



**FLORIDIAN**  
Natural Gas Storage Company, LLC

*In-State Natural Gas Storage  
A Peaking Tool for Utilities  
with  
LNG Distribution and Exports*

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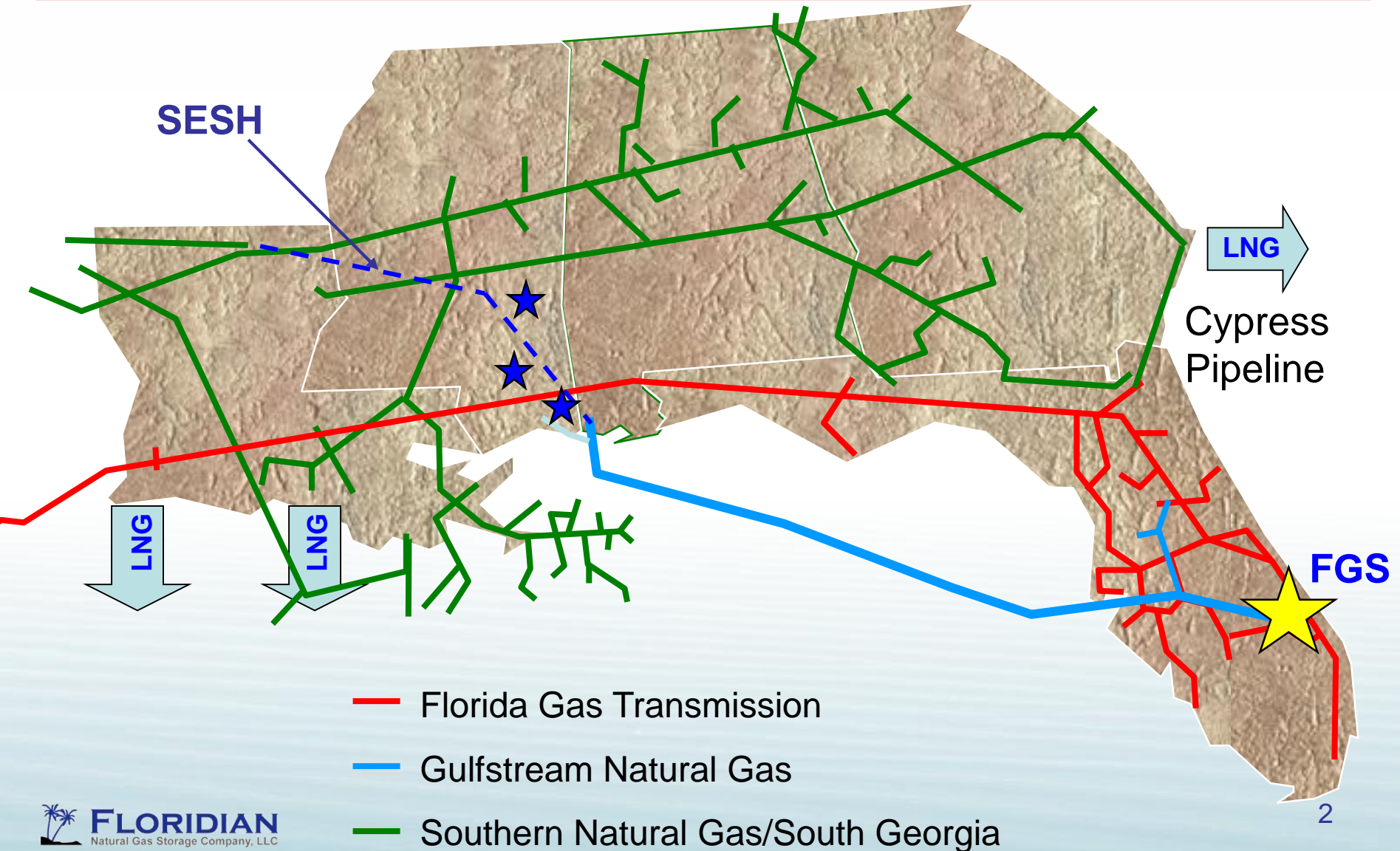
*A Strategic Supply of Natural Gas Providing  
System Reliability, Hourly Peaking,  
Environmental Benefits, Price Stability and  
Liquid Supply to Displace Diesel Fuel*

*Where you need it....  
When you need it*

[www.FloridianGasStorage.com](http://www.FloridianGasStorage.com)

# A STRATEGIC LOCATION FOR FGS

Strategic Reserve, Located Downstream of Pipeline Bottlenecks

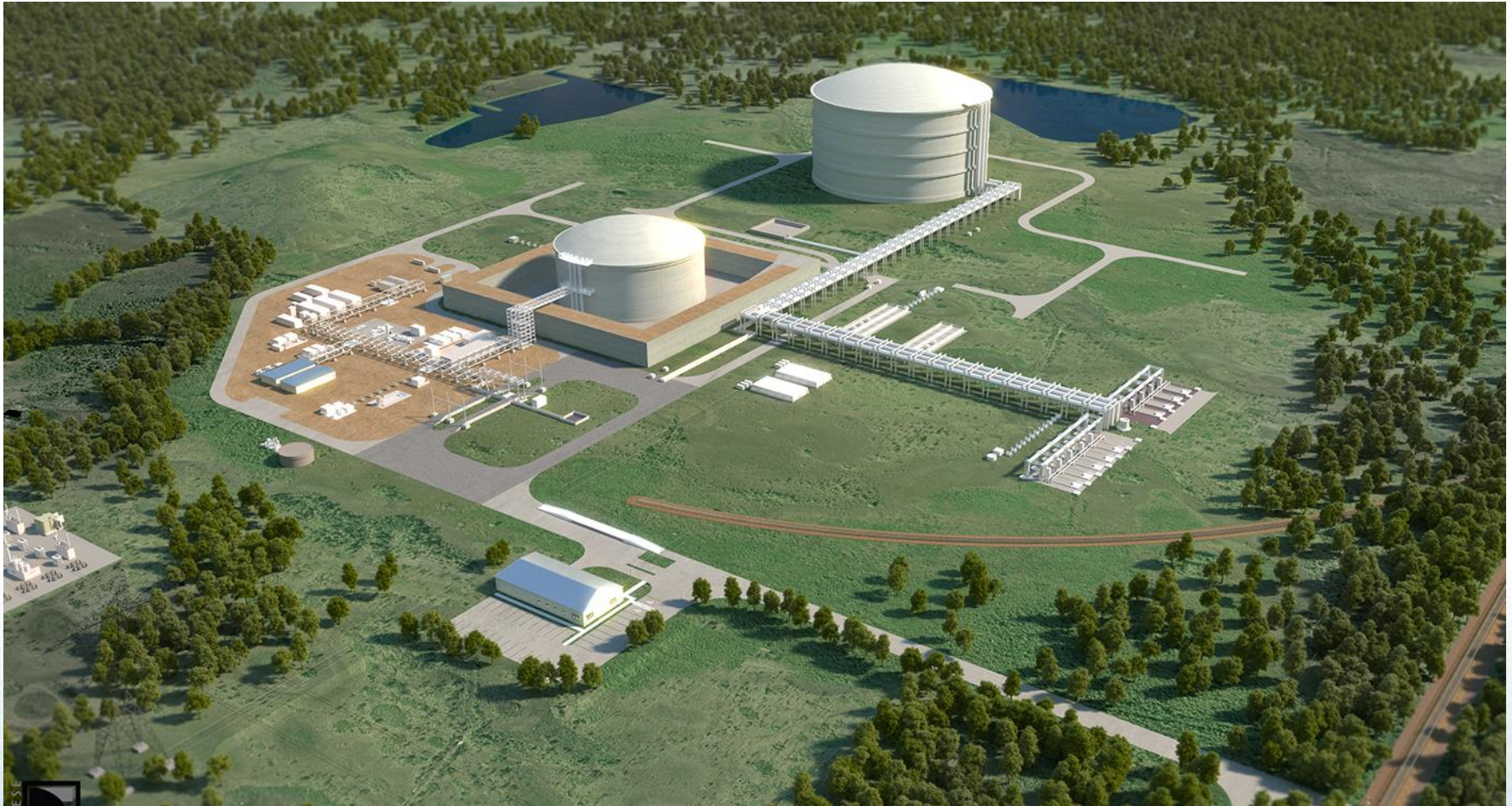


# ***FLORIDIAN NATURAL GAS STORAGE COMPANY***

## ***FULLY PERMITTED WITH FERC 7c***

### ***MARTIN COUNTY, FLORIDA***

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**Phase One a 1 BCF tank with truck loading**  
**Phase Two 4 BCF tank and added send out**

# *SCOPE OF FGS PROJECT*

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- *Permitting complete & 20 month construction ready to begin*
  - *FERC 7c, all Florida permits and DOE export authorization to non-FTA countries*
- *FGS can liquefy with four 25,000 MMBtu/d liquefaction trains*
- *Can take gas from and redeliver into FGT and Gulfstream*
- *Send out up to 500,000 MMBtu/d into multiple pipelines*
- *FGS can send out during day and liquefy at night (10 BCF p.a.)*
- *Liquid trucking for 30-48 truck loads per day ~400,000 gpd*
  - *To displace diesel fuel in Florida or for export to Caribbean*
- *Off-peak electricity used for liquefaction process*
- *Strong local support*

# *ENERGY & NATURAL GAS FOR FLORIDA*

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- *The demand for natural gas in Florida is increasing : 70% of south Florida power will come from natural gas*
- *Florida peninsula creates supply challenges*
- *In-state storage in south Florida converts existing stranded pipeline capacity into peak hour deliverability; when its needed*
- *Floridian Storage can also deliver LNG to displace diesel burn*
- *Not sufficient fuel backup in state if a pipeline goes down; no existing in-state natural gas storage*
- *Florida is significant burner of oil during peak summer months*
- *FGS delivers: economic development, critical infrastructure, jobs, taxes, training, and is good public policy*

# ***BUSINESS STRATEGY***

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- *Facility with size and scope that can serve multiple markets at a lower unit cost*
  - *25,000 MMBtu/d or 300,000 gallon per day train size and 1 Bcf storage tank are larger and lower costs than smaller scale facilities*
  - *Provides incremental hourly peaking supply to any market in Florida via pipeline segmentation & backhaul*
  - *Within trucking distance to all ports in Florida for bunker fuel or export*
  - *Closest LNG supply to Caribbean & Central America*
  - *U.S. natural gas prices provide greater long term price stability than oil*
- *Target underserved markets where LNG provides a significant value proposition*
  - *Utilizes off peak pipeline capacity that would otherwise be stranded*
  - *Provides cost effective fuel source for conversion of small scale generation and high horsepower equipment to environmentally cleaner natural gas*
- *Solve key components of LNG value chain, as necessary, to facilitate solutions for customers*

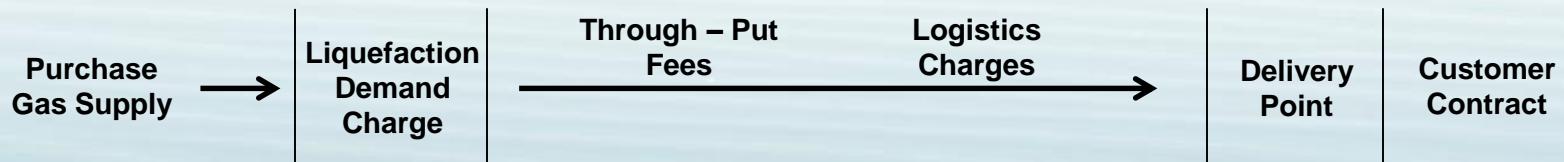
# LNG VALUE CHAIN

- *Strong value proposition for LNG*
  - *Lower cost peak capacity in Florida than available alternatives*
  - *Significant, pent-up demand in Caribbean/Central America*
- *Most end customers, especially in Caribbean, desire title transfer at delivery point*
  - *Requires an entity other than end use customer to hold title*
- *Floridian's current focus has been owning liquefaction and storage assets (red box)*
- *Other areas of value chain provided by partner and/or contractual arrangement*

## Assets to Move Gas



## Chain of Gas Title



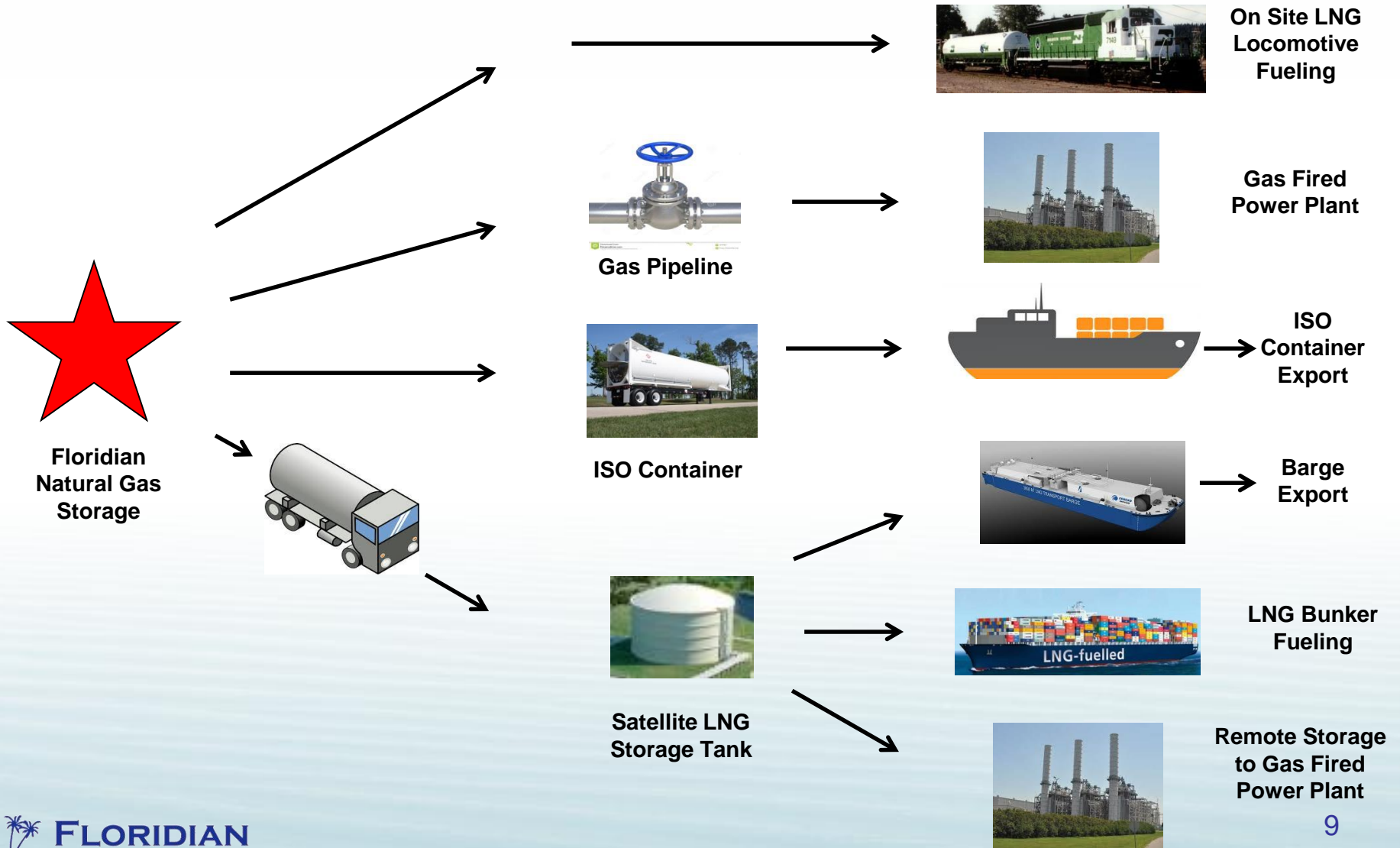
# *KEY PROJECT ATTRIBUTES*

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- *Facility sized and designed to provide multiple services to diverse customer base, thereby maximizing value to multiple markets*
  - *Unique engineering and design process with CB&I results in a low cost facility*
  - *Located to take advantage of low cost transportation into and out of the Facility*
- *FERC regulated*
  - *Allows Floridian to provide multiple services to its customers*
    - *Re-vaporization into interstate or intrastate pipelines directly from Facility or via truck at remote sites*
    - *Motor fuel for natural gas fueled vehicles and equipment*
    - *Along with NFTA and FTA export license, customer can export to any country*
- *Peaking Service*
  - *Can deliver high volume / high pressure hourly flow natural gas into the market on the existing pipeline network in Florida*
  - *Utilizes off peak pipeline capacity to refill*
  - *Increases the overall throughput and efficiency of the existing pipeline network*
- *Small scale export / Bunker Fuel*
  - *Can economically provide fuel to many locations or ports via truck or ISO Container*
  - *ISO Containers can be exported (through NFTA and FTA license) to any country*



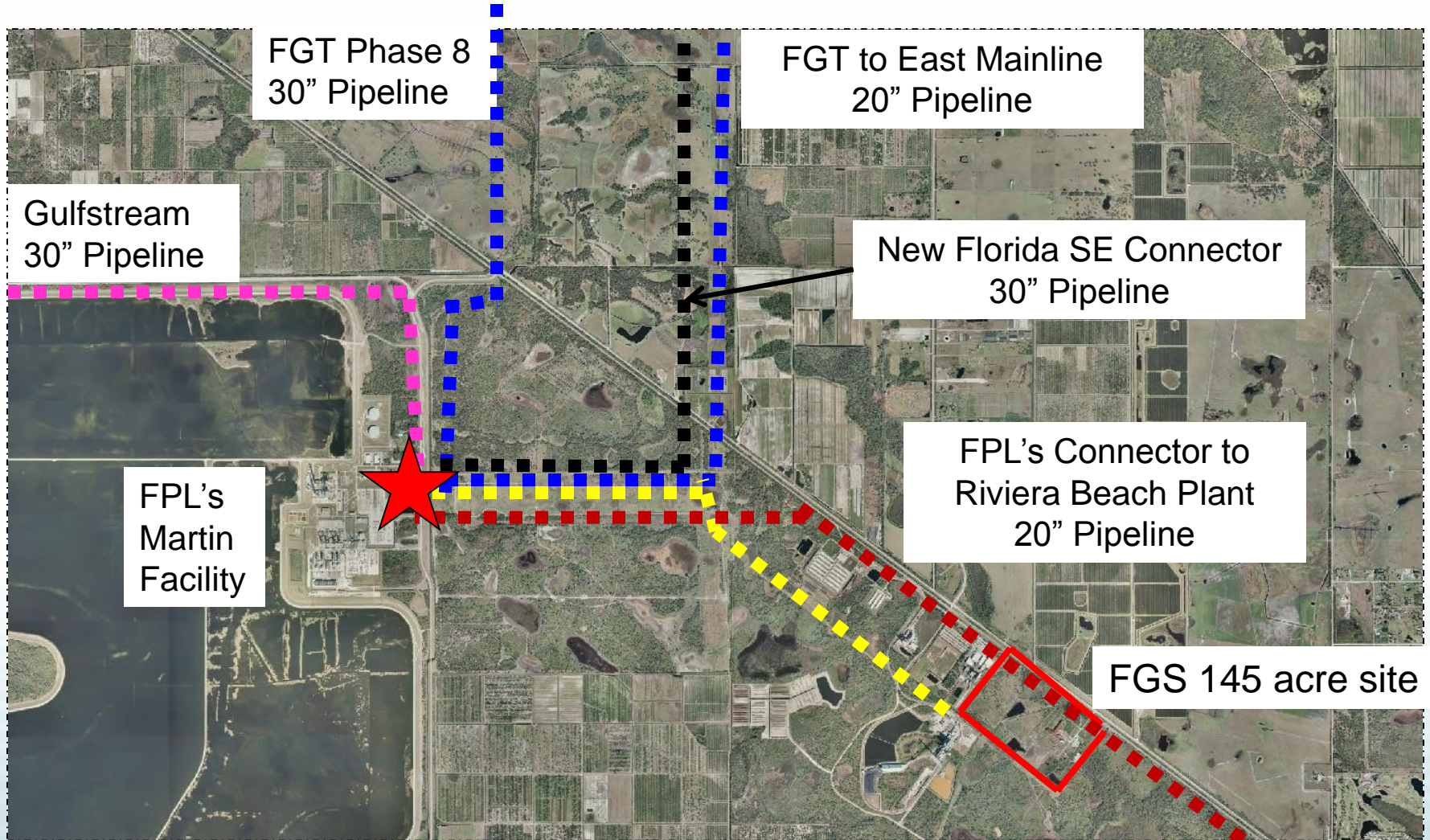
# MARKET OPTIONALITY



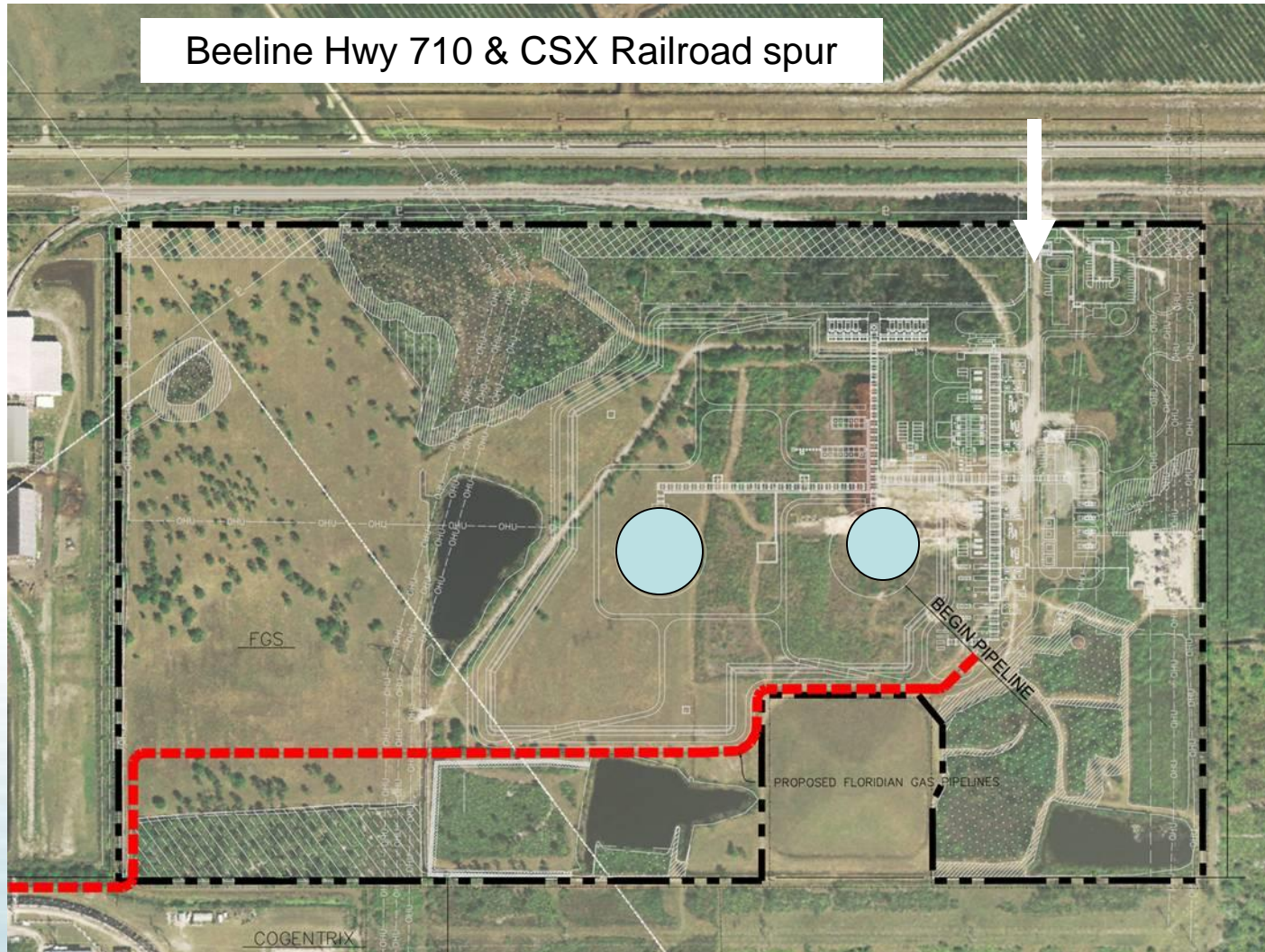


# MARTIN COUNTY NATURAL GAS HUB

3.6 MILES TO GULFSTREAM & FGT PIPELINES

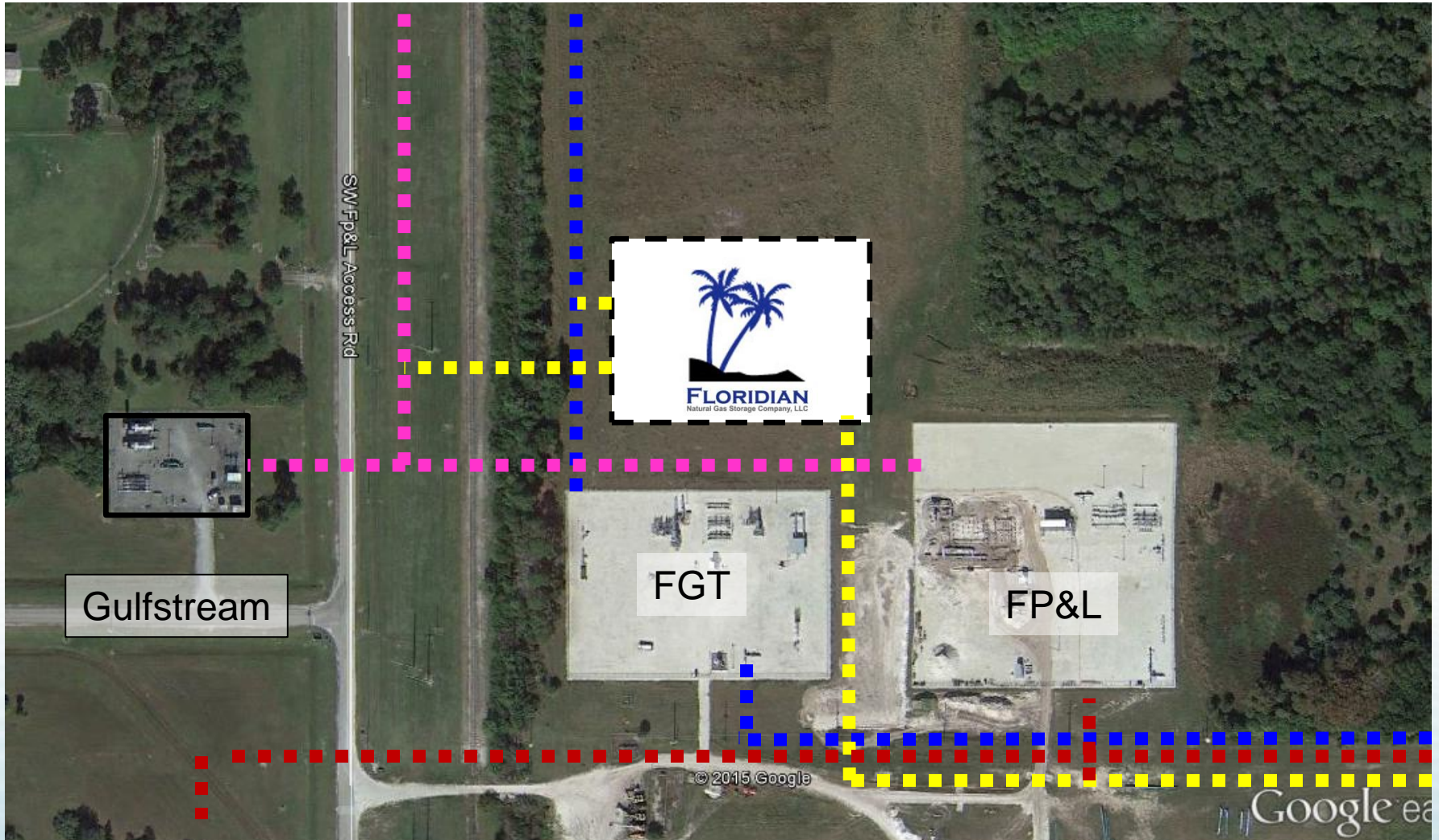


# FGS FACILITY SITE PLAN



# MARTIN COUNTY NATURAL GAS HUB

## CONNECTIVITY & FLEXIBILITY BETWEEN PIPELINES



# FLORIDA DEPENDENT ON NATURAL GAS

*IN-STATE STORAGE ADDS INCREMENTAL PEAK HOUR DELIVERABILITY*

**FGT Pipeline (3.0 BCFD increasing capacity on Phase 8)**

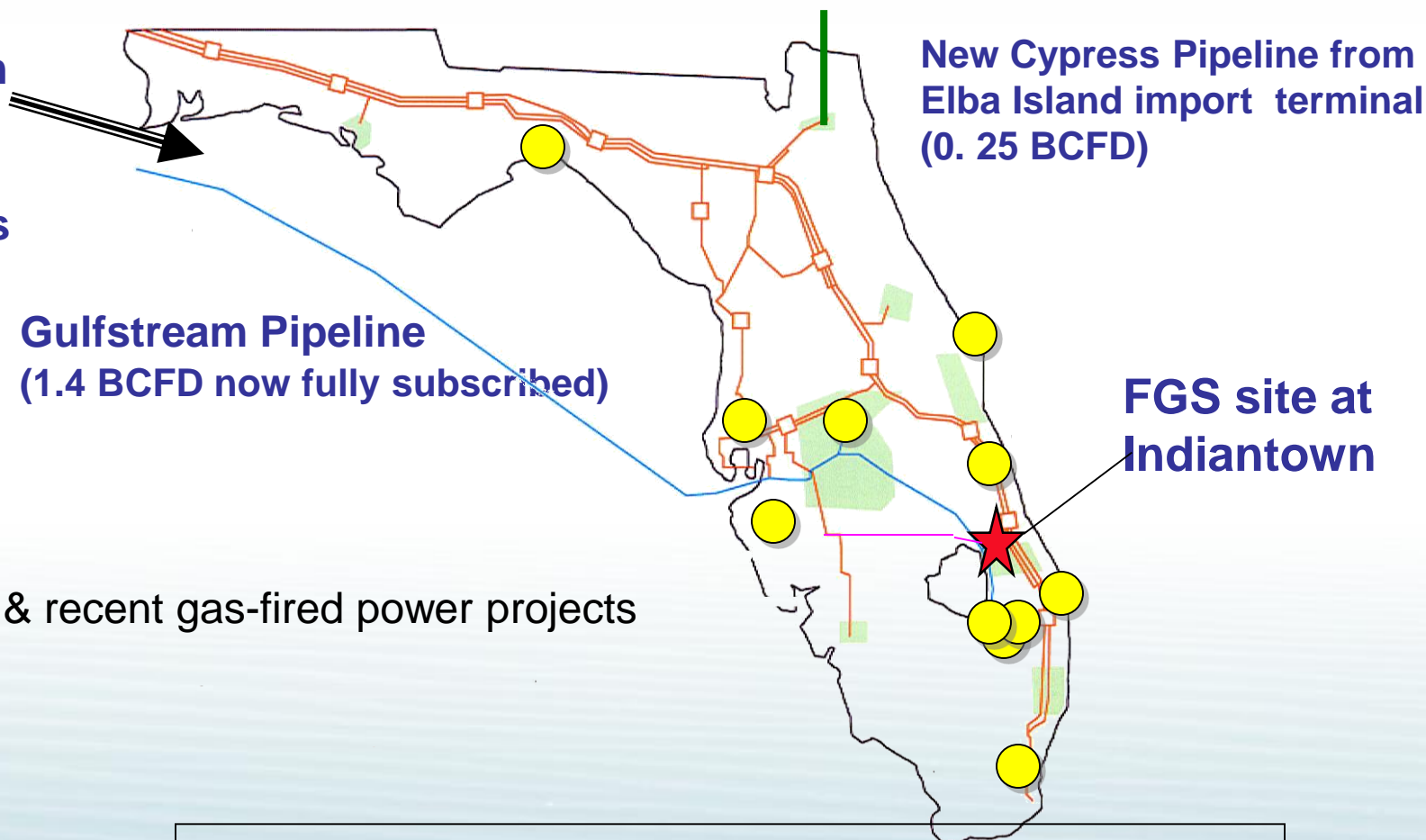
**Natural Gas from Gulf Coast suppliers**

**New Cypress Pipeline from Elba Island import terminal (0.25 BCFD)**

**Gulfstream Pipeline (1.4 BCFD now fully subscribed)**

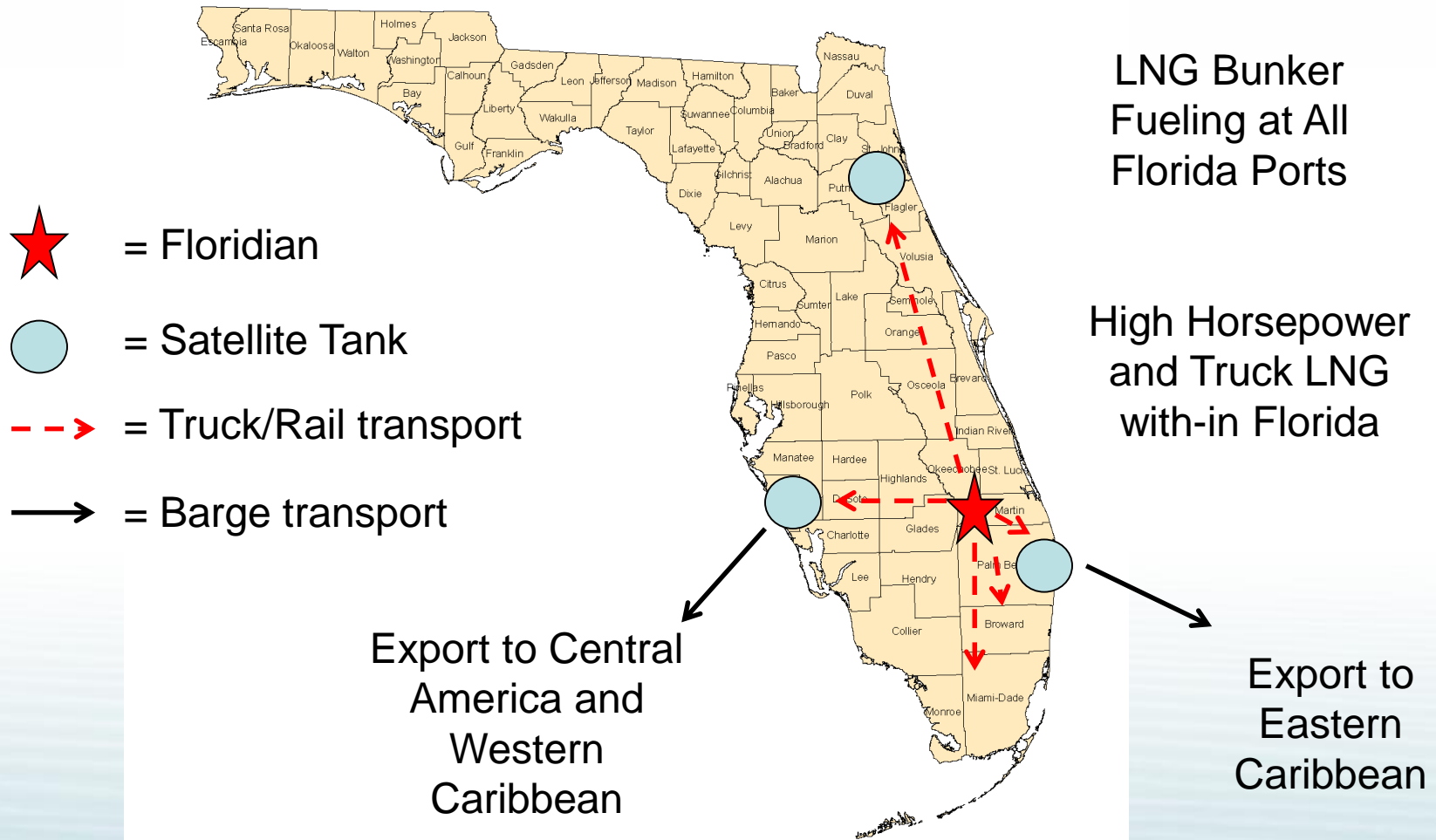
**FGS site at Indiantown**

**● New & recent gas-fired power projects**

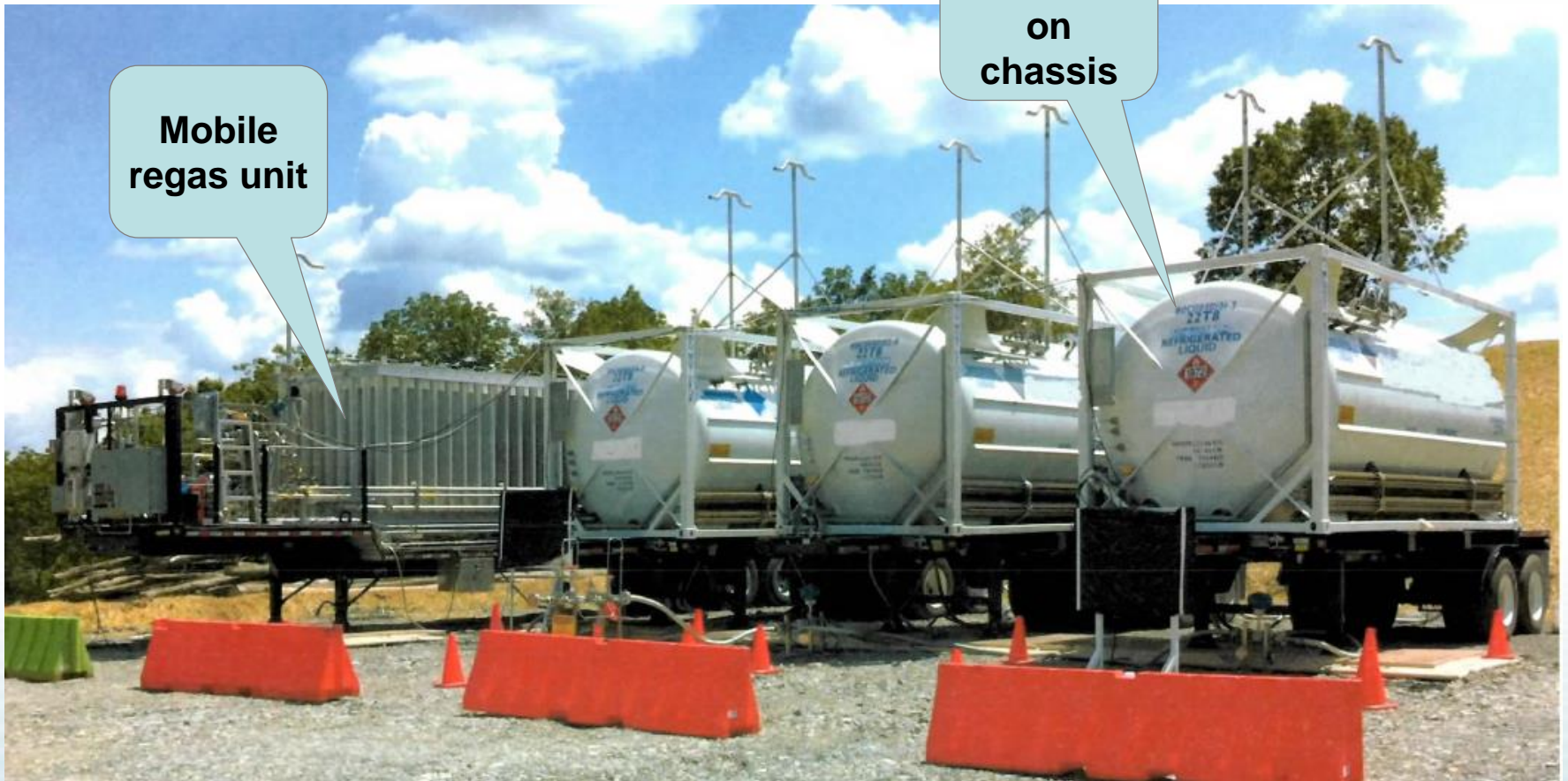


“The Ten-Year Site Plans include the net addition of approximately 11,000 MW of natural gas generation”

# GEOGRAPHIC OPTIONALITY FOR LIQUID DELIVERIES



# *PACKAGED LNG TO END USERS TO DISPLACE DIESEL FUEL BURN*



Mobile  
regas unit

Mobile  
ISO tank  
on  
chassis



# ***COCA COLA BOTTLER USING LNG FROM U.S. TO DISPLACE DIESEL IN PUERTO RICO***

***LNG Supply from the U.S.  
via ISO Tanks delivered by ship***



***Moving LNG to the Caribbean is Happening***

# *LNG USED FOR BUNKER FUEL IN U.S. AND CARIBBEAN GROWING NOW*

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Harvey Gulf's Workboat  
Loading LNG  
Aug. 6, 2015 Mississippi

Below TOTO LNG fueled  
vessel loads LNG to  
serve Puerto Rico



# PEAK SHAVING COMPETING OPTIONS

- Overbuild the forward haul pipeline capacity (only real alternative)
  - Doesn't address reliability or security of supply
  - Requires building capacity that is severely underutilized as market grows into the capacity
  - New incremental capacity is most expensive as significant cost paid by the consumer is stranded
- Out of State - Gulf Coast Storage
  - Addresses security of supply but not reliability
  - Requires new pipeline capacity to get gas to market
    - Capacity has to be reserved to move the storage gas on a peak day
    - Creates extremely underutilized capacity
  - Does not create incremental deliverability or efficiency
  - Cannot be delivered on hourly notice

- Other Florida LNG Projects
  - Cannot take advantage of segmentation or back haul value
  - No incremental forward haul capacity available on FGT or Gulfstream from other points in Florida
  - Gas supply availability
- Best Choice – FGS Phase I
  - 1 bcf of storage
  - 25K/day injection - 100K/day send out
  - Adds at least 1 to 1 incremental deliverability to existing pipeline infrastructure
  - ~\$30+ million annual demand charge

<i>Cost to Meeting Peaking Demand</i>	<i>FGS</i>	<i>FGT Phase VIII</i>	<i>Sabal Trail FL SE Connector</i>
<i>Demand Charge in millions</i>	\$30+	\$55	\$128
<i>Deliverability</i>	100K/day	100K/day	100K/day

# *NATURAL GAS PIPELINES*

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- *Largest gas load in Florida is power generation for 8-12 hr/day*
- *Power generators require a large amount of flexibility for fuel supplies “hourly swing” to meet load patterns during each day*
- *Gas supplies and delivery infrastructure have to be flexible to meet these needs*
- *Physical pipeline diameter and pressure determine capacity and throughput – deliverability drops through the day*
- *The higher the pressure the more gas can be delivered through the pipelines*
- *FGS provides a supply source at strategic location*
- *Being at the end of the pipelines allows deliveries anywhere upstream*

# *FLORIDA NEEDS FLEXIBLE SUPPLIES*

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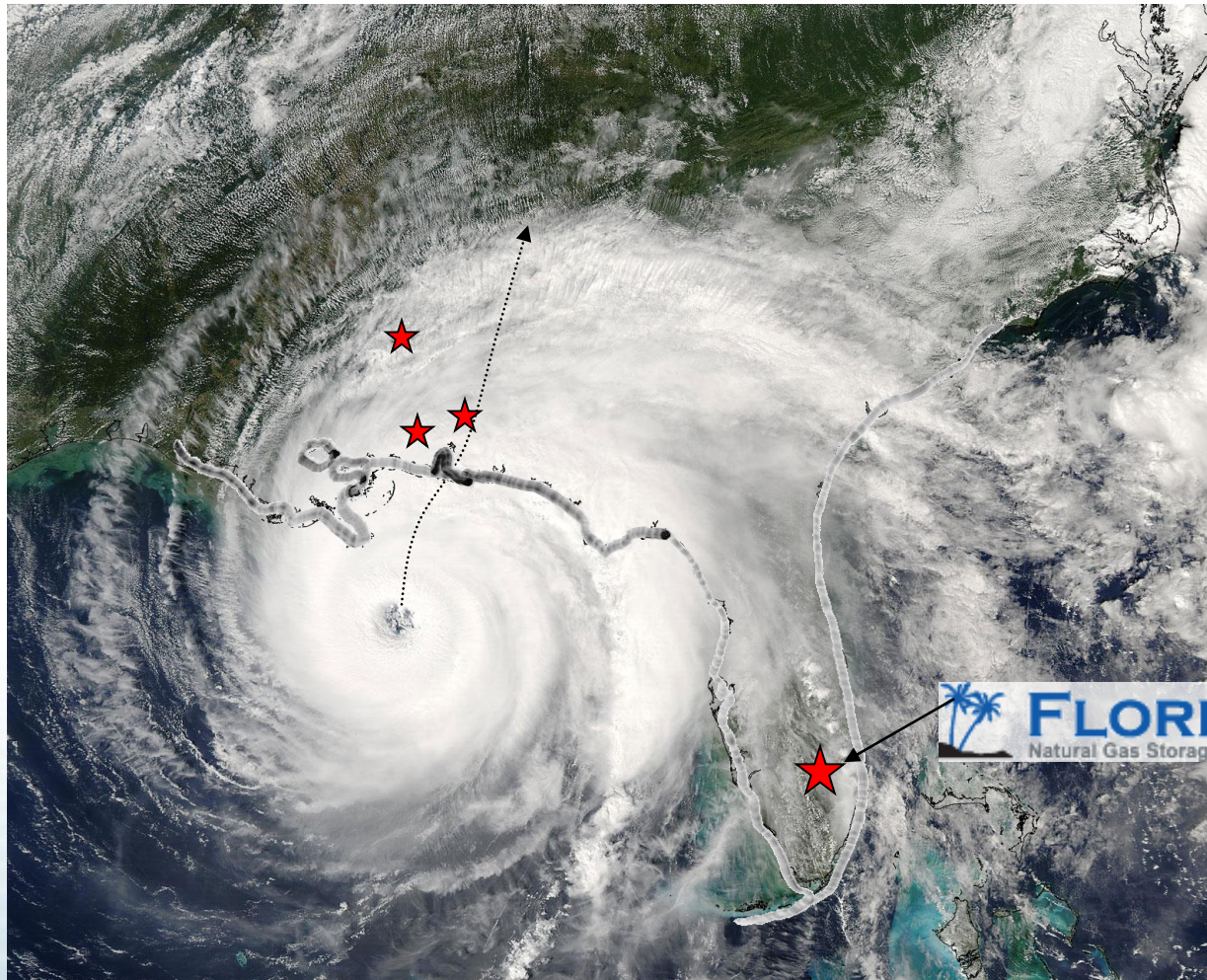
- *“Fuel security is vital to bulk power system”  
- NERC’s Long Term Reliability Assessment 2007-2016*
- *Florida has a summer season peak, week day peaks, intraday peaks*
- *Increasing baseload needs during the summer are best met with new firm pipeline capacity but leaves unused capacity in the spring & fall*
- *Florida also needs peak day/hour deliverability and back up service*
- *Pipelines on peak days are fully utilized and are fully contracted under firm contracts to south Florida i.e. No interruptible on peak days*
- *Peak gas needs above pipeline capacity can be met with oil or cutting load or with in-state natural gas storage*
- *What are the costs and benefits of each or adding pipeline capacity?*

# STORAGE FUNDAMENTALS

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- **Storage adds valuable flexibility – decisions are ever changing based on then current circumstances and forecast of what risks need attention at that point i.e. reliability, price, emissions, etc.**
- **Storage included in an infrastructure portfolio allows flexibility in supply decisions that captures the highest value of the entire infrastructure chain on a seasonal, daily, or hourly basis at any particular time**
  - Risk of hurricane supply / infrastructure interruption is greater in June than in October
  - Even in hurricane season FGS can be used hourly during the week and refilled at night and on weekends allowing capture of peak value without diminishing hurricane reliability protection
- **Gulf Coast and In-State storage provide value through different uses**
  - Gulf Coast storage delivers value by providing back up supply in the production area limited by the maximum forward haul capacity of the pipelines
  - In-state storage delivers value by providing supply in the market area over and above the maximum forward haul pipeline capacity
    - Serving peak hourly demand where pipeline capacity utilization would be very low relative to the cost of the firm annual pipeline capacity
    - Converting off peak stranded pipeline capacity from the production area that could not be used otherwise into firm on peak deliverability in the market area  
when and where its needed most

# *A STRATEGIC LOCATION FOR FGS AND FLORIDA*



***Strategic  
Reserve,  
Located  
Downstream  
of Pipeline  
Bottlenecks  
especially  
when no load  
lost in Florida***

