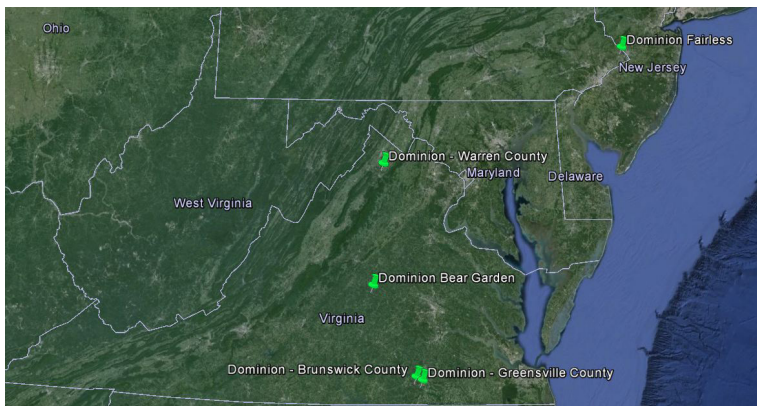


## DOMINION FLEET Generation Storage® Application

Virginia & Pennsylvania, USA



Brunswick County - 3 x MHI 501GAC - 123 MW Added - 29,300 chiller tons - 10.8 MG tank

## 537 MW ADDED TO DOMINION FLEET

TAS Energy has worked with Dominion Power to provide Generation Storage® (GS) on 5 large frame combined cycle plants. The addition of GS on these five plants has contributed 537 MW of summer peaking power to the Dominion fleet. This is the equivalent of adding a brand new 2x1 7F plant, without the need for additional operations and maintenance personnel, and without the costs and efforts associated with developing a new project including environmental permitting, land rights, community support, and the purchase of new turbines, electrical, fuel supply, etc. With the use of thermal energy storage, the 537 MW of added peaking power to the Dominion fleet also contributes the lucrative benefits common to all energy storage-offering flexible capacity through fast ramping and day/night price arbitrage.

## TECHNICAL OVERVIEW

### Fairless | Falls Township, PA

- ▶ 4 x Frame 7FA - Retrofit
- ▶ 2008 COD
- ▶ Water Cooled
- ▶ 2xF-Skids - 11,200 tons
- ▶ TES tank - 7.6 Million Gallons (MG)
- ▶ Incremental Power - 115 MW
- ▶ DOP - 12/12/0

### Warren County | Front Royal, VA

- ▶ 3xMHI 501GAC - Greenfield
- ▶ 2014 COD
- ▶ Water cooled
- ▶ 3xF-Skids - 23,700 tons
- ▶ TES tank - 8.9 Million Gallons (MG)
- ▶ Incremental Power - 107 MW
- ▶ DOP - 10/12/2

### Bear Garden | New Canton, VA

- ▶ 2 x Frame 7FA - Greenfield
- ▶ 2011 COD
- ▶ Water Cooled
- ▶ 1xF-Skids - 7,800 tons
- ▶ TES tank - 3.9 Million Gallons (MG)
- ▶ Incremental Power - 60 MW
- ▶ DOP - 10/12/2

### Brunswick County | Freeman, VA

- ▶ 3xMHI 501GAC - Greenfield
- ▶ 2016 COD
- ▶ Water cooled
- ▶ 4xF-Skids - 29,300 tons
- ▶ TES tank - 10.8 Million Gallons (MG)
- ▶ Incremental Power - 123 MW
- ▶ DOP - 10/12/2

### Greenville County | Emporia, VA

- ▶ 3xMHI 501J - Greenfield
- ▶ 2018 COD
- ▶ Water cooled
- ▶ 4xF-Skids - 29,600 tons
- ▶ TES tank - 10.8 Million Gallons (MG)
- ▶ Incremental Power - 132 MW
- ▶ DOP - 10/12/2

## 2x17F EQUIVALENT WITHOUT DEVELOPMENT COSTS

- ▶ No site development and permitting cost
- ▶ No additional emission sources
- ▶ No new fuel supply sources
- ▶ No operational and maintenance staff to hire and train
- ▶ Peaking power at combined cycle heat rate with energy storage flexibility
- ▶ Fast ramping and day/night arbitrage
- ▶ Reduced environmental impact
- ▶ Ability to operate GT at highest efficiency point with ramping done by GS system rather than turbine



Warren County 3 x MHI 501GAC - 107 MW Added - 23,700 chiller tons - 8.9 MG tank



Fairless - 4 x GE 7FA - Retrofit - 115 MW Added - 11,200 chiller tons - 7.6 MG tank



Greenville - 3 x MHI 501J - 132 MW Added - 29,600 chiller tons - 10.8 MG tank



Bear Garden - 2 x GE 7FA - 60 MW Added - 7,800 chiller tons - 3.9 MG tank

### ABOUT TAS ENERGY

TAS Energy provides clean and highly efficient solutions through the design and manufacturing of modular energy conversion and cooling systems for the power generation industry; district, commercial and industrial process cooling; data center/mis-sion critical; and the renewable energy sectors.

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