>7</sup>. The HUD ASD method, which was developed to assess risk of pressurized containers, often results in larger calculated safety zones than those used by FERC in LNG siting decisions, often by a factor of ten.
2. Emergency evacuations of local communities: There was considerable concern by the Task Force that the existing road network in the area of the proposed facility, the fact that the proposed facility would be located on a peninsula with limited avenues for egress, the relatively large local population that do not speak English, and the large number of schools and churches in the area, would all serve to make an effective and safe evacuation in the event of an emergency impossible.
3. Emergency response capability: Neither Baltimore County, the surrounding local governments, nor the State, have the equipment or staff to adequately respond to an emergency situation at an LNG ship or land facility. The Task Force was concerned that these capabilities do not currently exist, and that the State and local governments would incur an extremely large cost to adequately prepare for response to an accident should an LNG facility be built at Sparrows Point.

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<sup>7</sup> HUD Blast Overpressure Safety Standard (CFR 51.204-24)

#### IV.C. Findings and Recommendations

##### Senate Bill 996 Issue #1: The risks and hazards of a liquefied natural gas production, storage, or regasification facility.

##### Findings:

- IV-1. There is considerable public concern about the potential risks of LNG traffic in the Chesapeake Bay and of the terminal, storage, and regasification facility at Sparrows Point.
- IV-2. Much of FERC's and the USCG's assessments of risk from LNG plants are based on a report conducted by Sandia National Laboratories (*Guidance on Risk Analysis and Safety Implications of a Large Liquefied Natural Gas (LNG) Spill over Water*, 2004), which is derived largely on models and assumptions. These models have not been verified at the scale of the proposed LNG facility.

##### Recommendations:

Maryland should strongly recommend through the comment process that:

- IV-1. FERC and USCG take into account all studies on the risks of LNG not incorporated into the Sandia report (examples include *LNG Facilities in Urban Areas. A Security Risk Management Analysis for Attorney General Patrick Lynch, Rhode Island*, by Richard Clarke, 2005; *U.S. Environmental Protection Agency, Guidance Document for Hazard Analysis*, 1987), including those not publicly available. Also the LNG guidance policies used by European nations and Australia in licensing LNG facilities in their countries should be considered when making decisions on this and any future LNG applications.
- IV-2. When FERC and USCG interpret any findings based on models and assumptions to estimate the level of risk from the proposed LNG facility, they should include safety factors adequate to account for uncertainties in the models. They should use calculations from any recognized authority that provide the largest safety area.
- IV-3. FERC and USCG should require experiments on the hazards of LNG releases on the scale that would be experienced by a catastrophic failure of a tanker or land based storage tank before any final decisions are made on this application.

##### Senate Bill 996 Issue #2: The kind and use of the proposed production, storage, or regasification facility.

Findings:

- IV-3. The proposed LNG terminal, storage tanks, and regasification facility are typical of those used in the LNG industry. However, at Sparrows Point in addition to the LNG facility, the pre-filing notification describes a dredge material recycling plant and the potential siting of a power plant.
- IV-4. Sparrows Point Peninsula is the site of several industrial activities, and others are proposed. The cumulative and interactive impacts of the combined activities are not fully known.

Recommendation:

- IV-4. Maryland should assure that the cumulative and interactive impacts of the combined activities on Sparrows Point are evaluated once the formal application has been filed with FERC.

Senate Bill 996 Issue #6: The emergency response capabilities near the proposed facility location.Findings:

- IV-5. Adequate communication to the public during an emergency is a major concern due to lack of effective means of public notification due to insular or non-English speaking communities.
- IV-6. The road system is inadequate for evacuating public from the area in a reasonable amount of time. Several potentially affected communities have only a single road for evacuation.
- IV-7. Many local residents rely completely on public transportation.
- IV-8. Baltimore County does not have sufficient resources to respond to a major emergency at an LNG plant.

Recommendations:

Maryland should strongly recommend through the comment process that:

- IV-5. FERC requires that The Emergency Response Plan must include an effective and rapid means of notifying and evacuating the public in the event of an emergency. This plan must specifically address the road capacity for evacuation and evacuating those dependent on public transportation, and be acceptable to local and State agencies. This should include on-going public education efforts on notification and evacuation methods, as well as on-going drills for emergency responders.

- IV-6. The Emergency Response Plan must clearly identify the applicant as the responsible party for covering both the direct costs to respond to an emergency (e.g., high expansion foam capabilities, fire boats, emergency response personnel, planning for and implementing evacuations) as well as the indirect costs of planning and preparation (e.g., staff and management time after the emergency devoted to response and restoration, training and refresher training for emergency responders).

Senate Bill 996 Issue #7: The need and appropriate distance for remote siting:

Findings:

- IV-9. FERC will determine land exclusion zones around the proposed plant based on site-specific calculations and recommendations from the Sandia report as established by National Fire Protection Act 59A: *Standard for the Production, Storage, and Handling of LNG*. Two sets of exclusion zones will be set:
- a. “Thermal Radiation Exclusion Zones” which establishes several exclusion zones around the land storage tanks and the vaporization, process, and transfer areas within which certain activities and structures are prohibited. These include the outdoor assembly of 50 or more people; offsite structures used for occupancies or residences, and property lines that can be built upon. (Title 49, CFR, Part 193, Section 193.2057: *Federal Safety Standards for LNG Facilities*).
  - b. “Vapor Dispersion Exclusion Zones” which requires that provisions be made to minimize the possibility of flammable vapors from a design spill from reaching a property line that can be built upon. (Title 49, CFR, Part 193, Section 193.2059: *Federal Safety Standards for LNG Facilities*).

The company must have control over the identified exclusion zones (i.e. ownership or easements).

FERC does not have standard distances for these exclusion zones, but rather bases their decisions on unique characteristics of each proposed plant. These exclusion zones have not yet been set by FERC for the AES proposal at Sparrows Point, although AES has calculated proposed exclusion zones<sup>8</sup>. The exclusion zones proposed by AES are significantly smaller than those at Cove Point. FERC established exclusion zones for the Dominion Cove Point LNG facility in Calvert County and the AES proposed exclusion zones for the Sparrows Point facility are as follows:

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<sup>8</sup> Mr. Kent Morton (AES) at the LNG Task Force meeting, November 17, 2006.

	<b>Dominion Cove Point</b> (Established by FERC)	<b>AES Sparrows Point</b> (Proposed by AES)
Thermal Radiation Exclusion Zones around LNG storage tank impoundments		
No outdoor assembly of 50 or more people:	1,423 ft.	949 ft.
No offsite structures used for occupancy or residence:	771 ft.	737 ft.
Property line that cannot be built upon:	537 ft.	394 ft.
Vapor Dispersion Exclusion Zone around LNG storage tank.	1,200 ft.	262 ft.

It is important to note that the exclusion zones required by FERC around the proposed AES Sparrows Point LNG facility may be greater or less than the zones established by FERC at Dominion Cove Point, as they are two different facilities. A significant difference is that the Cove Point terminal off loads approximately 1 mile from the shoreline while the proposed Sparrows Point LNG facility is shoreside. The basic characteristics of the existing Cove Point facility, the expanded Cove Point facility (approved by FERC and currently under construction), and the proposed Sparrows Point facility are compared in Table 7:

<b>Description</b>	<b>Existing Cove Point</b>	<b>Expanded Cove Point</b>	<b>Proposed Sparrows Point</b>
LNG Storage Tanks	5	7	3
Total Storage Capacity (m <sup>3</sup> )	375,000	695,000	480,000
Natural Gas Capacity (bcf/day)	1.0	1.8	1.5
Developed lands (acres)*	108	130	80
Ship traffic (ships/year)	~90	~200	~130
Required dredging (million cubic yards)	0	0	2.5 – 4.0

\*Sparrows point proposal includes area developed for cogeneration and sediment processing (60 acres LNG + 20 acres cogeneration and sediment).

IV-10. The USCG has not yet submitted their Waterway Suitability Report (WSR), which will provide recommendations to FERC on the size of any marine safety and security zones around LNG tankers in Chesapeake Bay. The USCG may recommend to FERC that marine safety and security zones be modified from recommendations in the Sandia report to lessen the impacts to commercial and recreational activities, and in recognition of the physical configuration of the waterway. (Title 33, CFR, Part 165: *Regulated Navigation Areas and Limited Access Areas*). (See section V below for more on the impacts to commercial and recreational activities.)

LNG tankers transiting the Chesapeake Bay to the Dominion Cove Point LNG terminal have a 500-yard safety and security zone around the ship while in transit and while berthed at the Cove Point offloading platform (Title 33, CFR, Part 165, Sections 500 and 502).

IV-11. Additionally, the USCG has not yet made a recommendation via the Waterway Suitability Report on whether or not the Chesapeake Bay Bridge and/or the Key Bridge will have to be closed to traffic during the transit of LNG tankers in the vicinity. Currently the Tobin Bridge in Boston must be closed to vehicular traffic when LNG tankers transit beneath it en route to the Tractebel LNG terminal. The Delaware Memorial Bridge would not be closed for vehicular traffic under a proposed LNG terminal on the Delaware River in New Jersey, but this is currently being litigated.

#### Recommendations:

- IV-6. The State should conduct its own calculations of applicable exclusion zones to ensure agreement with the applicant, FERC, and USCG calculations, and to take into account local and State concerns regarding impacts to recreational and commercial activities on the waterways, impacts to traffic and construction activities on the Bay Bridge, etc. The State's conclusions should be forwarded to FERC as conditions on any potential license to the applicant.
- IV-7. Marine safety and security zones are calculated based on safety and security issues and must not be compromised to accommodate impacts on recreational and commercial activities. If the impacts to recreational and commercial activities are unacceptable, then Maryland should recommend to FERC that the project must not move forward.

**V. Environmental consequences of a potential LNG facility at Sparrows Point.**

Issues in SB 996	
8.	the effect of the proposed facility location on recreational and commercial boating and fishing and crabbing in the area;
9.	the impact on the environment, especially on water quality, due to the quality of the dredged material from the large scale dredging that is intended to be undertaken to accommodate the ships transporting the liquefied natural gas; and
10.	the impact on the ability of residential property owners near the proposed facility to retain access to their properties by way of the waterway.

V.A. Background

Much of the Sparrows Point peninsula and adjacent waters are contaminated due to legacy industrial activity. Portions of the former Bethlehem Steel site have contaminated soils and the site is targeted for clean-up under a consent decree. However, the proposed LNG site is no longer part of the consent decree, but has entered the Voluntary Cleanup Program. The near-surface sediments in the lower Bear Creek near the proposed LNG site contain high levels of organic pollutants (hydrocarbons and PAHs), metals and sulfides, and are often toxic to native organisms. While the area remains one of the most contaminated in Maryland, there is some recent indication of improved water quality, likely linked to reduced industrial activity on the site. Such ‘natural recovery’ of the land itself will not occur without active remediation of Sparrows Point soils.

The contamination of the area raises concerns about potential releases of pollutants during any construction. For example, winds may carry resuspended polluted soils away from the site, distributing contaminants into local communities. Also, dredging contaminated sediments will release contaminants into the overlying water, even if the best available environmental dredging techniques are used. Processing of dredged sediments on the site will likely discharge water from the site which, if untreated, would adversely impact the surrounding water.

As with almost all industrial activities, once in operation an LNG facility will release pollutants into the air and water. These releases will be regulated by the Maryland Department of the Environment through Clean Air Act and Clean Water Act permits. Maintenance dredging to maintain navigation channels into the facility, including dredging of the turning basin, will continue to generate contaminated dredge material requiring treatment and disposal.

Since LNG operations will restrict use of a portion of the waterway during LNG tanker movement and off-loading, there is a concern that an LNG facility at Sparrows Point would impact commercial and recreational use of the waterway in the area. The Bear Creek area is densely populated, and many in the community use the waterway for recreation. Bear Creek may also be suitable spawning habitat for commercially or ecologically important fish species.

The Task Force also examined the rationale for building an LNG facility at Sparrows Point in order to consider the 'no action' alternative to the proposal. The proposed facility and pipeline would deliver natural gas to southern Pennsylvania, to be further distributed to customers in the northeast. Maryland would not directly receive natural gas from the proposed facility, and any impact on Maryland energy costs or stability would likely be indirect. The project is justified on projections of future energy demands based on 'business as usual' energy use. As with any commodity, price and supply of energy is controlled by supply and demand. The Task Force examined whether improved energy efficiency in the region may achieve a comparable impact to building an additional LNG facility in Maryland.

### V.B. Issues

The environmental issues considered by the Task Force include (a) the impact of dredging, including treatment and disposal of dredged material, (b), the environmental impacts of construction and operation of an LNG facility at Sparrows Point, (c) the loss of waterway use, and (d) the impact of an LNG facility at Sparrows Point on Maryland energy supplies.

### V.C. Findings and Recommendations

#### *VC.1. Dredging.*

#### Findings:

- V-1. The volume generated by the proposed project would greatly exceed the already limited capacity for harbor material disposal.
- V-2. Unconfined disposal of spoil from Baltimore Harbor is prohibited outside of Baltimore Harbor; unconfined disposal of spoil from a "Baltimore County tributary" is prohibited within five miles of the Hart-Miller-Pleasure Island chain; and a contained disposal site may not be approved within the same five mile limit.
- V-3. The applicant has indicated that they will propose to build an on-site facility to process the dredge material prior to shipping off-site. There is no facility in the region to process the dredged sediment into a product that could be classified as an innovative use and therefore no precedent for permitting such a facility.
- V-4. The limited capacity to dispose of Baltimore Harbor sediments requires careful prioritization of Harbor dredging projects.
- V-5. Suspended sediments, toxic substances and nutrients will be released during dredging. The quantity released will depend on the nature of the

dredging technique used, which must be designed to minimize pollutant release to the water column. Even using the best available dredging and disposal technologies, the large volume of materials handled will result in an overall large release of contaminants.

Recommendations:

- V-1. Maryland should continue to prioritize the use of disposal capacity in Baltimore Harbor for required maintenance of navigation channels.
- V-2. State and Federal regulatory agencies should not permit dredge sediment disposal or disposal process operation until disposal capacity is clearly and legally documented and the regulatory path defined.
- V-3. A formal opinion from the Attorney General of Maryland as to the legality of processing of dredge materials on the proposed location under the current law should be requested prior to granting permission to dredge a deepened channel.
- V-4. State and Federal permitting agencies for any discharge permits must consider the potential for long-term impacts in addition to acute impacts because sediments in the proposed project area typically contain bioaccumulative contaminants. Impacts from dredging and de-watering should be evaluated cumulatively with existing impacts.

*V.C.2 Environmental Impacts.*

Findings:

- V-6. Baltimore Harbor has poor environmental quality due to excessive levels of nutrients and toxic pollutants. During the past 10 years, considerable resources have been spent to assess and manage these problems, and substantial efforts to improve the Harbor continue.
- V-7. The sediment in some areas surrounding the proposed facility is extremely contaminated and local neighborhoods have borne a disproportionately large pollution burden for several generations.
- V-8. Since the reduction of industrial activity at the Sparrows Point site, there is some evidence of improvement in environmental conditions in Bear Creek. Dredging and construction will increase pollution.

Recommendations:

- V-5. Maryland should work through existing regulatory authorities and voluntary incentives to insure that any new major activity in the Sparrows

Point area is ‘environmentally positive’ (i.e., the area’s environmental quality is better than if the project did not occur). Environmental impacts shall be avoided or minimized to the extent possible and the remaining impacts offset by mitigation.

- V-6. Maryland should ensure, through the Water Quality Certification and the Consistency Determination, that the proposed activity is consistent with existing Harbor-wide remediation and restoration programs.
- V-7. No activity should be allowed at Sparrows Point that interferes with or delays the required environmental remediation of the site.
- V-8. Maryland shall be a strong advocate for the residents of the surrounding communities, ensuring that any development on the site is consistent with the principles of environmental justice.

*V.C.3. Effect of the proposed facility on recreational and commercial boating, fishing and crabbing.*

Findings:

- V-9. In 2005, there were 200,532 boats registered in Maryland, of which 21,357 were registered in Baltimore County, and 3,032 were registered in Baltimore City<sup>9</sup>.

	Pleasure	Commercial Fishing	Other	Total
Baltimore County	21,004	14	339	21,357
Baltimore City	2,933	0	99	3,032
State Total	172,069	735	4,304	200,532

- V-10. The Patapsco River is the site of a significant amount of commercial fishing activity. Between 2003 and 2006, an annual average of approximately 85,000 pounds of fish and shellfish were commercially harvested from the Patapsco River<sup>10</sup>. Hard blue crabs comprise approximately 75% by weight of the Patapsco River commercial fishery harvest.
- V-11. Approximately 500 charter boat trips per year originate in Baltimore Harbor for recreational fishing, sightseeing, and other services (pers.

<sup>9</sup> Maryland Department of Natural Resources, Licensing and Registration Service

<sup>10</sup> Maryland Department of Natural Resources, Fisheries Service

comm. to Russell Donnelly from the Watermens Association). Charter fishing boats must report to DNR where they stop to fish. The Patapsco River is utilized by charter fishing boats on a highly variable basis depending on annual variation in the location of fish populations. Between 2003 and 2005, the charter boat fishing industry reported a low of four fishing trips in 2003 and a high of 100 fishing trips in 2004 (DNR Fisheries Service).

- V-12. Evidence is strong that the Bear Creek area is currently a spawning habitat for white perch, and was historically for other species<sup>11</sup>.

#### Recommendations:

Maryland should strongly recommend through the comment process that:

- V-9. FERC implement marine safety and security zones based solely on safety and security considerations and these must not be compromised to accommodate impacts on commercial and recreational activities. If the impacts on commercial and recreational activities are unacceptable, then Maryland should recommend to FERC that the project not move forward.
- V-10. FERC, with input from Maryland DNR, should accurately calculate the economic and cultural impacts to the recreational and commercial communities resulting from the inevitable loss of access to the waterway, and require that the applicant compensate these communities appropriately.

#### *V.C.4. Energy supply and policy*

#### Findings:

- V-13. In general, any new facility would increase the reliability of natural gas supply to the region, which may influence utility costs.
- V-14. The applicant's stated purpose for the proposed facility is to serve customers outside Maryland. The Task Force is not aware of any plans to build a gate station from this facility feeding to Maryland consumers.
- V-15. The use of natural gas typically has less overall environmental impact than other fossil fuels, including coal.
- V-16. Current LNG imports at Cove Point are approximately twice the current natural gas consumption in Maryland, providing LNG for regional distribution. After expansion of Cove Point, which has been approved by FERC and is currently underway, the capacity of that facility will be more

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<sup>11</sup> Maryland Department of Natural Resources, Fisheries Service

than three times the projected natural gas consumption in Maryland. The citizens of Maryland disproportionately bear the costs of environmental impacts, security, and emergency preparation and response.

- V-17. While the proposed facility will increase natural gas supplies to the mid-Atlantic and Northeastern U.S., greater economic impact could result from reducing energy demand through modernizing equipment in the region. Such reductions would have other positive environmental benefits beyond not constructing and operating the proposed facility. Comprehensive studies<sup>12</sup> have demonstrated that cost-effective demand reduction potential is large enough to offset population increase and substantially lower overall demand.

#### Recommendations:

- V-11. Maryland should adopt a comprehensive energy strategy that balances supply-side (increased energy production) and demand-side (increased efficiency, conservation) policies.
- V-12. Since this facility would push the region toward a supply-side response to energy demand and thereby undermine demand-side strategies, State and federal agencies should require the applicant to invest significantly in statewide demand management programs in Maryland. This should include utility or state-run energy efficiency programs in addition to economic assistance to improve home heating and public transportation in the area.

## **VI. Overall Recommendations**

- VI-1. The Task Force has identified several major issues of concern for which the applicant has not indicated adequate solutions. Maryland should advise FERC, and use existing State law and permitting authority to the maximum extent possible, to require that unless and until solutions to these critical issues are found, the State would not consider that the safety of the surrounding communities and environmental integrity have been adequately protected as required by the relevant laws. The most significant of these issues include:
- a. Notification, transportation and evacuation capabilities are clearly inadequate.

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<sup>12</sup> American Council for an Energy Efficient Economy (ACEEE), "Impacts of Energy Efficiency and Renewable Energy on Natural Gas Markets: Updated and Expanded Analysis: April 2005; New York State Energy Research and Development Authority (NYSERDA) "Natural Gas Energy Efficiency Resource Development Potential in New York", Final Report, October 2006.

- b. The feasibility of processing the required volume of dredged material in a legal and safe manner with existing technology and legal limitations on dredged material disposal in this area is doubtful.
  - c. Established principles of environmental justice would be severely violated.
- VI-2. The applicant should be required to pay all costs borne by the State and local governments for environmental, security and safety protection resulting from any proposed facility.
- VI-3. An environmentally, socially, and economically responsible comprehensive development plan for the entire Sparrows Point Peninsula should be prepared by Baltimore County, with State assistance if requested,. Any development on the Sparrows Point Peninsula should not conflict with current and planned environmental restoration efforts and should result in net environmental benefit.
- VI-4. To ensure future economic viability and energy security, Maryland should develop a comprehensive energy policy that balances supply and demand.
- VI-5. Maryland and Baltimore County should continue to be advocates for the local communities. All available legislative and judicial avenues to direct responsible development of the Sparrows Point peninsula should be investigated.
- VI-6. A state ombudsman should be designated to communicate the status of development of Sparrows Point to the public.

## **VII. Acknowledgements**

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