



ENERGY AUCTION

Technical Conference

August 3, 2009

target
ZERO 

Every day, every job, safely.

Agenda

- Welcome
- Background and Overview
- Considerations for Participation by Third-Party Sellers
- Survey Results
- Next Steps



ENERGY AUCTION

Background and Overview

Background

- Oct. 17, 2008 – Southern Company files proposed amendments to its market based rate tariff to mitigate concerns over potential horizontal market power
- Proposal included:
 - Implementation of bid-based Day Ahead and Hour Ahead Energy Auctions
 - A must-offer obligation of Available Capacity on the part of Southern Company to address concerns over physical withholding of capacity
 - Mitigated Seller Offer Prices on the part of Southern Company to address concerns over economic withholding of capacity

Background

- Dec. 18, 2008 – FERC conditionally accepts Southern Company's proposed amendments
- Condition
 - Allow third party sellers into the auction within one year of order (*i.e.*, by Dec. 18, 2009)
- Apr. 23, 2009 – Phase I of the Southern Company Energy Auction was implemented

Overview

- Day Ahead Energy Auctions
 - Every business day excluding NERC holidays
 - Bid period opens 12N two business days prior to delivery and closes 6:30 am one business day prior to delivery
 - Two simultaneously offered products
 - Firm LD Energy
 - Recallable Energy

Overview

- Hour Ahead Energy Auctions
 - Every hour: 24 x 7 x 365
 - Bid period opens at the top of each hour and closes 15 minutes past the hour for delivery the following hour
 - Product: Non-firm energy

Overview

- Southern's Mitigated Participation
 - Must-Offer Obligation
 - Southern must offer all “Available Capacity” that can be committed and offered into the market after taking into account native load and third-party sales obligations, load forecast uncertainty, and reliability obligations

Overview

- Southern's Mitigated Participation
 - Seller Offer Price Cap
 - Southern's offers must not exceed a price cap as follows:
 - Day Ahead: 110% of the expected average cost (including startup and no load costs) to commit and operate the uncommitted facility plus a demand charge of \$21.43/MWH
 - Hour Ahead: 110% of the expected incremental cost (including startup and no load costs for CTs) to serve the sale plus a demand charge of \$21.43/MWH

Background

- Dec. 18, 2008 – FERC conditionally accepts Southern Company's proposed amendments
- Condition
 - Revise auction to allow participation by third-party sellers within one year of the order (*i.e.*, by Dec. 18, 2009)



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Considerations for Participation by Third-Party Sellers

Participation by Third-Party Sellers

- Mitigation Requirements
 - Only applicable to Southern Companies
- Transmission and Scheduling Considerations
 - Assuming physical delivery:
 - Seller must identify point of receipt
 - Point of receipt must satisfy deliverability requirements consistent with product sold
 - Buyer responsible for all other transmission-related requirements

Participation by Third-Party Sellers

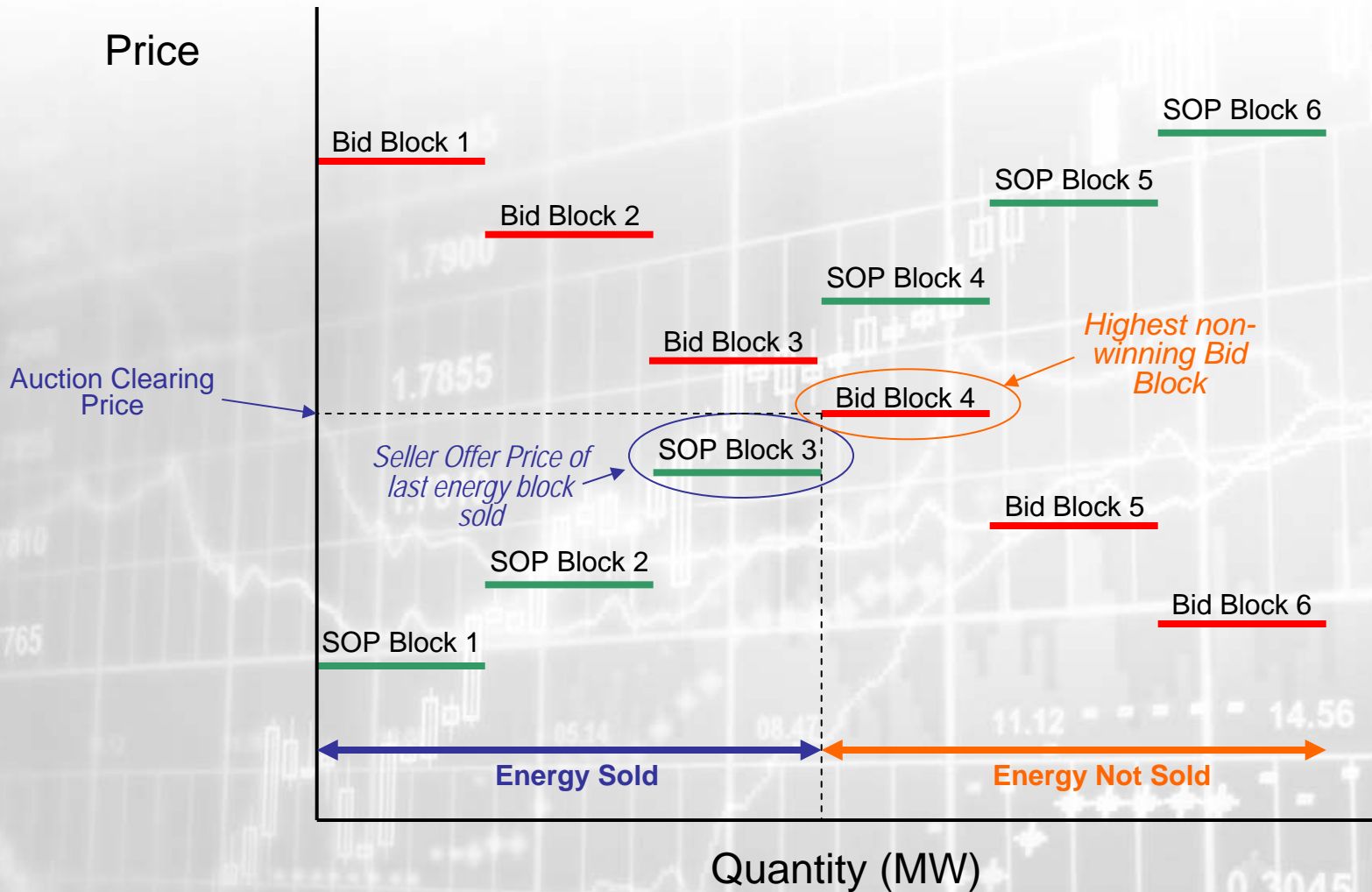
- Participation Agreement
- Seller Administrative Considerations
 - Counterparty Credit Limits
 - Enabling Contracts
 - Statutory Limitations (if any)

Participation by Third-Party Sellers

- Counterparty Constraints
 - Current Method – One Seller
 - Bid rejected at entry if it violates credit limit
 - Bid rejected at clearing if it violates credit limit
 - New Method – Multiple Sellers
 - Bids and Offers from the same participant cannot be matched
 - Violation of credit limit for one Seller does not necessarily disqualify the Bid for other Sellers
 - Bid rejected at entry if it violates credit limits for all possible Sellers
 - Bid rejected at clearing if it violates credit limits for all Sellers who submitted Offers

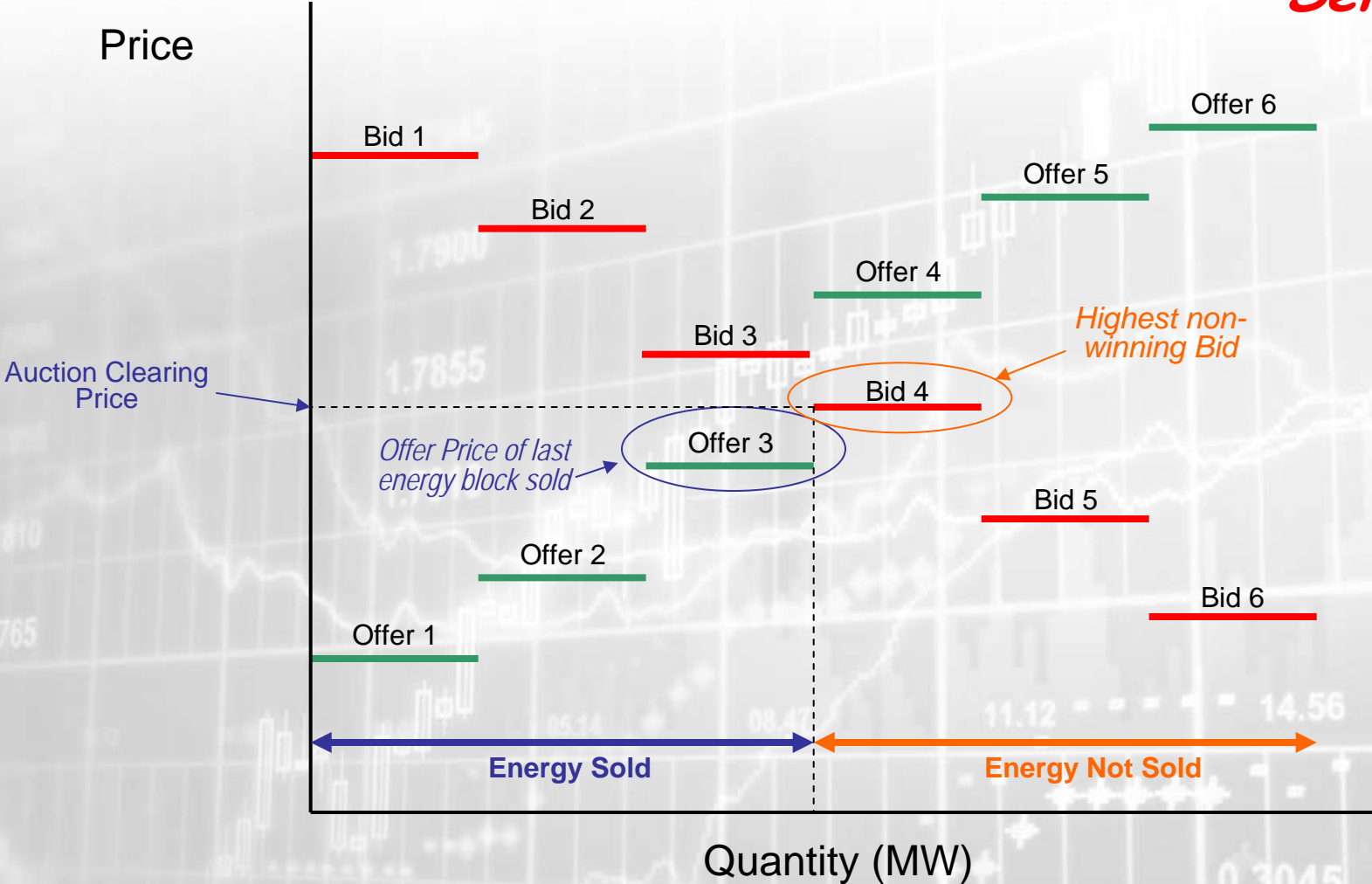
Auction Clearing

Today



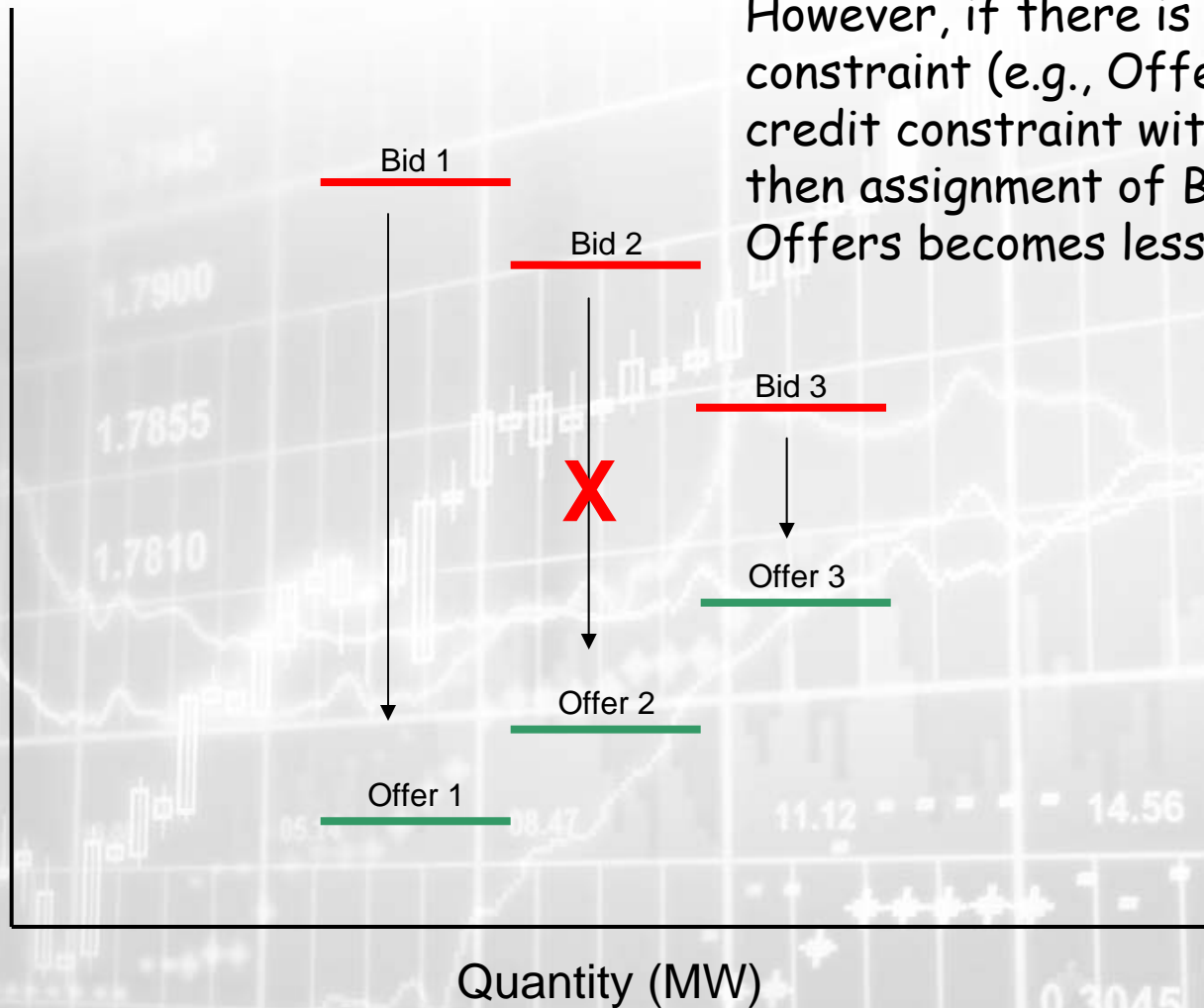
Auction Clearing

*Participation
by Third-Party
Sellers*



Assignment of Winning Bids & Offers

Price



However, if there is a constraint (e.g., Offer 2 has a credit constraint with Bid 2), then assignment of Bids and Offers becomes less obvious.

Reasons for Infeasible Assignments

- Lack of enabling contract
- Lack of credit
- Statutory limitations

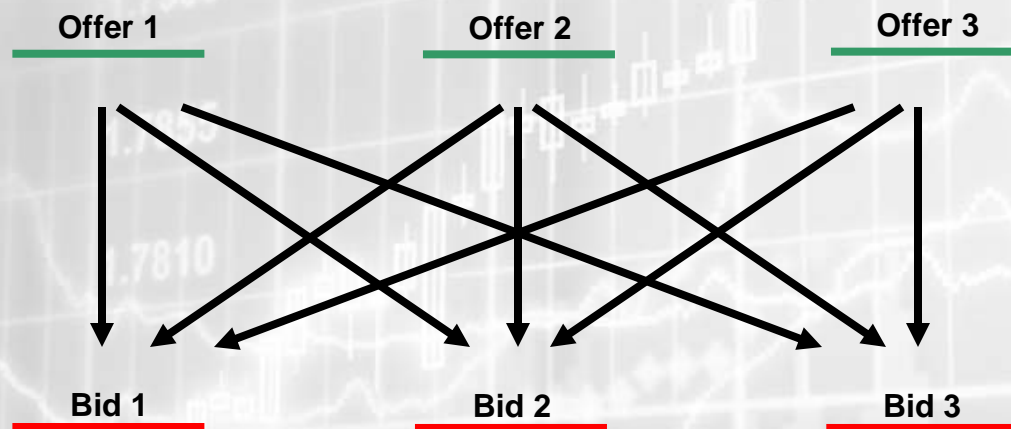


Assignment of Winning Bids & Offers

- Once the auction clearing price has been established, assignment of winning Sellers to Buyers must consider counterparty constraints.
- The question becomes, what is the assignment objective?
 - Follow auction clearing process and eliminate all infeasible Bid/Offer matches
 - Honor order of winning Offers
 - Maximize the number of matches given the set of winning Bids and Offers
 - Other

Assignment of Winning Bids & Offers

Objective: Maximize number of deals.



With no constraints, there are nine feasible matches.

Assignment Considerations

Consider the following 3x3 matrix.

| | Offer 1 | Offer 2 | Offer 3 |
|--------------|----------------|----------------|----------------|
| Bid 1 | | | |
| Bid 2 | | | |
| Bid 3 | | | |

Assignment Considerations

Step 1: Identify all infeasible matches.

| | Offer 1 | Offer 2 | Offer 3 |
|-------|---------|---------|---------|
| Bid 1 | | X | X |
| Bid 2 | | X | |
| Bid 3 | | | |

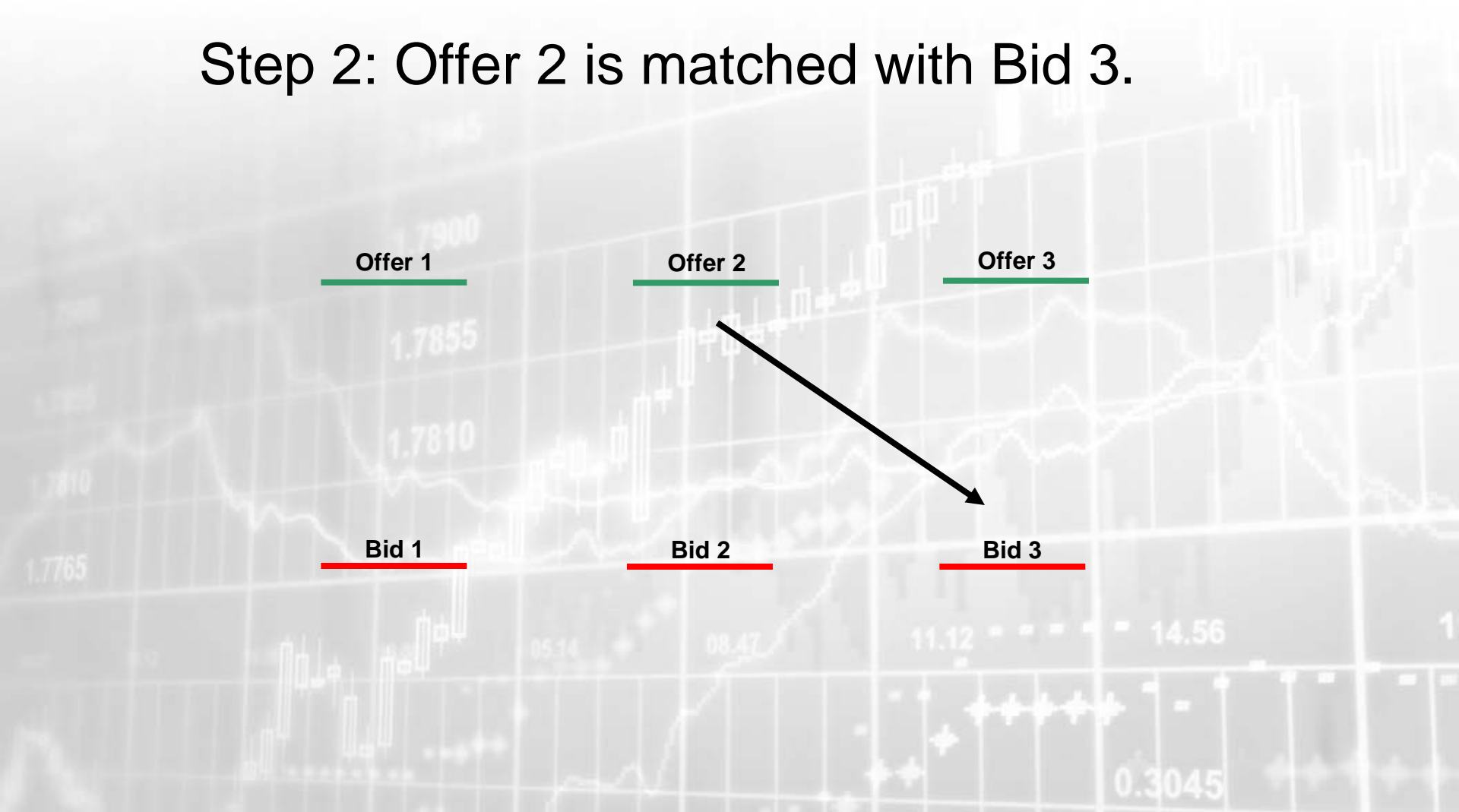
Assignment Considerations

Step 2: Match most constrained pair.

| | Offer 1 | Offer 2 | Offer 3 |
|-------|---------|---------|---------|
| Bid 1 | | X | X |
| Bid 2 | | X | |
| Bid 3 | | Match | |

Assignment of Winning Bids & Offers

Step 2: Offer 2 is matched with Bid 3.



Assignment Considerations

Step 3: Eliminate options given the Match.

| | Offer 1 | Offer 2 | Offer 3 |
|-------|---------|---------|---------|
| Bid 1 | | X | X |
| Bid 2 | | X | |
| Bid 3 | X | Match | X |

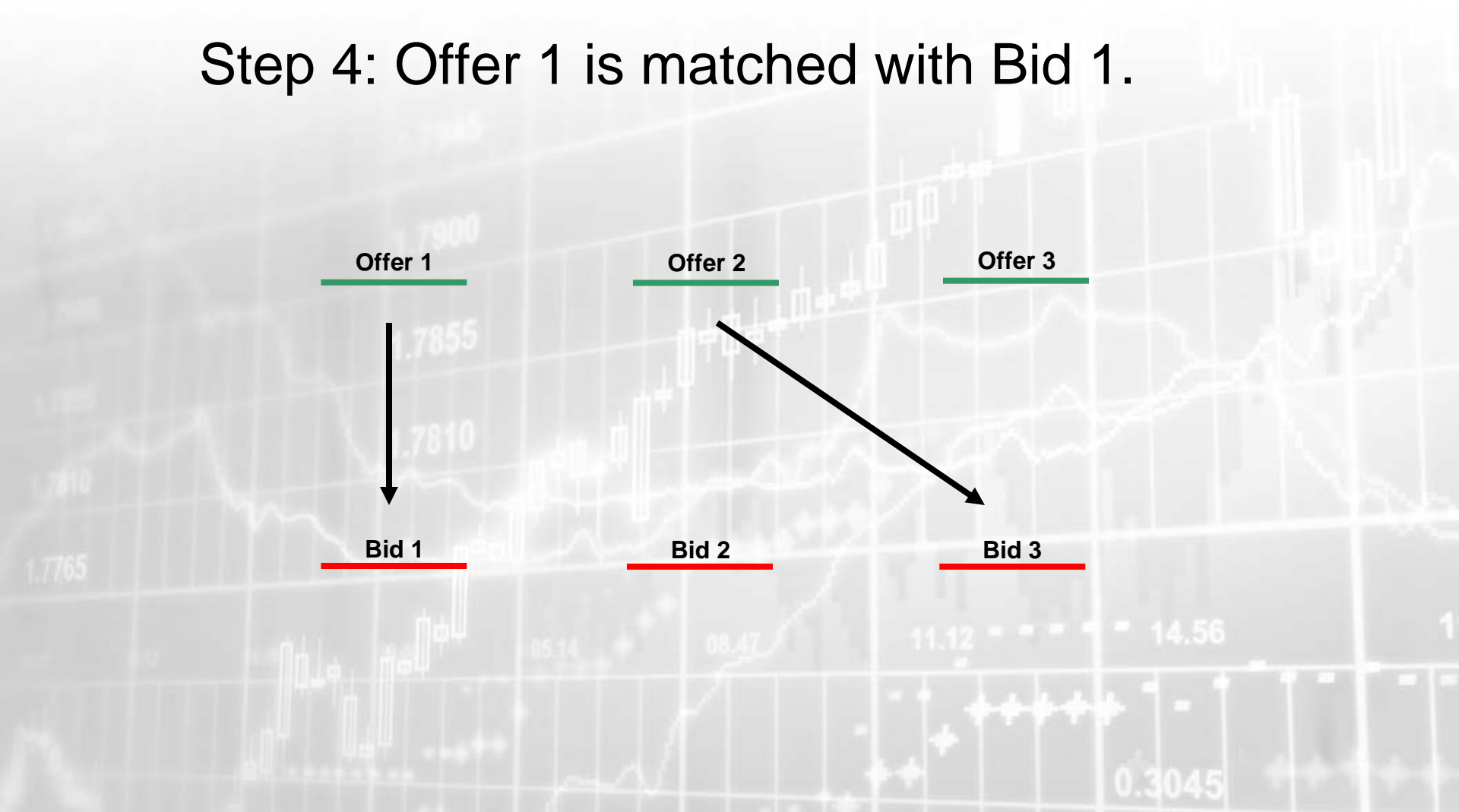
Assignment Considerations

Step 4: Match next most constrained pair.

| | Offer 1 | Offer 2 | Offer 3 |
|-------|---------|---------|---------|
| Bid 1 | Match | X | X |
| Bid 2 | | X | |
| Bid 3 | X | Match | X |

Assignment of Winning Bids & Offers

Step 4: Offer 1 is matched with Bid 1.



Assignment Considerations

Step 5: Eliminate remaining options.

| | Offer 1 | Offer 2 | Offer 3 |
|-------|---------|---------|---------|
| Bid 1 | Match | X | X |
| Bid 2 | X | X | |
| Bid 3 | X | Match | X |

Assignment Considerations

Step 6: Match remaining pair.

| | Offer 1 | Offer 2 | Offer 3 |
|-------|---------|---------|---------|
| Bid 1 | Match | X | X |
| Bid 2 | X | X | Match |
| Bid 3 | X | Match | X |

Assignment of Winning Bids & Offers

Step 6: Offer 3 is matched with Bid 2.



Assignment Considerations

What if?

| | Offer 1 | Offer 2 | Offer 3 |
|-------|---------|---------|---------|
| Bid 1 | X | | X |
| Bid 2 | | X | |
| Bid 3 | X | | X |

Assignment Considerations

Possible Assignments

| | Offer 1 | Offer 2 | Offer 3 |
|-------|---------|---------|---------|
| Bid 1 | X | Match | X |
| Bid 2 | Match | X | X |
| Bid 3 | X | X | X |

Assignment Considerations

Possible Assignments

| I | Offer 1 | Offer 2 | Offer 3 |
|----------|---------|---------|---------|
| Bid 1 | X | Match | X |
| Bid 2 | Match | X | X |
| Bid 3 | X | X | X |

| II | Offer 1 | Offer 2 | Offer 3 |
|-----------|---------|---------|---------|
| Bid 1 | X | Match | X |
| Bid 2 | X | X | Match |
| Bid 3 | X | X | X |

| III | Offer 1 | Offer 2 | Offer 3 |
|------------|---------|---------|---------|
| Bid 1 | X | X | X |
| Bid 2 | Match | X | X |
| Bid 3 | X | Match | X |

| IV | Offer 1 | Offer 2 | Offer 3 |
|-----------|---------|---------|---------|
| Bid 1 | X | X | X |
| Bid 2 | X | X | Match |
| Bid 3 | X | Match | X |

Issues That Can Complicate Assignment

- Bid/Offer priority when 100% assignment is not achievable
- Full vs. Partial Bids/Offers (*i.e.*, linking)
- Dynamic vs. Static Credit
- Bid size (especially for hourly auctions)

Participation by Third-Party Sellers

- Identified Assignment Objectives
 - Primary: Maximize number of transactions
 - Secondary: Honor original bid/offer ranking priority
- Software Expansion
 - OATI is on board to implement modifications to address the expansion requirement
- Mitigation Requirements
 - Only applicable to Southern Companies



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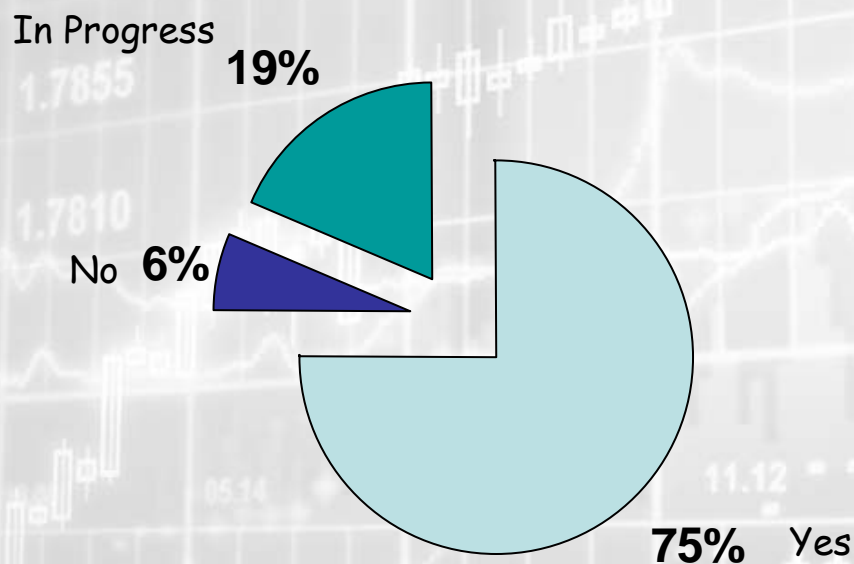
Survey Results

Survey Results

- Blind Survey
- 79 Hits on the Survey
- Seventeen Responses

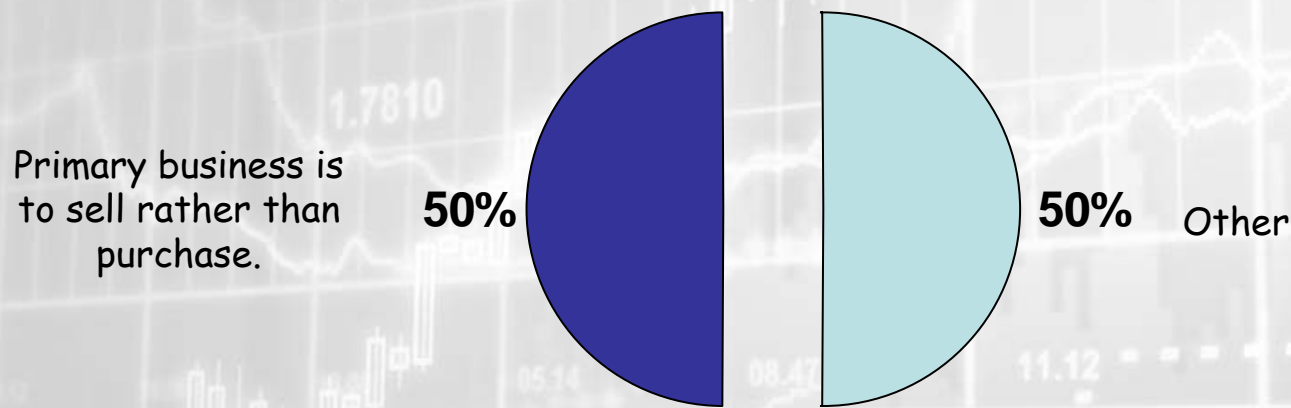
Survey Results

1. Are you currently a registered participant of the Southern Company Energy Auction?



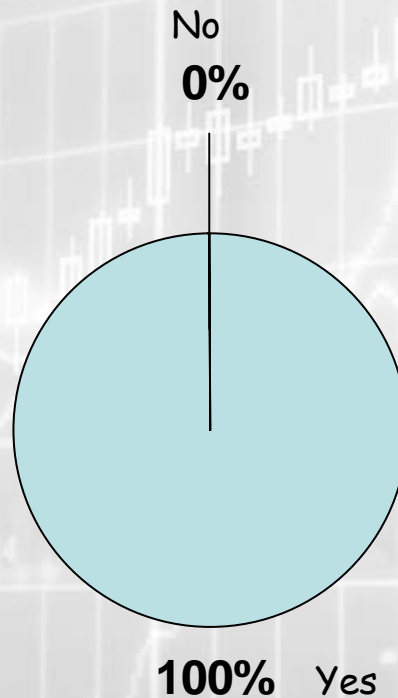
Survey Results

2. If you are not a registered participant, describe the reasons for your decision not to participate.



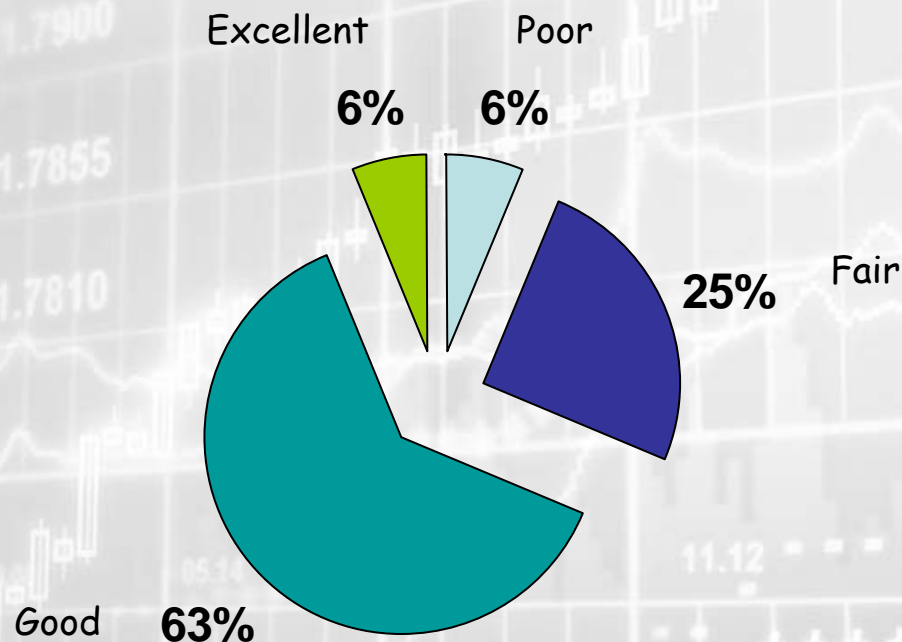
Survey Results

3. Have you accessed the Southern Company Energy Auction and webMarket training materials and other information available at the www.southerncompany.com/energyauction website?



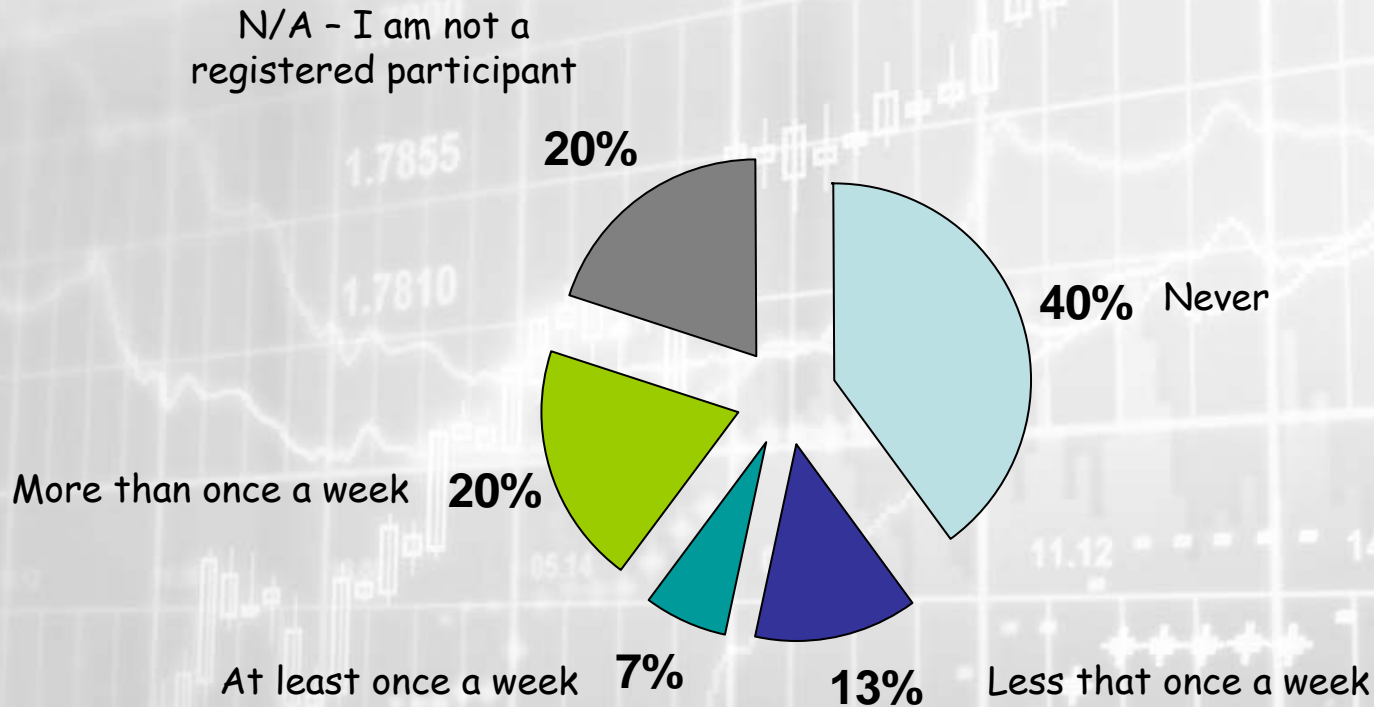
Survey Results

4. If you answered yes to Question 3, how would you rate the usefulness of the available materials?



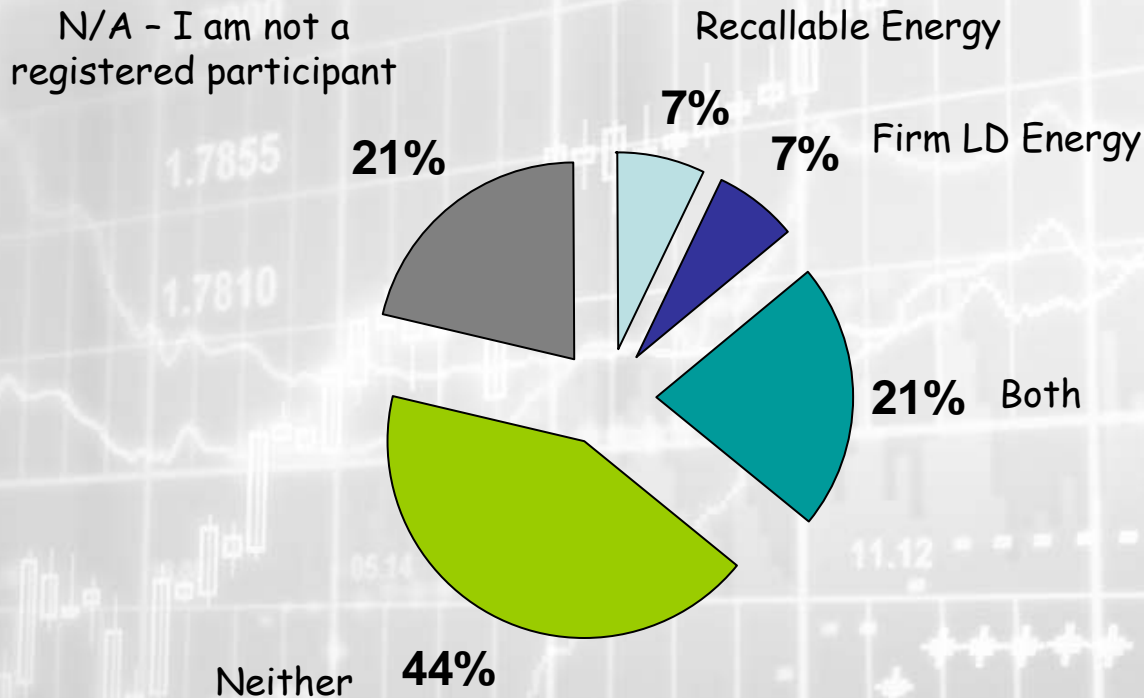
Survey Results

5. How frequently have you participated as a bidder in the Day Ahead energy auction?



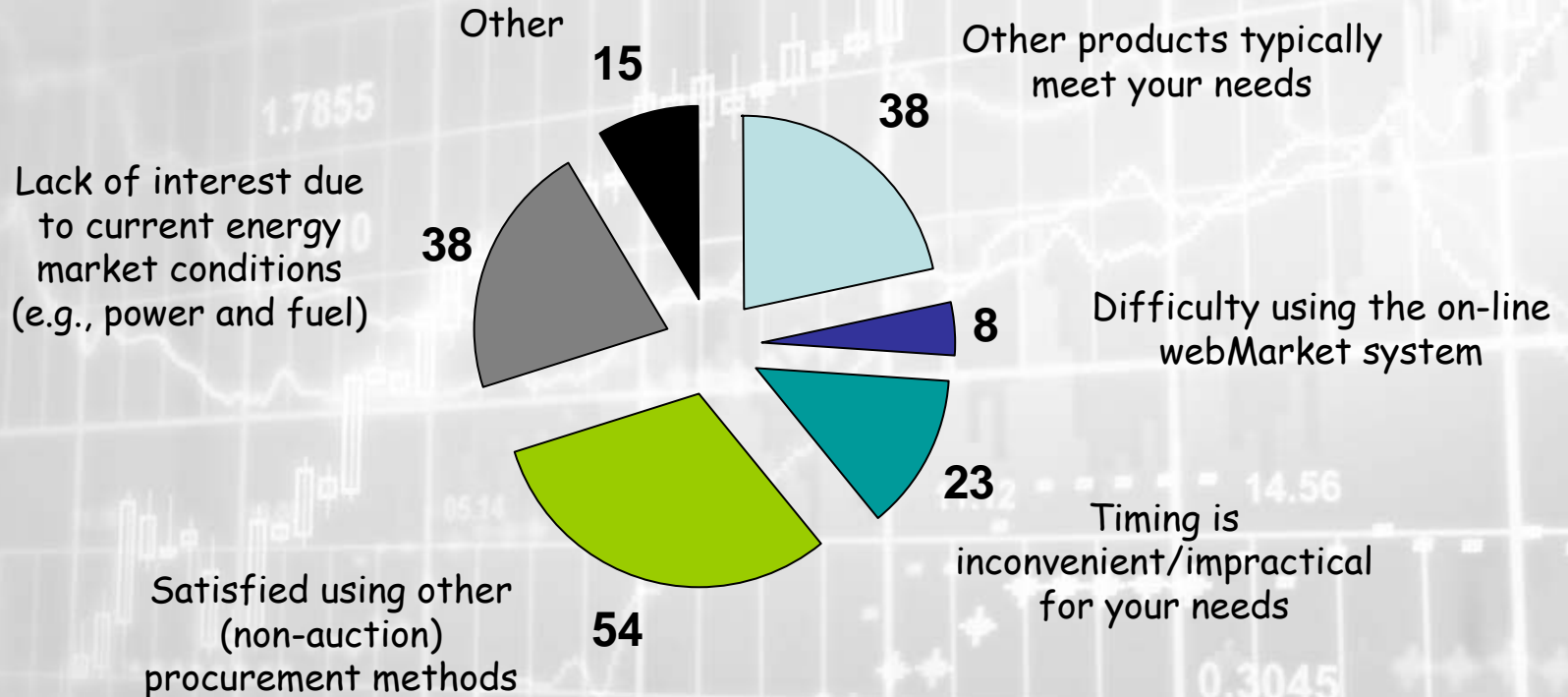
Survey Results

6. Of the two Day Ahead products (Recallable Energy and Firm LD Energy), which have you bid to purchase?



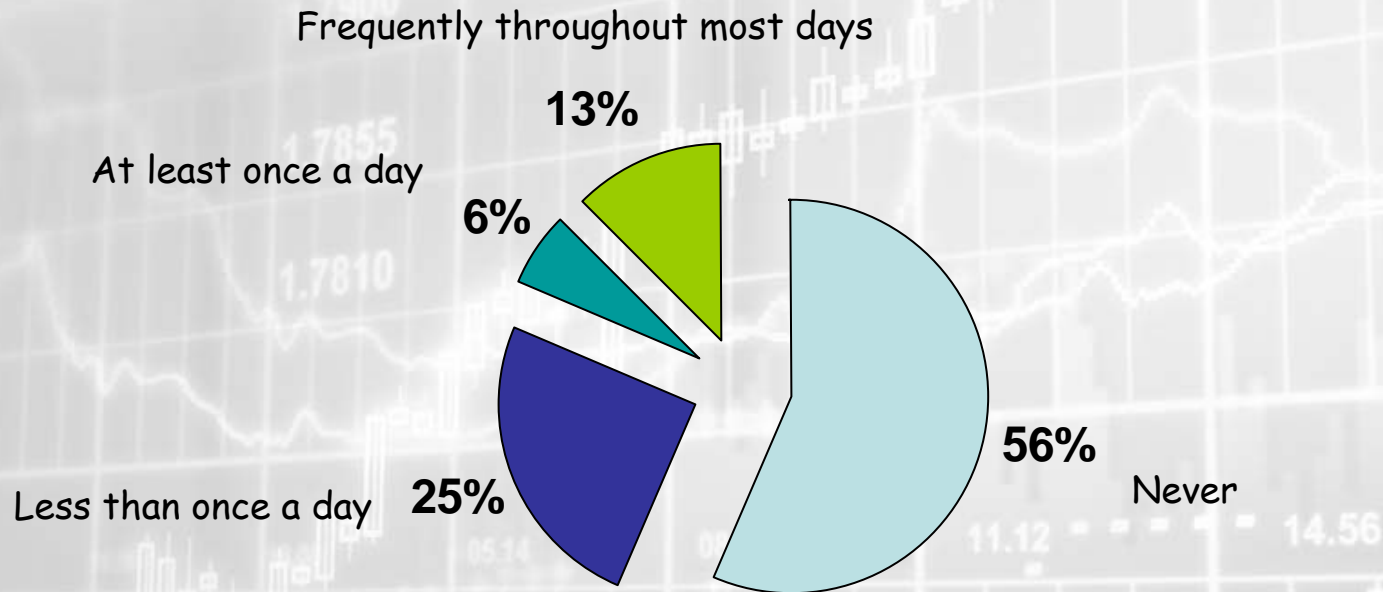
Survey Results

7. If you are not regularly submitting bids or discontinued submitting bids in the Day Ahead energy auction, describe your reasons for doing so. (Mark all that apply.)



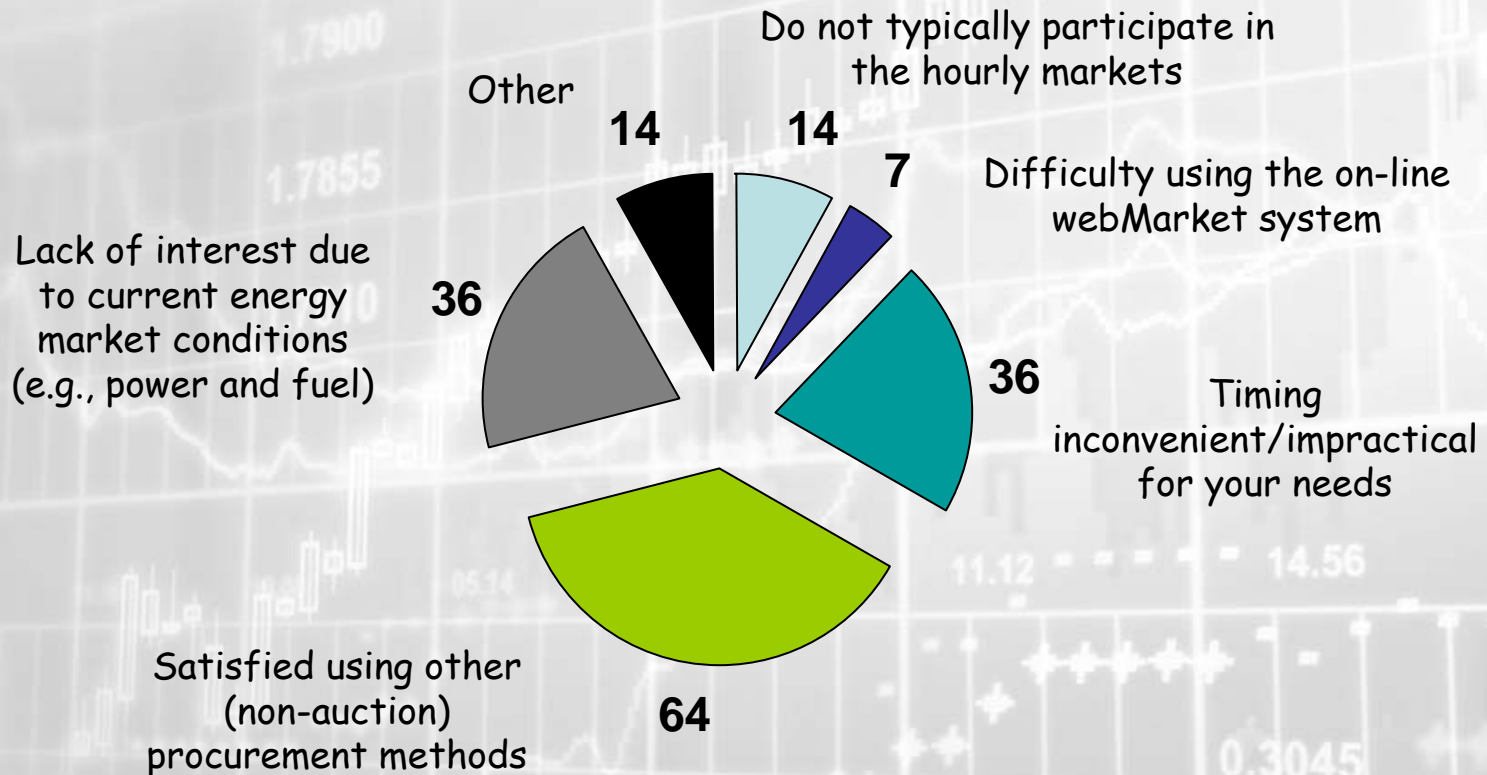
Survey Results

8. How frequently have you participated as a bidder in the Hour Ahead energy auction?



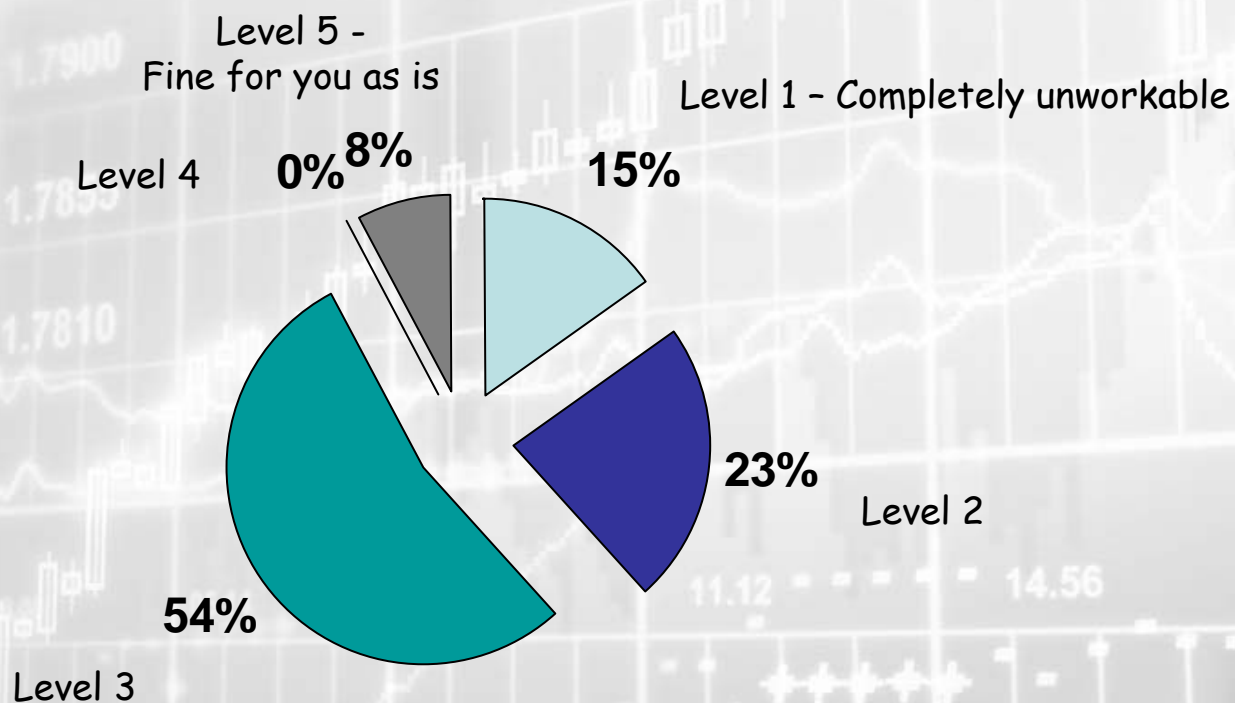
Survey Results

9. If you are not regularly submitting bids or discontinued submitting bids in the Hour Ahead energy auction, describe your reasons for doing so. (Mark all that apply.)



Survey Results

10. On a scale of 1 to 5, rate the convenience and practicality of the current Day Ahead energy auction schedule.



Survey Results

11. Considering your response to Question 10, what improvements would you suggest to the Day Ahead energy auction schedule (i.e., timing)?

- The need to have DA bids in the system by 0630 is a difficulty since most companies' work days start a little later. Our company is not comfortable submitting bids the prior afternoon or in having our real-time desk do this overnight. So we have chosen not to participate.
- Timing should be faster.
- Clears need to come out later, 7:30 am?
- We feel it might be better if the Auction closed at 6:45 AM CPT everyday (assuming results are still available by 7:00 CPT) to give people time to more accurately predict their position for the next day.

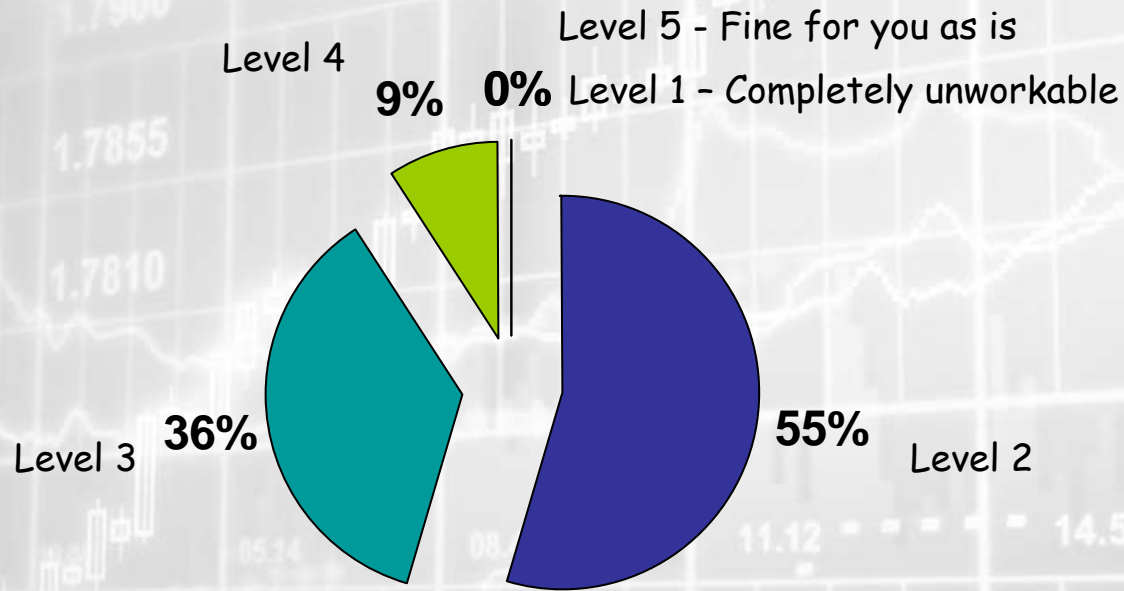
Survey Results

11. Considering your response to Question 10, what improvements would you suggest to the Day Ahead energy auction schedule (i.e., timing)?

- The biggest improvement Southern Company could make with respect to its Day-Ahead Energy Auction would be to change the calculation for which it calculates its Available Capacity and thus the unit Heat-Rates it is able to offer into the auction. For a multi-hour block product like the one Southern offers in its Day-Ahead Auction a more prudent approach to calculating Available Capacity would be to look at each hour individually and see what the marginal unit that is needed for that hour and then take the average cost of the marginal unit across all hours to get a true marginal cost across all hours. This is consistent with the way that a 16-hour peak product is priced and trades across all regions and how the Into-Southern 16-hour product trades in the Over-The-Counter market. By only looking at the Available Capacity in the peak hour of each day, Southern is grossly under-stating its Available Capacity in all other hours of that day.
- The fact that Southern is allowed to sell power into external control areas and thus reduce their Available Capacity during the auction open period is a little disheartening as well.

Survey Results

12. On a scale of 1 to 5, rate the convenience and practicality of the current Hour Ahead energy auction schedule.



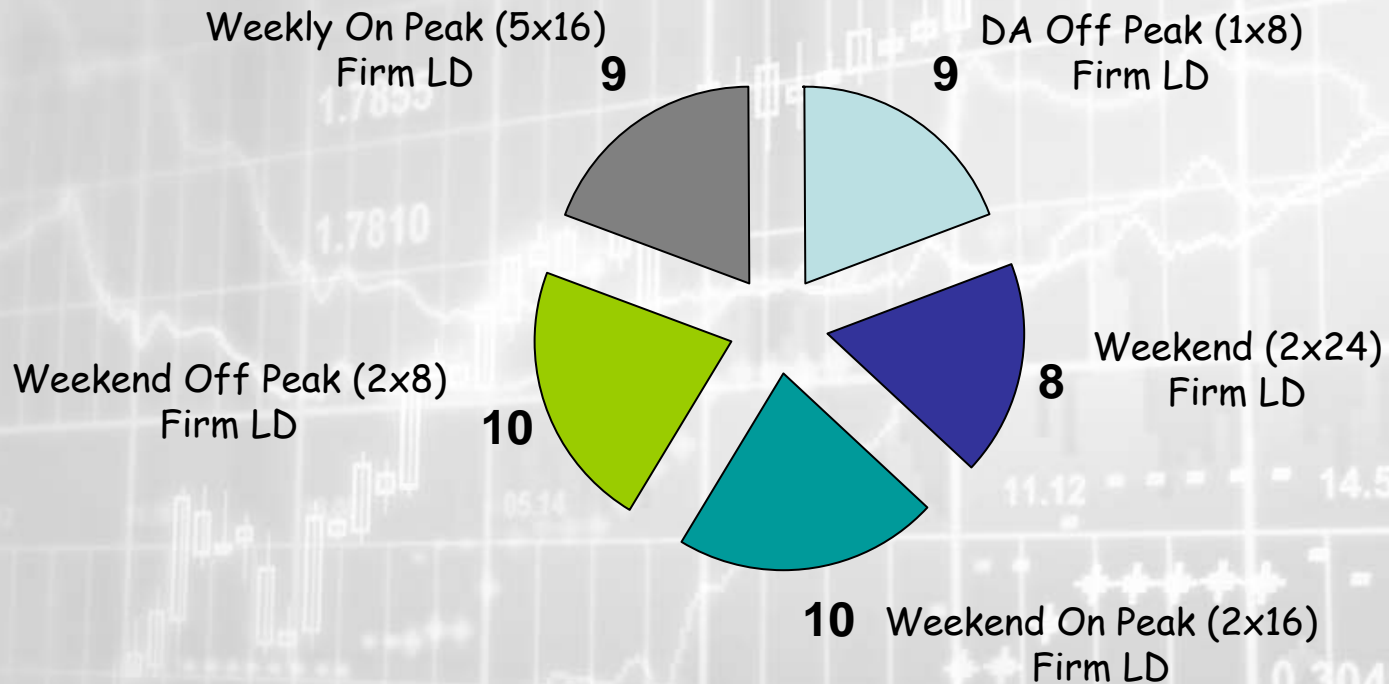
Survey Results

13. Considering your response to Question 10, what improvements would you suggest to the Day Ahead energy auction schedule (i.e., timing)?

1. Timing is bad...would be better if shifted back at least 15 minutes.
2. This market closes too late in the hour to be a reliable source for our company. I would like to see the bid window open at 10 or 15 until the top of the hour; close around the top of the hour or 5 after. This would allow plenty of time after the auction runs to buy in the bilateral market if needed.
3. I would like to see the auction for buying AND selling power to Southern, not just an auction for buying.
4. Shorter auction time...know clearing prices sooner.
5. Timing is too late for the hourly market.
6. Timing.

Survey Results

14. Keeping in mind scheduling and other constraints associated with operation of the Day Ahead energy auction, which additional products would you find attractive in a future phase of the auction? (Mark all that apply.)



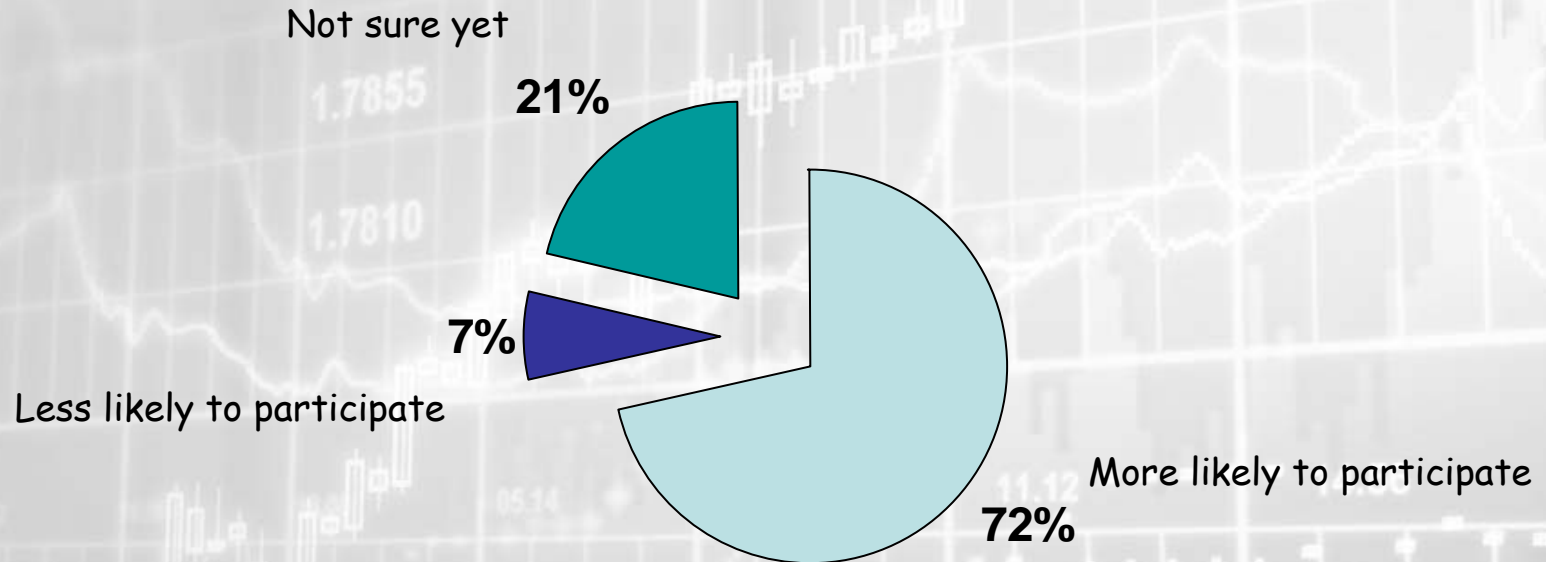
Survey Results

15. Please rate the functionality and ease of use of the webMarket auction software.

| | Poor | Fair | Good | Excellent | No Opinion |
|---------------|------|------|------|-----------|------------|
| Functionality | 0% | 8% | 54% | 31% | 8% |
| Ease of Use | 0% | 0% | 50% | 42% | 8% |

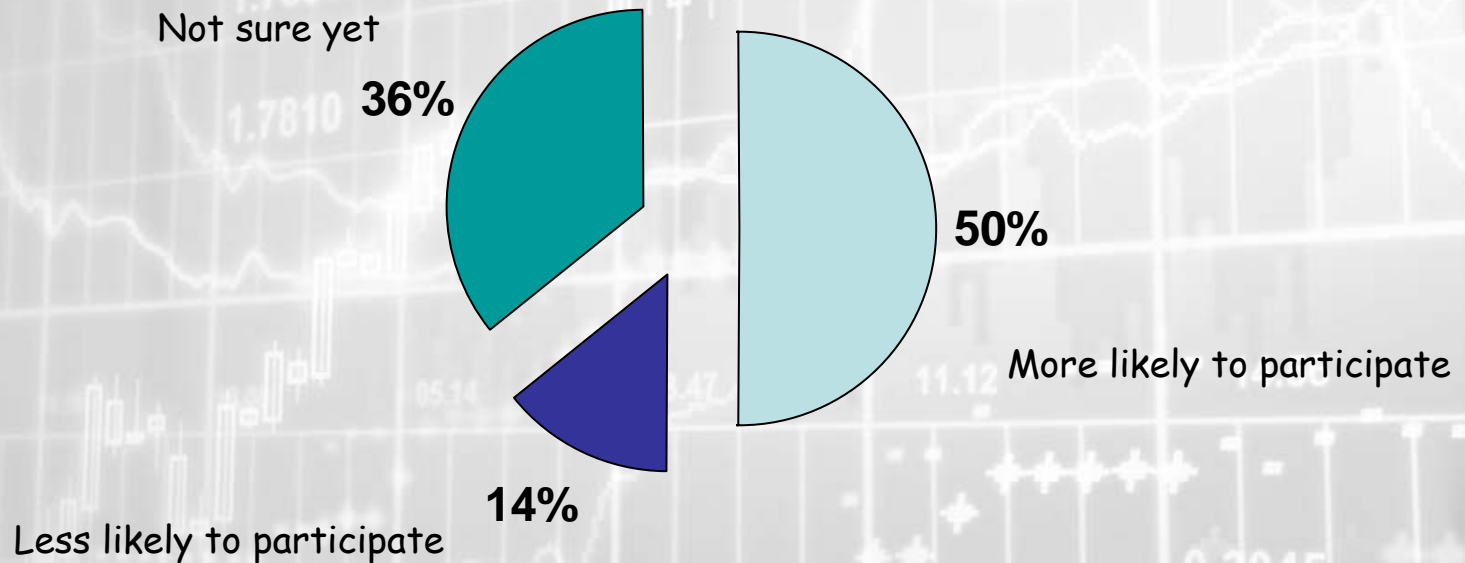
Survey Results

16. When additional sellers are allowed into the Southern Company Energy Auction, what is the likelihood your organization would participate as a seller?



Survey Results

17. When additional sellers are allowed into the Southern Company Energy Auction, what is the likelihood your organization would participate as a purchaser?





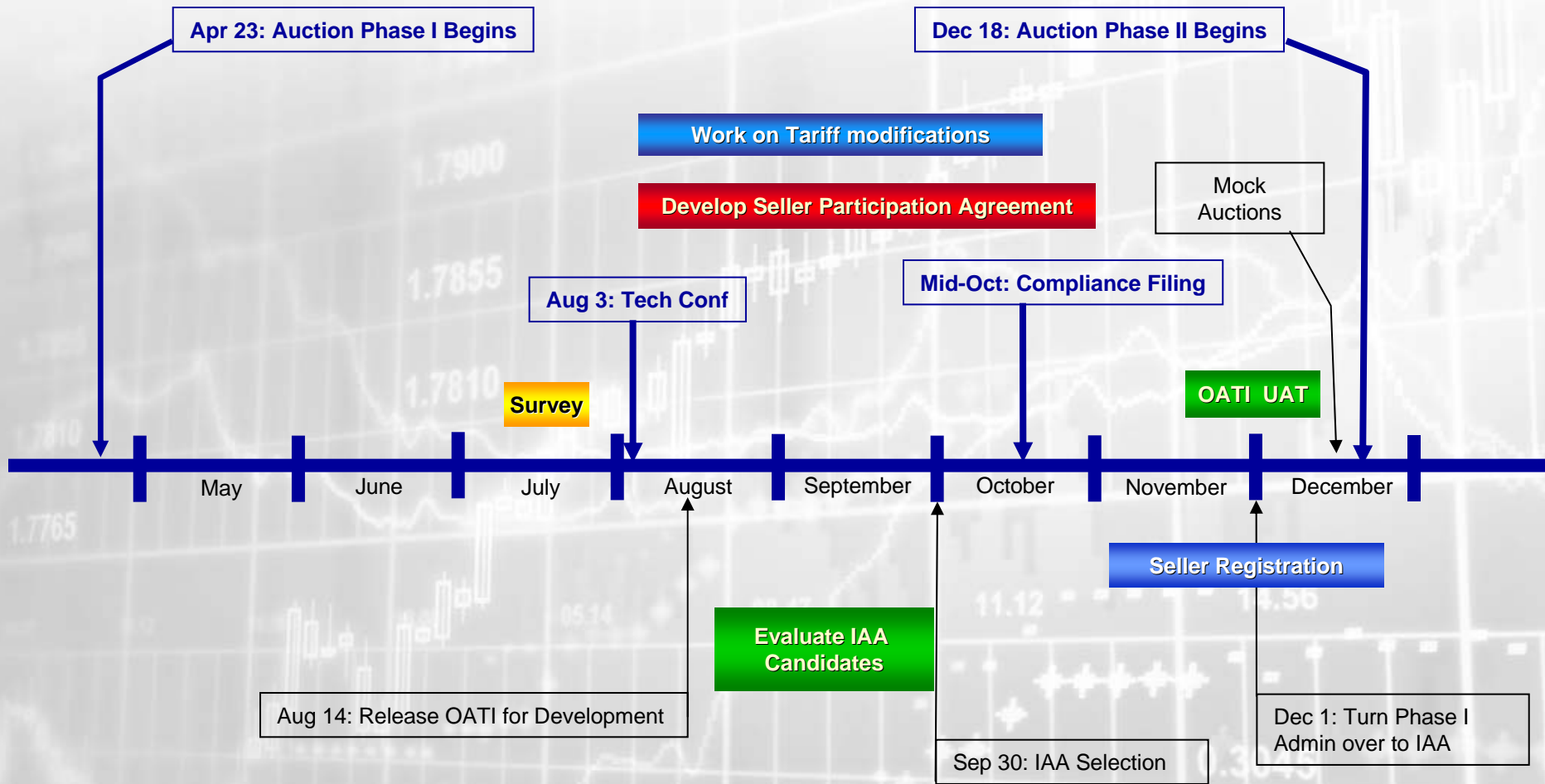
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Next Steps

Changes to Auction Rules

- Participation by Third-Party Sellers
- Additional Modifications
 - Required to expand Auction by 12/18/09
 - Independent Auction Administrator
 - Recovery of Administrative Costs
 - Software Costs
 - Independent Auction Administrator Costs
 - Consideration for Survey Results

Energy Auction: Phase II Timeline





ENERGY AUCTION

Questions