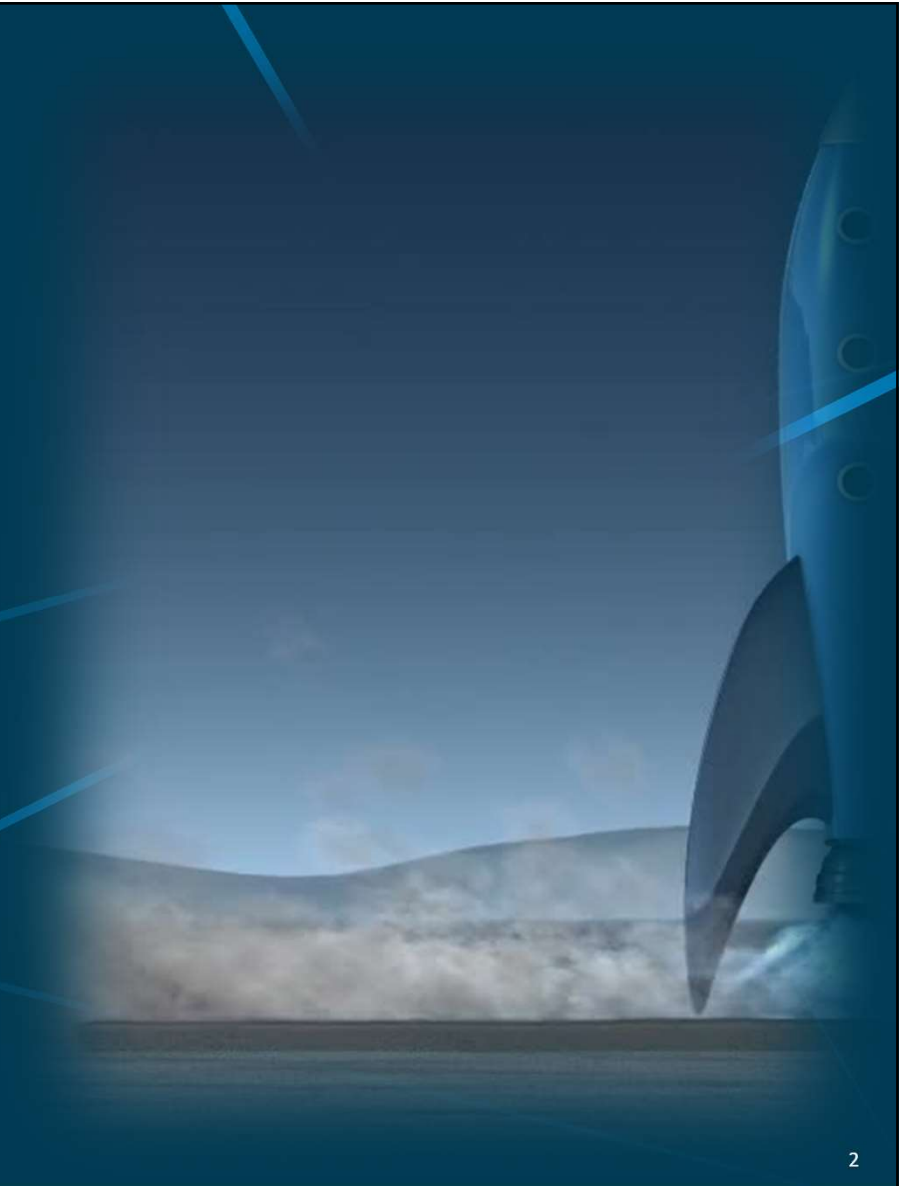


# SEEM: Counting Down to Launch

Where We Started  
Where We Stand  
Who is Onboard?



# Where We Started



# Bi-lateral Market Evolution



# Core Principles



Each utility/state maintains control of its generation & investment decisions.



Each Transmission Provider remains independent with its own tariff.



Each Balancing Authority remains independent.



Minimize bureaucracy while maximizing benefits to customers.



Participation must be voluntary.

***Our objective is to create the most stable, affordable, reliable and cleanest region in the United States.***



# Where We Started

Cross-functional, Cross-organizational Teams working continuously

**Feb 2020**

COVID  
Strikes!

**May 2020**

**Dec 2020**

**Feb 2021**

Initial in-person meeting to discuss the feasibility of a 15-minute market across the Southeast.

Cost/Benefit Evaluation completed using independent consultant and obtaining “ballpark estimates” from potential vendors.

Plan to create the Southeast Energy Exchange (SEEM) is announced.

Initial SEEM filing made at FERC.

# Where We Started

Cross-functional, Cross-organizational Teams working continuously

**Mar 2021**

RFP issued for SEEM Platform.

**Jun 2021**

SEEM responds to “deficiencies” with revised FERC filing.

**Oct 2021**

FERC approves SEEM platform “by operation of law” on 2-2 vote.

**Dec 2021**

SEEM amends filing to further address any transparency concerns. SEEM also announces Platform Vendor.

# Where We Started

Cross-functional, Cross-organizational Teams working continuously

**Jan 2022**

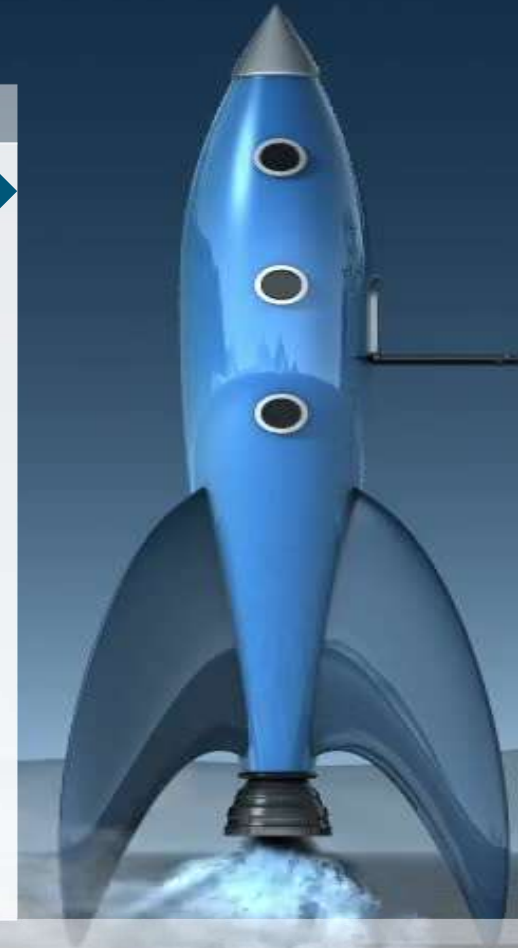
Platform development begins in earnest.

**Spring  
2022**

Additional RFPs for Administrator and Auditor released. Public Workshops begin.

**Testing  
Market Trials**

Work on all fronts continues towards a Q4 launch.

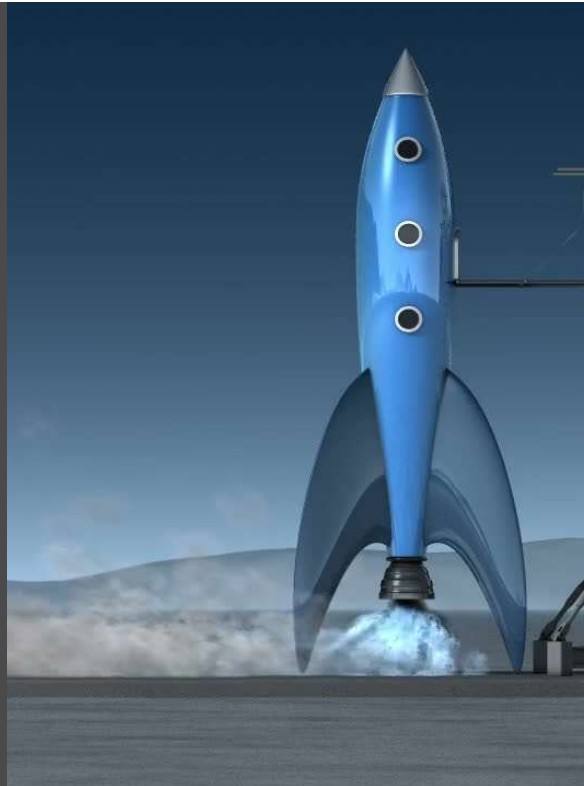




# What is SEEM?

## SEEM is...

- a region-wide, automated, intra-hour platform to match buyers and sellers with the goal of more efficient bilateral trading **utilizing unused transmission capacity** to achieve cost savings for customers (the “Platform.”)
- An overlay (**enhancement**) to the existing bi-lateral market.
- **Non-discriminatory**: Anyone that can physically transact in the wholesale market in the region can use the platform.



## SEEM is *NOT*...

- an RTO/ISO.
- an EIM (Energy Imbalance Market.)
- a replacement for the existing bi-lateral market or for existing agreements.
  - No centralized dispatch!
  - Voluntary Participation!
  - Power sales will take place pursuant to bilateral contracts between participants under, where applicable, market-based rate authority.

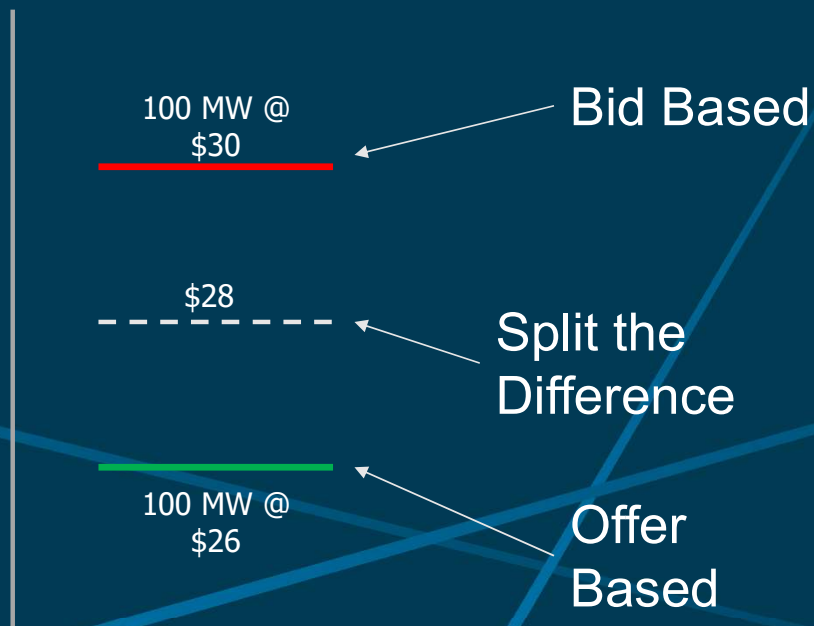


# Non-Firm Energy Exchange Transmission Service

- “NFEETS” fuels SEEM
- Provided under individual Member TSP’s OATT
- \$0/MWh rate
- 15-minute term
- E-tags submitted by SEEM platform
- No Schedule 1 or Schedule 2 charges
- Financial loss charges paid to TSPs
  - Established in individual OATTs
  - Split between buyer & seller through the platform



# Match Price = Split the Savings



\* Simplified example; does not include losses



- Bids and Offers
  - Megawatts, Price, Source/Sink
  - Source/Sink valid Web Registry point
  - 4 MW increments (due to integration)
- Matching Algorithm
  - No single clearing price
  - Split the Savings (Midpoint) pricing basis, incorporating transmission losses
  - The optimization engine matches the combination of Bids and Offers that creates the most market benefit during each market interval while adhering to all constraints

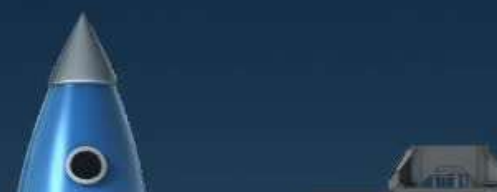


## Is the Juice Worth the Squeeze?

**Estimated Benefits:** \$40M - \$50M per year (independent study)

**Estimated Costs:** < \$5M in start-up costs  
< \$2M per year in on-going costs

**Note:** Only Members fund start-up & operations. There is no fee for participants.



- PLUS:**
- Creates new opportunities without disrupting a well-functioning regulatory framework
  - Optimizes existing transmission and generation assets
  - Supports the integration of future renewable & variable resources
  - Leverages geographical diversity of the Southeast
    - Crosses two time zones
    - Over one thousand miles wide... and growing!
    - Connects wind & solar regions with large metropolitan sinks.
  - Designed to respect Southeast jurisdictional diversity
    - Most members are not FERC jurisdictional



# Current SEEM Footprint

> 160 GW of capacity serving > 640 TWh of energy for load

## Electric Service Territory Map

- Southern Company
- Georgia Transmission\*
- Oglethorpe Power Corp.\*
- Dalton Utilities
- MEAG Power
- TVA
- Associated Electric Cooperative, Inc.
- LG&E and KU Energy LLC
- PowerSouth - Alabama
- PowerSouth - Florida
- North Carolina Municipal Power Agency No. 1
- Dominion Energy
- Duke Energy
- Santee Cooper
- Served by Dominion or South Carolina's electric cooperatives
- Served by Duke or South Carolina's electric cooperatives
- North Carolina EMCs

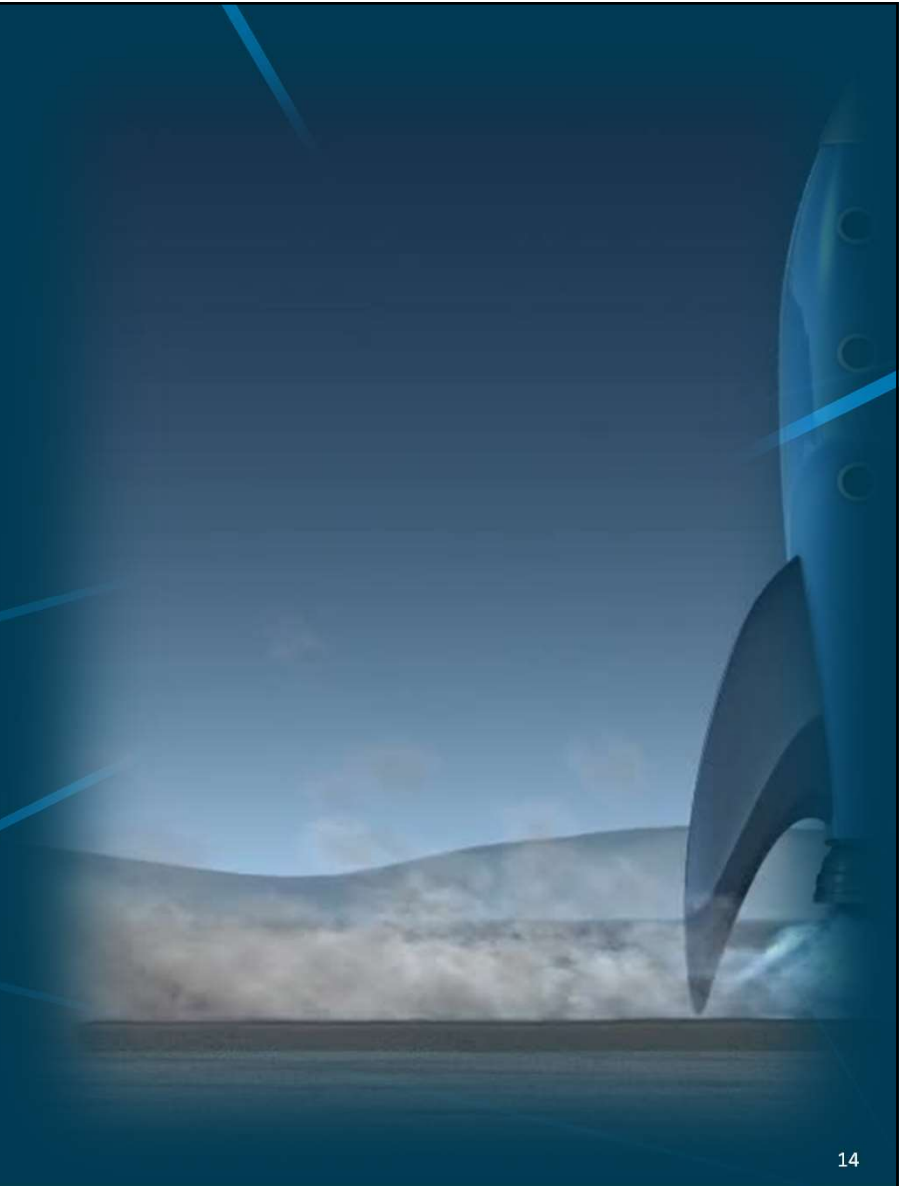
\*Oglethorpe Power is a Georgia Transmission member and power supplier that serves the 38 member systems

## Footprint Expanding in 2023:

- Tampa Electric
- Duke Energy Florida
- Seminole Electric
- JEA

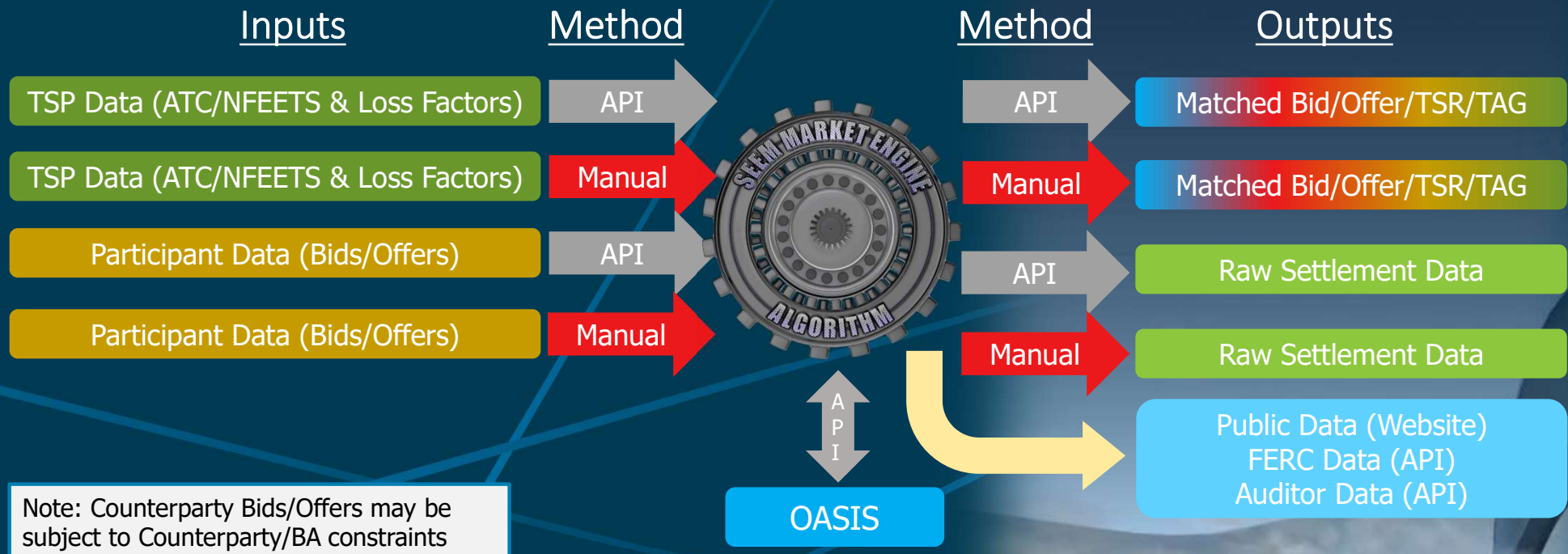


# Where We Stand





# The SEEM Platform





# Participants: Bids & Offers

https://prod.seemplatform.com/dataengine#ETAG/results/seemresults/rpt\_ParticipantResultsETAGView

Admin Transmission Trading Results Reports Upgrade Notice: Every day 8:00pm EPT SEEM

## SEEM Match Results

SEEM Match Results Quick View

Sorted By Refresh Central Prevailing Time Show Summary Pivot Data

ID	Date	Interval Start	Buyer/Seller	Counterparty	Path	Source	Sink	Trade Volume (MW)	Trade Volume (M...)	Trade Price (\$/MWh)	Bid Price	Offer Price	TSR Aref	Tag Status	Tag ID	Details	Modified Date
102777	09/28/2022	06:30	Seller	TEA MEAG	SOCO-MEAG	MILLER	MEAGLoad	36	9	\$75.57		\$59.22	71355627, 71355634	IMPLEMENTED	SOCO_SEEM0100014GG_SOCO		09/28/2022 06:25:06
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102782	09/28/2022	06:30	Seller	TEA SC	SOCO-SC	MILLER	SC	20	5	\$61.05		\$57.19	71355619, 71355624	IMPLEMENTED	SOCO_SEEM0100014GL_SC		09/28/2022 06:25:06
102787	09/28/2022	06:45	Seller	LGEUP	SOCO-TVA-LG...	MILLER	LGEE	4	1	\$62.12		\$57.19	71355642, 71355644, 713...	IMPLEMENTED	SOCO_SEEM0100014GO_LGEE		09/28/2022 06:40:02
102789	09/28/2022	06:45	Seller	LGEUP	SOCO-TVA-LG...	MILLER	LGEE	8	2	\$62.39		\$57.72	71355643, 71355645, 713...	IMPLEMENTED	SOCO_SEEM0100014GS_LGEE		09/28/2022 06:40:02
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# Transmission Service Providers: ATC/NFEETS

← → ↻ 🔒 https://prod.seemplatform.com/SEEM#ETAG/TSPCapability/View

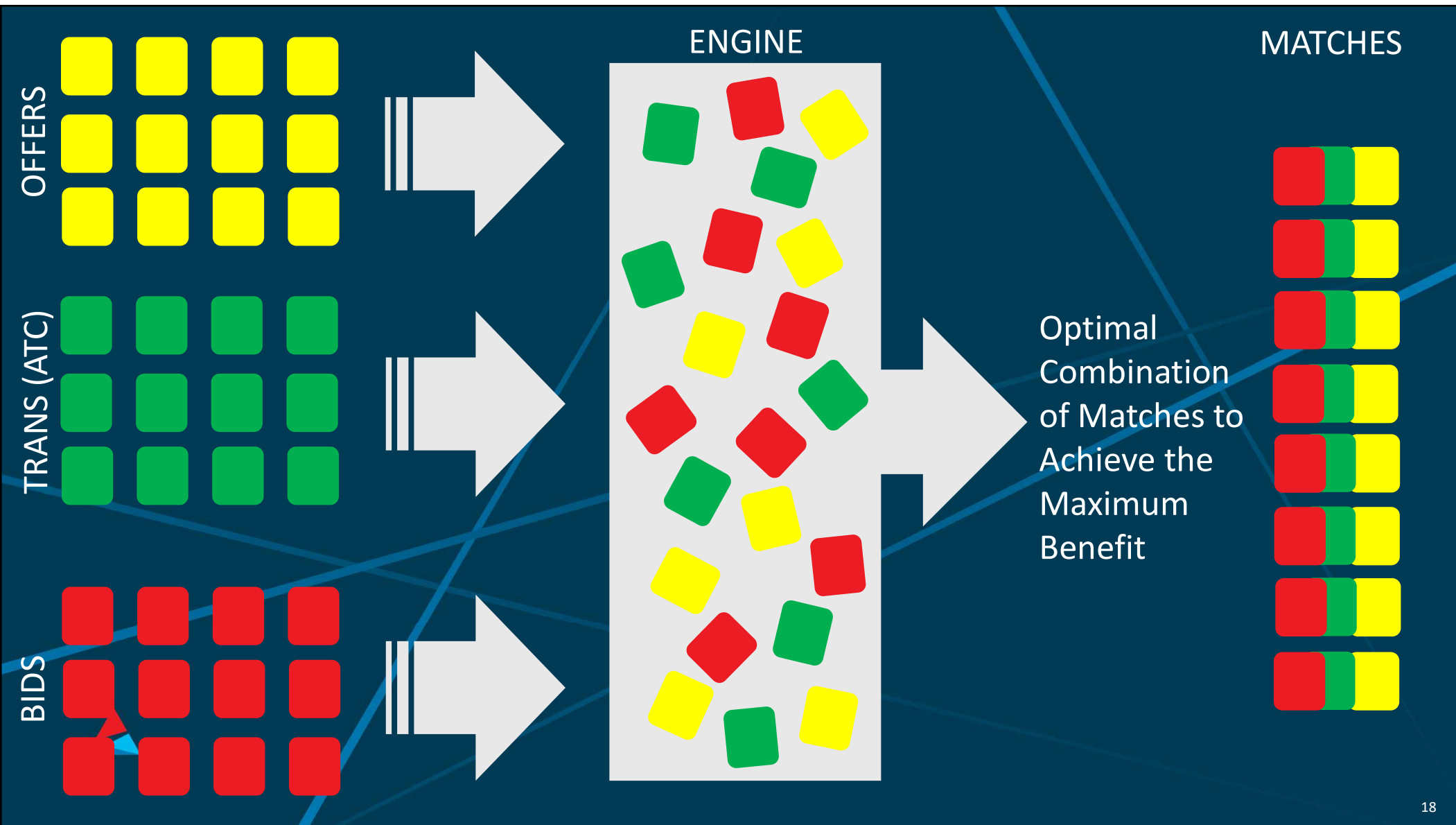
Admin Transmission Trading Results Reports Upgrade Notice: Every day 8:00pm EPT

**SEEM** ETAG **TSP Capability** Deadline 0:31 For Interval 10:00 - 10:15

Sorted By Refresh Totals Central Prevailing Time Add Delete

<input type="checkbox"/> TSP ↑	SEEM Segment ↑	Start Date ↓	Start Interval ↓	End Date	End Interval	OASIS	Override	Final	Comments	External ID	Modified Date	Modified By
<input type="checkbox"/> SOCO	SS/SOCO/DUK-SC/MUL...	10/06/2022	10:00	10/06/2022	10:15	492		492			10/06/2022 09:42:37	jobmanager
<input type="checkbox"/> SOCO	SS/SOCO/DUK-SCEG/...	10/06/2022	10:00	10/06/2022	10:15	170		170			10/06/2022 09:42:37	jobmanager
<input type="checkbox"/> SOCO	SS/SOCO/DUK-SOCO//	10/06/2022	10:00	10/06/2022	10:15	492		492			10/06/2022 09:42:37	jobmanager
<input type="checkbox"/> SOCO	SS/SOCO/DUK-TVA/MU...	10/06/2022	10:00	10/06/2022	10:15	492		492			10/06/2022 09:42:37	jobmanager
<input type="checkbox"/> SOCO	SS/SOCO/SC-DUK/MUL...	10/06/2022	10:00	10/06/2022	10:15	102		102			10/06/2022 09:42:37	jobmanager
<input type="checkbox"/> SOCO	SS/SOCO/SCEG-DUK/...	10/06/2022	10:00	10/06/2022	10:15	128		128			10/06/2022 09:42:37	jobmanager
<input type="checkbox"/> SOCO	SS/SOCO/SCEG-SC/MU...	10/06/2022	10:00	10/06/2022	10:15	128		128			10/06/2022 09:42:37	jobmanager
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<input type="checkbox"/> SOCO	SS/SOCO/SCEG-TVA/M...	10/06/2022	10:00	10/06/2022	10:15	128		128			10/06/2022 09:42:37	jobmanager
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<input type="checkbox"/> SOCO	SS/SOCO/SOCO-SOCO//	10/06/2022	10:00	10/06/2022	10:15	43,216		43,216			10/06/2022 09:42:37	jobmanager
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# Match Results

← → ↻ 🔒 https://prod.seemplatform.com/dataengine#ETAG/results/seemresults/rpt\_ParticipantResultsETAGView

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**SEEM** ETAG **SEEM Match Results** SEEM Match Results Quick View

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102799	09/28/2022	07:15	Buyer	TVAM	TVA-SOCO	TVA	SOCOLOAD	32	8	\$40.68	\$42.90		71355673, 71355679	IMPLEMENTED	TVA_SEEM0100014H2_SOCO		09/28/2022 07:10:10
102801	09/28/2022	07:15	Buyer	TVAM	TVA-SOCO	TVA	SOCOLOAD	8	2	\$40.68	\$42.90		71355674, 71355680	IMPLEMENTED	TVA_SEEM0100014H4_SOCO		09/28/2022 07:10:10
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### Public Data

- Min, Max, Avg. Match Prices
- Amount of energy offered and sold (and bid & purchased) over time
- Amount of energy that flowed once matched
- Total amount of energy transacted
- Total number of transactions
- Total benefit
- Min, Max, and Avg. MW Match volume
- Matches made but not executed
- Avg. weighted match price

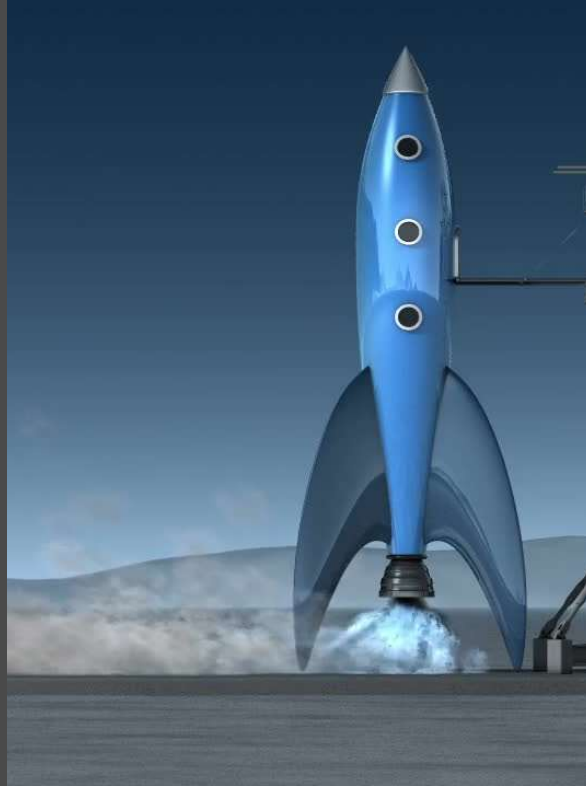


## Transparency is Crucial

- Governance  
Membership Board will hold an annual meeting [open to all stakeholders](#).
- Price Reporting  
Sales by FERC jurisdictional entities will be reported through EQR under applicable bi-lateral contracts.

# Prelaunch Activities

- Complete Market Trials
- Finalize Flight Plan
  - Complete Legal Agreements
- Onboard SEEM Auditor
- Recruit New Participants



## Verify Technical Setup

- Participant Configuration
- Hartigen – Software Developer
- Other Vendors
  - OATI
  - MCG
  - PCI

## Enhance SEEM Website

Ramp up Auditor Function (Potomac Economics)

Test FERC Data Connections

# Who is Onboard?

*...and when will you join us?*

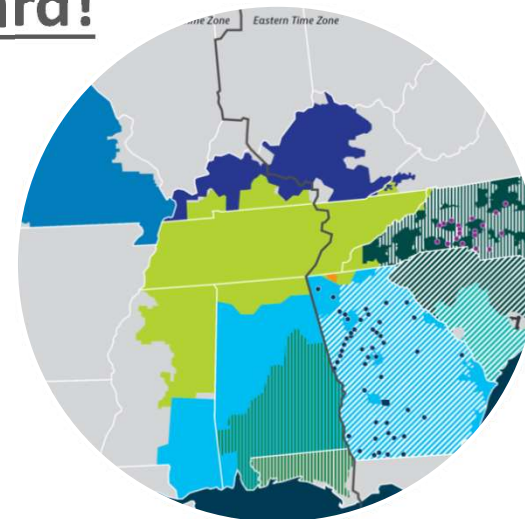






## Your SE Neighbors & Counterparties Are Onboard!

AECI      TVA      LG&E/KU  
Dominion SC      Santee  
Cooper      GTC  
Southern  
Company      Duke Energy - Carolina  
MEAG



*Participation is Free & Voluntary*



## What Do I Need to Do to Join?

### SEEM Members

Potential Additional Members need to certify their eligibility and intent to join during the Annual Enrollment period (July1 – September 30). Additional Members may sign a Joinder Agreement binding it to the terms of the SEEM Agreement. Members share the cost of operating the platform and have voting rights in the governance of SEEM.

### SEEM Participants

Potential Participants must certify they meet the qualifications to participate and execute a Participation Agreement committing to follow the SEEM Market Rules. There is **no cost** associated with becoming a Participant. *Participants can join anytime!*



# Participant Eligibility

## SEEM Participant

- Own or control a Source within the SEEM footprint and/or;
- Be contractually obligated to serve a Sink within the SEEM footprint.
- Execute a Participation Agreement
- Demonstrate NFEETS service has been acquired with all the participating SEEM Transmission providers.
- Maintain Enabling Agreements with at least three other non-affiliated SEEM Participants

## Participating Transmission Providers

- Certify that it has amended its Tariff (or equivalent) to include NFEETS service and has obtained acceptance from FERC or other jurisdictional agencies; and
- Certify the NFEETS service allows for a continuous Contract Path for Energy Exchanges.
- Work with Administrator & Platform Vendor to integrate service into Network Map and SEEM platform according to the SEEM Market rules.

# I want to participate, but how do I sign up?

1) Let us know!

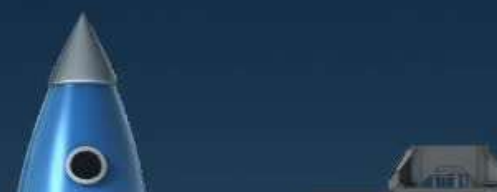
2) Complete the Participant Application Packet

- ☒ Confirm all NFEETs agreements are in place.
- ☒ Provide valid source/sink information.
- ☒ Warrant at least 3 enabling counterparty agreements are in place.
- ☒ Designate an Entity Security Administrator for the platform
- ☒ Identify any Affiliates or Notable Relationships

3) Execute the SEEM Agreement

- ☒ Agree to follow the SEEM Market Rules





## Resources:

- SEEM Website: [www.southeastenergymarket.com](http://www.southeastenergymarket.com)
- Interim Contact(s): Paul Hughes – [phughes@southernco.com](mailto:phughes@southernco.com)  
Matt O'Neal – [mboneal@southernco.com](mailto:mboneal@southernco.com)  
Matt Pitcaithly – [mapitcaithly@tva.com](mailto:mapitcaithly@tva.com)



**Are**  
**YOU**  
**SEEM launches**  
**November 9<sup>th</sup>!** **On Board?**

