

# The Maryland Certificate of Public Convenience and Necessity (CPCN) Process

**April 12, 2017** 

Susan Gray

Maryland Department of Natural Resources

Power Plant Research Program

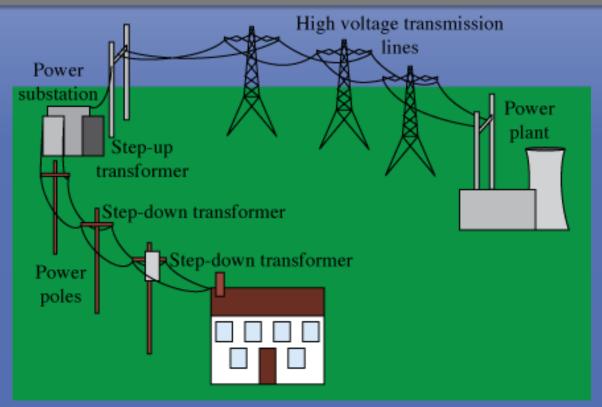
#### **Presentation Purpose**



- Set the stage briefly provide facts on how Maryland gets its electricity
- Step through time utility restructuring and how it shaped how power plants are sited and permitted today in Maryland
- Basic principles of how power plants are permitted in Maryland - the CPCN process

#### **Electric Service**





- Generation
- Transmission
- Distribution
- Behind the Meter

Maryland is a net importer of electricity. We consume more than we generate.

Maryland imports electricity from PJM.

## PJM Interconnection operates the grid



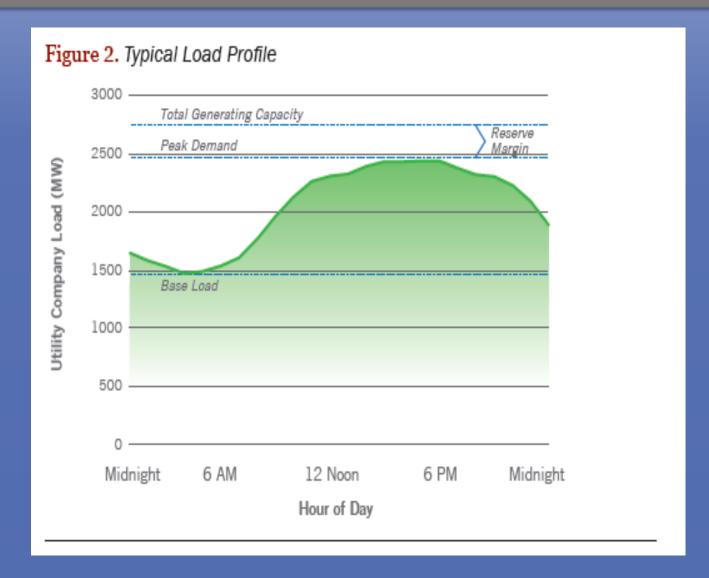
- Independent, federally regulated
- Balances supply & demand through reliable transmission
- Plans for new TLs and TL upgrades
- Does NOT direct construction of new generation
- For Maryland,
  - Merchant Generators build and operate generation;
  - Electric Utilities build and maintain
     Transmission & Distribution Lines

#### **PJM** is our RTO



#### **Typical Load Profile**

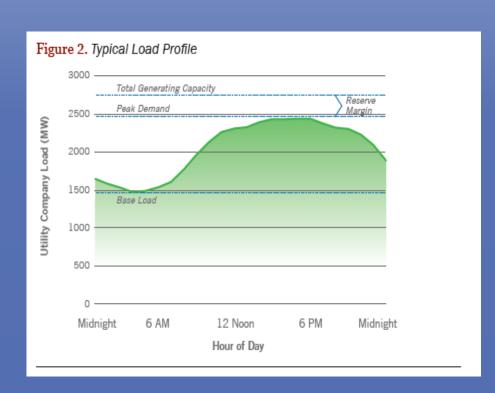




### PJM Power Plant Dispatch



- Plants <u>least expensive</u> to run operate almost continuously in order to meet minimum electric demand (<u>base-load</u> <u>plants</u>: coal, nuclear, some natural gas)
- Plants more expensive to run with the ability to quickly send electricity onto the grid to meet peak demand (natural gas, oil, hydro)
- PJM also uses Demand Response



Resource: PPRP Electricity Fact Book

### PJM Interconnection (Cont.)



- What must an Electric Generator Developer do to connect to the grid?
  - Submit Interconnection Request
  - Triggers a series of 3 studies among which PJM determines the specific transmission system upgrades (if any) required to meet reliability criteria
    - Puts the requested generator in the PJM Queue
    - Takes 12 to 24 months to complete the process
    - Without an Interconnection Agreement, Developer risks the possibility of a stranded asset.

#### Presentation Purpose



- Set the stage
- Step through time utility restructuring and how it shaped how power plants are sited and permitted today in Maryland

## 1910: Creation of the Maryland PSC



- Established by the General Assembly
- Independent agency within State government
- Many responsibilities including approval of Maryland electric generating plants and transmission lines through a process called the CPCN – Certificate of Public Convenience and Necessity

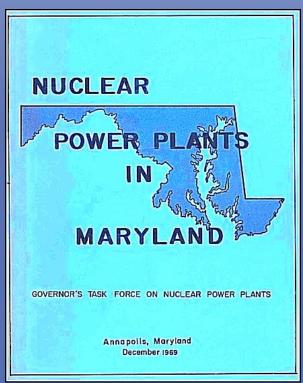
### 1971: The Power Plant Siting Act



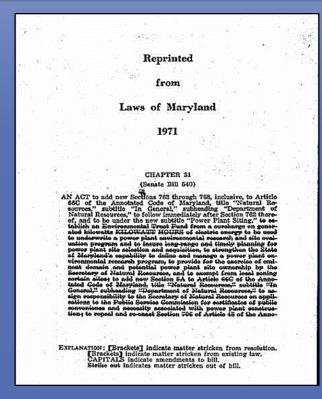


Concerns over the ability of the State to provide significant technical review of the impacts of the proposed Calvert Cliffs Facility

resulted in



Then Governor Mandel's 1969 Task Force Report on Power Plant Review



The Passage of The Power Plant Siting Act of 1971

Ultimately resulting in

#### Creation of PPRP



Reprinted

from

Laws of Maryland

1971

CHAPTER 31 (Senate Bill 540)

AN ACT to add new Sections 763 through 768, inclusive, to 66C of the Annotated Code of Maryland, title "Natisources," subtitle "In General," subheading "Depart Natural Resources," to follow immediately after Section 76x course of, and to be under the new subtitle "Power Plant Siting," to exhabite an Environmental Trust Fund from a surcharge on generated kilowatts KILOWATT HOURS of electric energy to be used to underwrite a power plant environmental research and site evaluation program and to insure long range and timely planning for power plant site selection and acquisition, to strengthen the State of Maryland's capability to define and manage a power plant environmental research program, to provide for the exercise of eminent domain and potential power plant site ownership by the Scerctary of Natural Resources, and to exempt from local zoning certain sites; to add new Section 5A to Article 66C of the Annotated Code of Maryland, title "Natural Resources," subtitle "In Conorel," subheading "Department of Natural Resources," to assign responsibility to the Secretary of Natural Resources," to easign responsibility to the Secretary of Natural Resources, applications to the Public Service Commission for certificates of public convenience and necessity associated with power plant construction; to remeal and to canada Section 706 of Article 42 of the Anno-

EXPLANATION: [Brackets] indicate matter stricken from resolution.

[Brackets] indicate matter stricken from existing law.

CAPITALS indicate amendments to bill.

Strike out indicates matter stricken out of bill.

#### For the CPCN, PPRP:

- Conducts a comprehensive, objective assessments based on sound science
   of electrical generation and transmission lines
- Coordinates a consolidated State
   Agency review process

#### 7 Secretaries Letter and **Recommended Licensing Conditions and PPRP ERD**



PPSE-PB-1

DNR Exhibit **Recommended Licensing Conditions** 

The Honorable Glenn F. Ivev Chairman Public Service Commission 6 St. Paul Center Baltimore, Maryland 21202

Re: Case No. 8838

Dear Chairman Ivey:

In accordance with Section 3in Section 7-207 and 7-208 of the Pul recommendation in Case Number 883 Environment, Agriculture, Transporta Office of Planning and the Maryland conditions relate to the application for Prince George's County to construct Sanitary Landfill near Upper Marlbon

As set forth more fully in the landfill gas collection at the Brown S County Correctional Center. Four en project. Electricity generated from th Correctional Center and/or be sold to Utility Regulatory Policies Act. The be flared, while providing needed ele

Based on our review of the ap date, we have concluded that the site accordance with all applicable enviro attached recommendations as condition impacts associated with the proposed Review Report for the Brown Station supplied as an exhibit in this proceed record, should these recommendation and conditions for the project.

Sincerely.

Department of Agriculture

Department of Business and Economic Development

Office of Planning

John D. Porcari Department of Transportation

Frederick H. Hoover, Jr.

Maryland Energy Administration

Department of the Environment

Department of Natural Resources

Brown Station Road Landfill Generator **General Requirements** 

Except as otherwise provided for in the following provisions, the application for the Certificate of Public Convenience and Necessity (CPCN) is considered to be part of this CPCN (certificate) for the Prince George's County Brown Station Landfill Project. The application consists of the original application received by the Maryland Public Service Commission (PSC) on March 22, 2000. Construction and operation of the facility shall be undertaken in accordance with the CPCN application and subsequent amendments. If there are any inconsistencies between the certificate conditions specified below and the application, the conditions in this certificate shall take precedence. In the application, estimates of dimensions, volumes, emission rates, operating rates, feed rates and hours of operation are not deemed to constitute enforceable numeric limits except to the extent that they are necessary to make a determination of compliance with applicable

PSC Case No. 8838

If any provision of this certificate shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provision shall be considered severed and deleted from this certificate.

#### Air Quality Requirements

- Representatives of the Maryland Department of the Environment, Air and Radiation Management Administration (ARMA) shall be afforded access to the Brown Station Landfill property at any reasonable time to conduct inspections and evaluations necessary to assure compliance with the certificate. The Permittee shall provide such assistance as may be necessary to effectively and safely conduct such inspections and evaluations by representatives of the Department, that, may include but need not be limited to the following:
  - inspecting construction authorized under this certificate;
  - sampling any materials stored or processed on site, or any waste, or discharge into the environment:
  - inspecting any monitoring or recording equipment required by this certificate or applicable regulations;

#### 1999: Deregulation



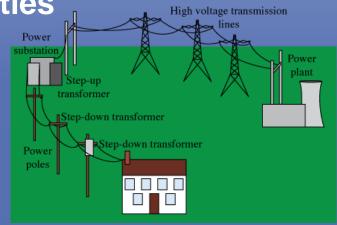
- Maryland General Assembly passed legislation Electric Customer Choice and Competition Act of 1999
  - Many other (but not all) states deregulated.
- Goal:
  - provide consumers with the <u>lowest possible prices</u> for electricity
  - allow <u>customers to choose</u> their power supplier
  - provide incentives for the creation and development of innovative products and services.

#### Before 1999



Vertically integrated electric utilities

- Regulated monopolies responsible for generation, transmission & distribution services
- Rates set by the PSC to recover reasonable costs and earn a fair return on investment



- Power plants were constructed to ensure reliability & minimize costs to ratepayers
- Utilities looked at alternative sites for generation and transmission as part of their <u>integrated planning process</u>.
- Competitive firms prohibited from marketing and selling generation service within the franchised service area of the utility

#### After 1999



- Divestiture of Maryland's utility power plants
- Relieved the utilities of their integrated planning function
  - The market determines the proposed type, size, and location of new generation
- Made retail generation competitive; so the PSC
  - Doesn't regulate the cost of electricity generated by plants located in Maryland
  - Is responsible for setting rates for electric distribution
  - Approves new/modified electric generating plants and transmission lines via the CPCN process

#### **Back to 2017**



What must a Generator do to construct and operate a Power Plant in MD?

- PJM Interconnection Agreement
- Public Service Commission CPCN
- County Permits
- Other State and Federal Permits

Resource: PPRP Cumulative Environmental Impact Report -18 Chapter 1 and Appendix A for a more complete listing. (http://pprp.info/ceir18/HTML/Report-18-Chapter-1.html)

### **Presentation Purpose**



- Step through time
- Basic principles of the CPCN process

### CEIR-18, Chapter 1, CPCN Process





#### Power Plant and Transmission Line Licensing

The PSC is the regulating entity whose jurisdiction includes licensing power generating facilities and overhead transmission lines greater than 69 kilovolts (kV) within the state. The PSC is an independent commission created by the State Legislature with commissioners appointed by the Governor for set terms.

An electric company that is planning to construct or modify a generating facility or a transmission line must receive a permit, called a Certificate of Public Convenience and Necessity (CPCN) from the PSC prior to the start of construction. The approved CPCN constitutes permission to construct the facility and incorporates several, but not all, additional permits required prior to construction, such as air quality and water appropriation (see Appendix A).

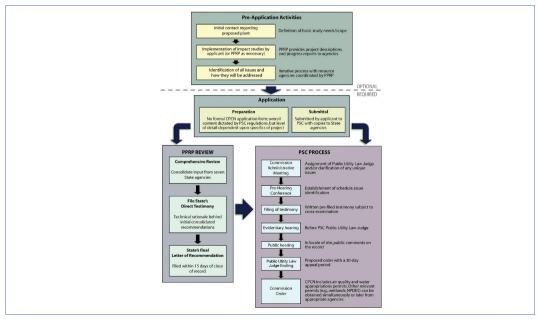
Applications for a CPCN are reviewed by the PSC, or a delegated Public Utility Law Judge, in a formal adjudatory process that includes written and oral testimony, cross examination, and the opportunity for full public participation. Parties to a CPCN licensing case include the applicant, the PSC Staff, the Office of People's Counsel (acting on behalf of the Maryland ratepayers), and PPRP (acting on behalf of DNR and six other State agencies and private environmental organizations, as well as individuals with a specified interest, also may have a right to participate as intervenors in these hearings. The broad authority of the PSC allows for the comprehensive review of all pertinent issues and was designed in 1971 to be a "one-stop shop" for power plant licensing.

The CPCN licensing process provides an opportunity for the State to examine all of the significant aspects and impacts of a proposed power facility or transmission line, including the cumulative effects of interrelations between various impacts. This is a unique process within the State's regulatory framework. The CPCN mechanism recognizes that electricity is a vital public need, but its generation and transport can result in impacts to the state's natural, social, and cultural resources. A distinguishing feature of PPRP's role in the CPCN process is the high degree of interagency coordination involved. PPRP coordinates the project review and consolidates comments from the Departments of Natural Resources, Environment, Agriculture, Commerce, Planning, and submits these recommendations to the PSC on behalf of the State agencies. In many instances, conditions go beyond regulatory process.

In the case of multiple facilities proposed in close proximity to each other or to existing plants, or for transmission lines that span multiple regions and resource areas, PPRP includes cumulative impacts within the consolidated review process. In such a case, impacts to air, water, terrestrial, socioeconomic, and other resources are evaluated and compared to any identified thresholds of acceptability. Additionally, the cumulative analysis identifies any licensing conditions needed to address cumulative impacts.

Figure 1-1 illustrates the elements of the CPCN licensing process. The primary steps in the CPCN licensing process are described below

Figure 1-1 The CPCN Licensing Process



















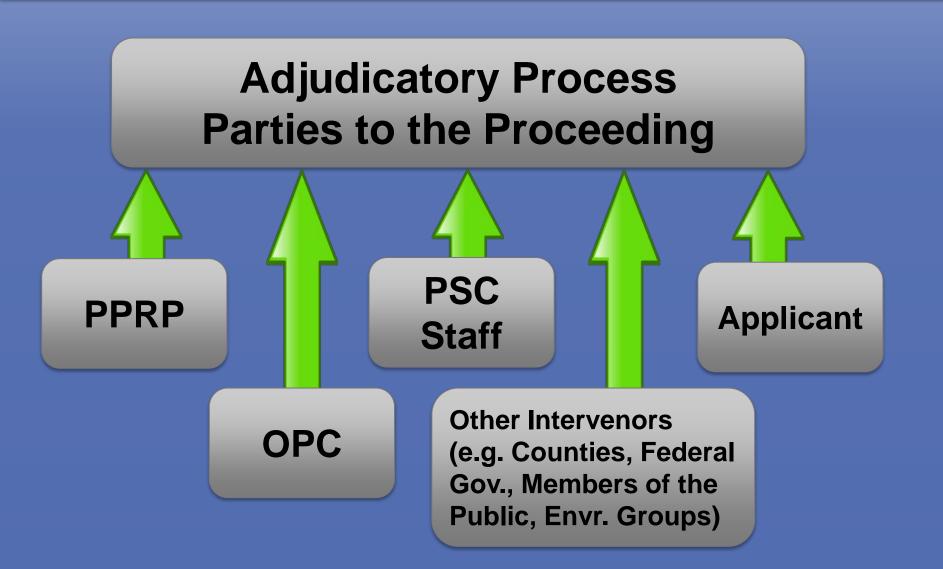
#### **CPCN Exemptions**



- Generation capacity less than or equal to 2MW
- On-site generation capacity (up to 25 MW) and at least 10% is consumed on site
- On-site generation capacity (up to 70 MW) and at least 80% is consumed on site
- Land-based wind generation capacity (up to 70 MW)

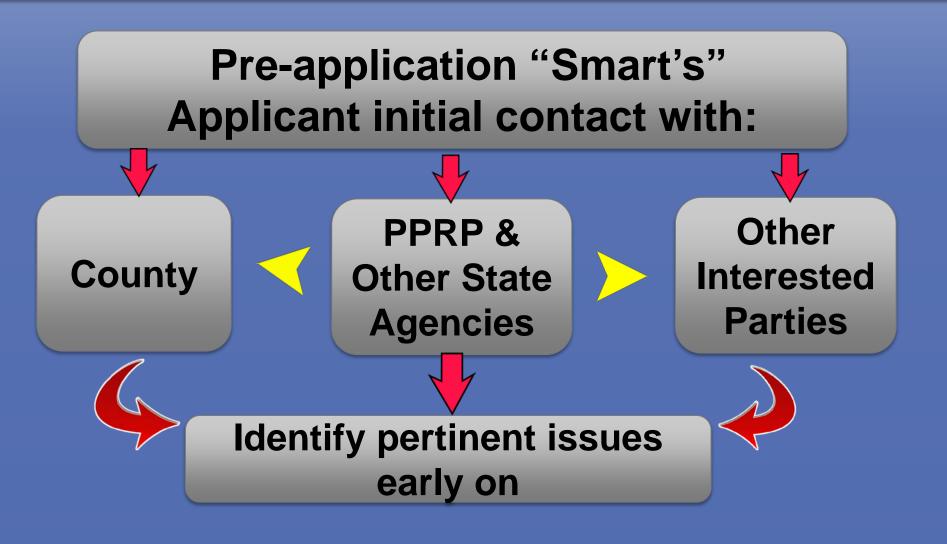
### What is the CPCN Process?





## Before a CPCN Application is Filed





#### **CPCN Process**



Application (Generator > 2MW)



PSC Admin Mtg; Judge Assigned to Case



Prehearing Conference





Discovery (Data Requests)



Filing of
Testimony and
Supporting
Documentation





Evidentiary and Public Hearings; Legal Briefs



PSC
Proposed
Order incl.
Permit
Conditions



Order
Becomes
Final in 30
Days Unless
Appealed

### **CPCN** Appeals



#### Any party to the Proceeding Can Appeal

- 1. Utility Law Judge Proposed Order can be appealed to the full 5-Member PSC Commission
- 2.5-Member Commission order can be appealed to the Circuit Court
- 3. Circuit Court Order can be appealed to the Court of Special Appeals

#### Timeframe for Appeals: 6 to 24 months

(Note: Without certain, additional legal actions, Developer can construct at its own risk once PSC issues its Final Order)

#### **Due Consideration**

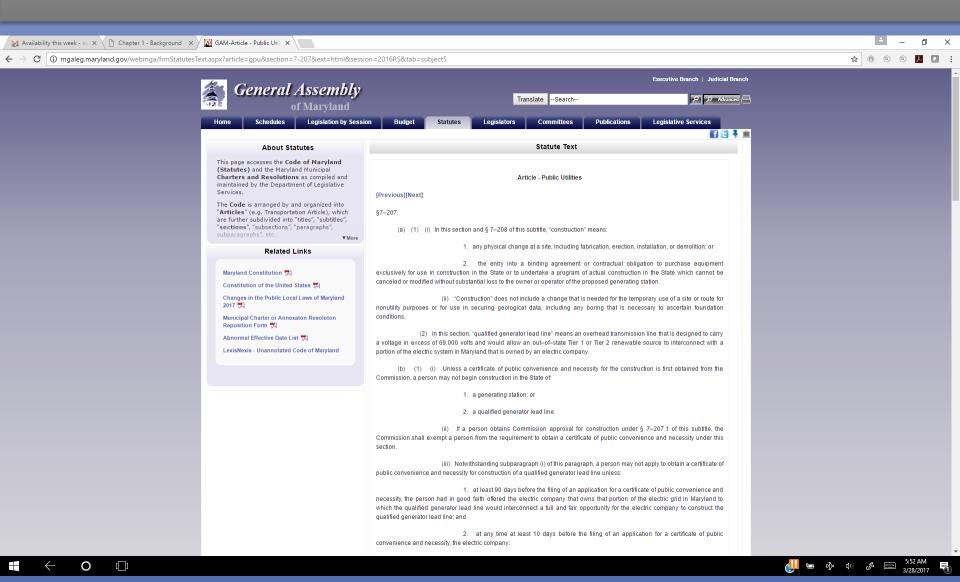
MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Reference: PUC §7-207

- PSC can take final action on a CPCN application only after due consideration of:
  - (1) the recommendation of the governing body of the county or municipal corporation
  - (2) the effect of the generating station on:
    - stability & reliability of the grid
    - environmental impacts
    - economics/socioeconomics
    - safety (e.g., aviation safety)
  - (3) 2017 General Assembly Amendments

#### **PUC § 7-207**





#### **Notice**

Reference: PUC §7-208

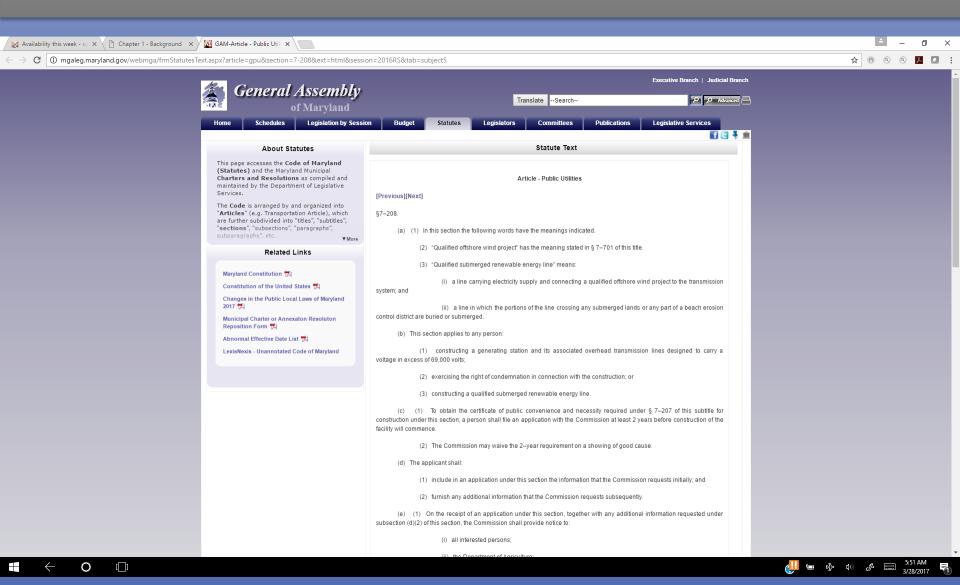


On receipt of an CPCN application, the Commission provides notice to:

- the governing body of each county or municipal corporation of the generating station's location;
- the governing body of each county or municipal corporation within 1 mile of the of the generating station's location;
- each member of the General Assembly representing the affected County(ies)
- 2017 General Assembly Amendments

#### **PUC § 7-208**







- Background:
  - State Agency Contact is identified by the Agency
  - PPRP maintains State Agency Contact List
  - State Agency Contacts are members or participants of PPRAC
  - PPRP can meet with new SACs to show them the ropes and
    - As a new procedure, conducts periodic SAC training/informational webinars/meetings



- Interactions from Initiation of CPCN through Final Order. PPRP:
  - Sends out briefing email and link to company's CPCN application when CPCN is submitted, requesting any preliminary feedback which could affect the CPCN procedural schedule
  - Communicates the CPCN's procedural schedule and how that translates into a SAC review timeframe, including the estimated timeframe for final RSA review of the Secretaries' Letter and Initial Recommended Conditions and PPRP's Environmental Review Document.



- Interactions from Initiation of CPCN through Final Order. PPRP (cont.):
  - Contacts specific SACs throughout its review, identifying issues that have arisen that affect their State Agency (e.g., MDOT/SHA for transportation issues, MDE for air and water permit issues, MHT for historical/archaeological issues, etc.) Interacts with that individual SAC to resolve the issue, including drafting one or more recommended licensing conditions.
    - Note that if technical issues arise that are not within the purview of a particular agency, then PPRP takes the lead on these issues.
  - Facilitates interaction between the Applicant and the State Agency, as needed, to expedite resolution of issues.



- Interactions from Initiation of CPCN through Final Order. PPRP (cont.):
  - If issues cannot be resolved, PPRP requests the RSA to provide an individual from the RSA to provide written testimony to the PSC on the issue. (This individual will need to attend the evidentiary hearing and will be subject to cross examination by the Applicant and other intervenors in the case.)
  - Sends out via email the Secretaries' Letter and Initial Recommended Conditions and PPRP's Environmental Review Document for final review and comment



- Interactions from Initiation of CPCN through Final Order. PPRP (cont.):
  - Resolves any SAC comments and sends our final documents for his/her Secretary's signoff.
    - Note: the Secretary's signature on the Secretaries' Letter is the Secretary's endorsement of those conditions for which his Agency has responsibility.
    - The Signoff Folder consists of the Letter, Recommended Conditions, ERD, and PPRP Briefing Memo. The PPRP PM contacts the SAC for a time to have the Secretary signoff, and personally takes the Folder to the Secretary so that he/she may ask any questions.



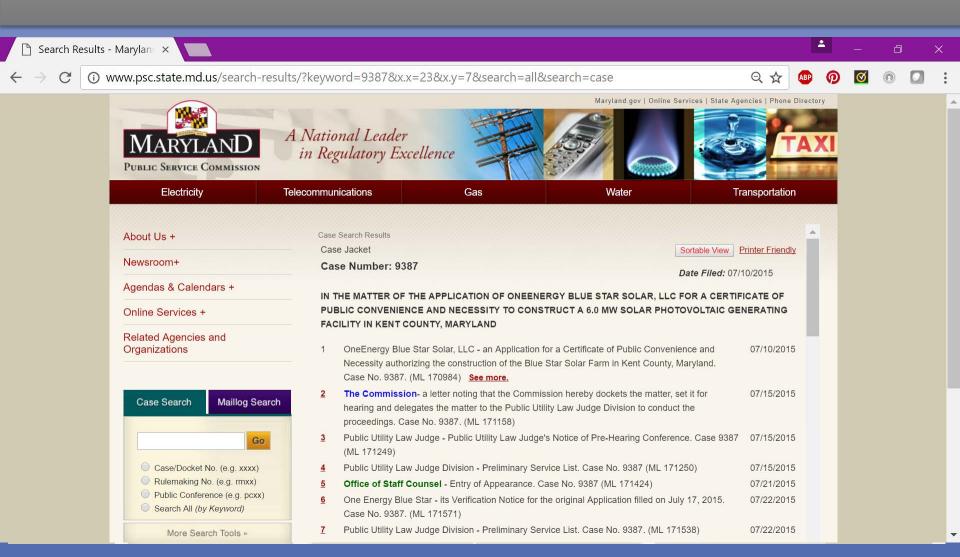
- Interactions from Initiation of CPCN through Final Order. PPRP (cont.):
  - If during the evidentiary hearing and/or public hearing, new information is acquired which may affect a RSA condition, PPRP contacts the affected Agency immediately and seeks clarification on technical or policy positions to be taken.
    - Note PPRP does not make policy. It conducts power plant and transmission line reviews based on sound science and presents the RSA's positions within the CPCN framework.
  - Following the hearings, PPRP sends out a summary of what went on at the evidentiary and public hearings.



- Recent Improvements in Communication and Tools to Review CPCNs:
  - Expanded SAC contact list to include other interested programs w/in a RSA (e.g., MHA w/in MDP)
  - SAC training and semiannual group "here's what could be coming down the road" briefs
  - SmartDG+ update to include additional data layers:
     Heritage Areas, Scenic Byways, Prime Farmland
  - PPRP website update to include PJM Queue info and "Here's what's currently in the CPCN pipeline" info

#### **PSC** Website





#### **New & Ongoing Projects**



#### **New & Ongoing CPCN Cases**

- Massey Solar 5 MW Kent Co.
- LeGore Bridge Solar 20 MW Frederick Co.
- Egypt Road Solar 45.9 MW Dorchester Co.
- Dan's Mountain Wind 30-41 MW Allegany Co.
- Big Spring Solar 3.5 MW Washington Co.
- Perennial Solar 8 MW Washington Co.
- Mason-Dixon Solar 18.4 MW Washington Co.
- Jones Farm Lane Solar 56.7 MW Queen Anne's Co.
- Pinesburg Solar 7 MW Washington Co.
- Keys Energy Center (Natural Gas) (Modification) 735 MW Prince Georges Co.

#### **New & Ongoing Projects**



#### **New & Ongoing CPCN Cases**

- St. Charles Natural Gas (Modification) 725 MW Charles Co.
- Mattawoman Natural Gas (Reclaimed Water Pipeline) (Modification) –
   9.3 mile Prince Georges Co.
- Morgnec Road Solar 57 MW Kent Co.
- Biggs Ford Solar 15 MW Frederick Co.

#### Other Projects Before the PSC

 US Wind & Skipjack Offshore Wind Project – 248 MW – MD Wind Energy Area (East of Ocean City)

#### Follow-Up

Great Bay Solar (Condition violation during construction) – Somerset Co.

#### **Federal Projects**

Conowingo Dam - Relicensing – Cecil & Harford Co.

#### **New & Ongoing Projects**



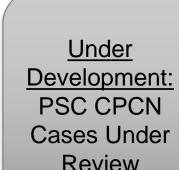
#### **Anticipated Projects**

- BGE Baltimore Harbor/Keys Bridge Crossing Transmission Line Baltimore City
- TransSource Interstate Transmission Line PA into MD
- Rock Springs Natural Gas Plant (Modification) Cecil Co.
- Catoctin Solar Frederick Co.
- Phoenix Solar Prince Georges Co.
- Roberts Station Solar Queen Anne's Co.
- Brick Kiln Road Solar Wicomico Co.

#### **PPRP** Website

V PPRP website - Norton S 🗶 PPRP Program Activities 🗶 🦬 Solar on Agricultural Lan 🗴





→ C ① pprp.info/pprphome.htm

**Potential Power Plants** and T-Line Reviews

- Maryland Power Plants and the Environment (CEIR-18)
  - Summary Document (5.5Mb pdf)
  - CEIR-18 Webpages
- Long-term Electricity Report for Maryland December 2016 New!
- SmartDG+ Online Mapping Tool
- Electricity in Maryland Fact Book 2014
- Smart Siting Online Mapping
- Power Plant Licensing in Maryland
- Windpower Technical Advisory Group
- Power Plant Research Advisory Committee
- Power Plants in Maryland
- Featured Projects
  - Transmission Line Projects in Maryland an Overview
  - Atmospheric Deposition Measurement and Analysis Information Resource
  - Mercury in Maryland: Past, Current and Future Plans April 2006 Workshop
  - Potomac Flowby Studies
  - Clean Water Act Section 316 Regulations

























#### Power Plants in MD



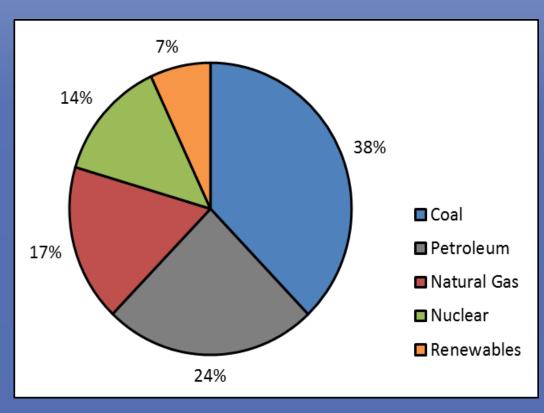


### Power Plant Capacity in Maryland



### **Total In State Generation Capacity ~ 13,500 MW**

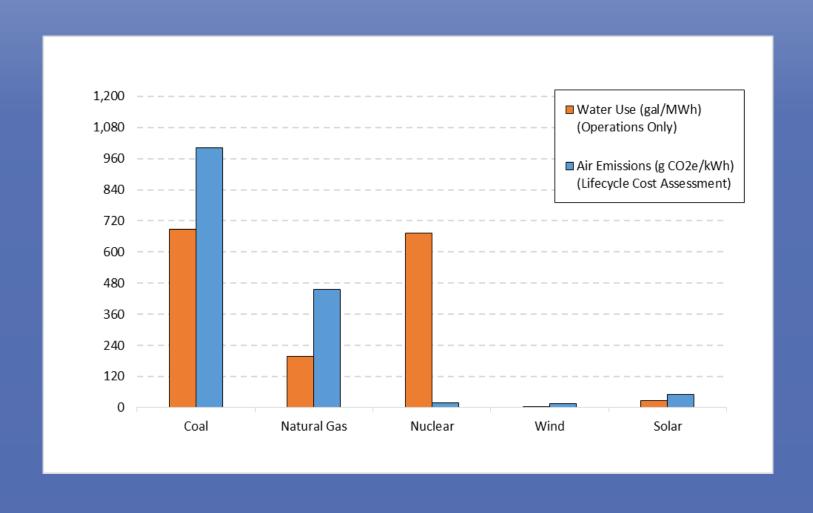
- Fossil Fuel ~ 10,800 MW
  - Coal ~ 5,100 MW
  - Petroleum ~ 3,300 MW
  - Natural Gas ~ 2,400 MW
- Nuclear ~ 1,800 MW
- Renewables ~ 900 MW



Rule of Thumb: 1MW of electricity will supply ~ 1000 homes ... Caution: capacity doesn't equal output to the grid.

### Generation Air & Water Use Comparisons





### Generation Land Use Comparisons





0.6 Acres/MW 13,140 MWh/Acre



2 Acres/MW 2,190 MWh/Acre



5 Acres/MW 263 MWh/Acre





1 Acre/MW 7,446 MWh/Acre



5 Acres/MW (minimum) 526 MWh/Acre



### PPRP Website Resources





### PPRP Contact and Website Info



pprp.dnr@maryland.gov Phone: 410-260-8660 www.pprp.info

#### Thank You!



