Public Workshop on Auction Formats for Issuing Offshore Wind Leases

South Interior Building Auditorium Washington, DC December 16, 2011

Auction Design Challenges for Offshore Wind



Offshore Wind Leasing Challenges

- OCS blocks are not alike
 - Project revenues affected by proximity to markets and the quality of the wind resource
 - Project development costs are affected by bottom conditions, water depth, environmental stipulations, and access to onshore installation and transmission infrastructure
- Bidders have different development strategies
 - The marketing strategy drives general project location and sizing
 - The developer's experience drives project site selection, configuration, technology, and buffer requirements
- Uncertainties affect valuation
 - Costs are volatile, technologies are emerging, and data incomplete
 - COP EIS may further restrict the use of the leased area
 - Projects are currently reliant on a mix of long-term sales agreements or other federal, state, or local supports

Wind Resource and Water Depth

Multipurpose Marine Cadastre Bureau of Ocean Energy Management and National Oceanic and Atmospheric Administration





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Access to Onshore Transmission



New Jersey Competitive Landscape





























Maryland Competitive Landscape



Aggregate Expressions of Interest by 1/16th OCS Block Aliquot

Individual Expression of Interest by 1/16th OCS Block Aliquot

Bluewater Wind Maryland LLC



OCS Blocks: 14

Whole: 9

Partial: 11 (5)



OCS Blocks: 14







Aggregate Expressions of Interest by 1/16th OCS Block Aliquot



Individual Expression of Interest by 1/16th OCS Block Aliquot

Fishermen's Energy of New Jersey, LLC

OCS Blocks: 13.06







Aggregate Expressions of Interest by 1/16th OCS Block Aliquot



Individual Expression of Interest by 1/16th OCS Block Aliquot

Seawind Renewable Energy Corporation, LLC

OCS Blocks: 5.94







Aggregate Expressions of Interest by 1/16th OCS Block Aliquot

OCS Blocks: 14



Individual Expression of Interest by 1/16th OCS Block Aliquot

Iberdrola Renewables, Inc.

OCS Blocks: 12.38







Aggregate Expressions of Interest by 1/16th OCS Block Aliquot

OCS Blocks: 14





Individual Expression of Interest by 1/16th OCS Block Aliquot

Orisol Energy US, Inc.

OCS Blocks: 9.69







Aggregate Expressions of Interest by 1/16th OCS Block Aliquot

OCS Blocks: 14





Individual Expression of Interest by 1/16th OCS Block Aliquot

Energy Management, Inc.

OCS Blocks: 14







Aggregate Expressions of Interest by 1/16th OCS Block Aliquot



Individual Expression of Interest by 1/16th OCS Block Aliquot

Maryland Offshore LLC

OCS Blocks: 14







Aggregate Expressions of Interest by 1/16th OCS Block Aliquot



Individual Expression of Interest by 1/16th OCS Block Aliquot

RES America Developments Inc.

OCS Blocks: 9.69





Rhode Island/Massachusetts Competitive Landscape
















































Resolving Overlapping Interest

- Allow bidders to form meaningful lease areas based on prices and business plans by allowing bidders to <u>substitute</u> lots during the auction
- Minimize guesswork by letting prices increase ("ascend") during the auction in response to demand from bidders ("price discovery")

 Allow bidders to express their valuation of as many lot combinations they are interested in leasing during the auction

Criteria for Evaluating Formats

- Fair Return: Per BOEM statutory requirement
- <u>Efficiency</u>: Awards commercial renewable energy leases on the OCS to those who value the areas the most
- <u>Simplicity</u>: Manageable for BOEM to administer and bidders to understand and participate
- <u>Competition</u>: Fair process that encourages participation
- Transparency: Open process in which bids are comparable and it's clear why the winners won
- **<u>Neutrality</u>**: All companies are treated equally

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<u>Consistency</u>: Applicable to the issuance of leases in a variety of renewable energy development contexts

Basic Auction Parameters

- All auctions would be based on a cash bonus bid variable
 - Operating fee and rental rate schedules set prior to the auction
 - Straight-forward bid comparison
 - Properly incentivizes bidders
- Only technically and financially qualified bidders may participate

Object of Bidding

- Lot: An area offered for leasing that bidders may bid on during the auction
 - May consist of one or more OCS lease blocks (or a fraction thereof)
 - May offer a lease sale area as a single lot or as a set of multiple lots
- <u>Package</u>: A group of one or more lots desired by a bidder
 - Bidders submit bids for packages by submitting a single dollar value for all of the lots in the package
 - Bidding on packages is all-or-nothing

Formats Under Consideration Standard Auctions Single-Lot: Ascending Clock Auction



% Off

Final Cash Bonus 1st Factor

Nth Factor

Multiple-Lot: Simultaneous
 Ascending Clock Auction (SACA)

Multiple-Lot: Package Clock Auction

Multiple-Factor Auctions

Layered onto Standard Auctions

Single-Lot: Ascending Clock Format



Basic Concepts



- All of the OCS lease blocks in a lease sale area are offered as a single item, or "lot"
- Bidding occurs over multiple rounds ("ascending")
- BOEM "ticks" up the auction price at the start of each round like a clock
- Bids signal whether a bidder is "in" or "out" at the round's announced price
- Once a bidder is out they cannot re-enter in a later round (basic "activity rule")
- Auction closes when no more than one bidder signals an interest in the lot at the announced price for the round

Determining the Winner



- If only one bidder signaled interest during the final round the lot is awarded to that bidder at that round's price
- If all bidders from the previous round drop out from one round to the next a tie-breaker is used to determine the winner
 - Bidders are required to submit an "exit bid" price in the round when they leave the auction
 - The exit bid price must fall between the previous and current round's prices
 - The bidder with the highest exit bid wins

Price Determination



 Opening price is the BOEM minimum bid price

Illustrative Default Increment Percentages for a Clock Auction

- A percentage increase is applied to the previous round's price corresponding to the level of demand and the pace of the auction
- Allows BOEM to control the auction's pace



Ausubel and Cramton (2011c), p. 39.

One Bidder in at Final Announced Price





	Bid	Exit Bid
Bidder A	In	
Bidder B	In	
Bidder C	In	

**Bidders only see the announced price and demand at the start of each round 53

One Bidder in at Final Announced Price



Demand: 2

ln.

Bidder C

**Bidders only see the announced price and demand at the start of each round 54

One Bidder in at Final Announced Price

	Single Lot		Bid	Exit Bid
Round 1		Bidder A	In	
Announced Price: \$100		Bidder B	In	
Demand: 3		Bidder C	In	
Round 2		Bidder A	Out	\$105
Announced Price: \$108		Bidder B	In	
Demand: 2		Bidder C	In	
Round 3		Bidder A		
Announced Price: \$112		Bidder B	Out	\$110
Demand: 1		Bidder C	In	

Winner: Bidder C at \$112 for the Lot

**Bidders only see the announced price and demand at the start of each round

No Bidders in at Final Announced Price

	Single Lot		Bid	Exit Bid
<u>Round 1</u>		Bidder A	In	
Announced Price: \$100		Bidder B	In	
Demand: 3		Bidder C	In	
Round 2		Bidder A	Out	\$105
Announced Price: \$108		Bidder B	In	
Demand: 2		Bidder C	In	
Round 3		Bidder A		
Announced Price: \$112		Bidder B	Out	\$110
Demand: O		Bidder C	Out	\$111

Winner: Bidder C at \$111 for the Lot

Advantages



- <u>Simple in/out bidding procedure</u> ensures transparent process that is easy for BOEM to conduct and bidders to participate
- Price discovery process encourages bidders to bid up to their valuation of the lot, prevents over-bidding and surprise outcomes, and discourages harmful bidding practices

Audience Participation



- Check the piece of paper on the top of the day's handout for your bidder ID and auction budget for a single item
- As the auctioneer calls out each round's announced price either:
 - Keep your hand raised if the announced price is less than or equal to your budget; or
 - Lower your hand if the announced price exceeds your budget

Audience Participation



Auction Summary

1 2	- 24	А	В	С	D	E	F	G	Н		J
	1										
	2			Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Round 7	Round 8
	3	Rou	nd Price:	25.00	27.50	30.25	33.28	36.60	40.26	44.29	46.06
	4		Bids:	175	40	31	24	19	12	3	0
	5										
	6	Bidder	Budget								
+	7	175	25	In	Out						
	141	41	27	In	Out						
+	142	40	28	In	In	Out					
	150	32	30	In	In	Out					
+	151	31	31	In	In	In	Out				
	157	25	33	In	In	In	Out				
+	158	24	34	In	In	In	In	Out			
	162	20	36	In	In	In	In	Out			
+	163	19	37	In	In	In	In	In	Out		
	169	13	40	In	In	In	In	In	Out		
+	170	12	41	In	In	In	In	In	In	Out	
	178	4	44	In	In	In	In	In	In	Out	
	179	3	45	In	Out						
	180	2	45	In	Out						
	181	1	46	In	Out						

Multiple-Lot: Simultaneous Ascending Clock Auction (SACA) Format



Basic Concepts



- BOEM subdivides a larger lease area into a set of individual lots for sale, e.g., OCS blocks
- Bidding on all of the lots occurs at the same time over multiple rounds ("simultaneous")
 - Bidders indicate a "yes" for each lot in the set of <u>contiguous</u> lots they are interested in at the round's price for each lot



 If the number of bidders interested in <u>any</u> lot is more than one another round occurs; otherwise the auction closes



 BOEM ticks up the price for each lot at the outset of each round

NJ Lot Definition Example





Lots defined by BOEM prior to an auction in a manner that allows bidders to bid on the set of lots most aligned with their business objectives in each round

 Several ways BOEM can offer a lease sale area

- By Aliquot (1/16th Block): 996 lots
- By Block: 77 lots
- By Whole/Partial Pairings: <u>44</u> lots
- By larger lots each capable of supporting a standard wind project (not shown)
- Examples assume whole OCS blocks

Ausubel and Cramton (2011c), p. 49.

"Information Policy"





- What information do bidders receive before the start of each round?
 - The price for each lot set by BOEM
 - The number of bidders interested in each lot from the previous round ("demand")
- Bidding is rendered anonymous to minimize adverse bidding behavior

Price Determination

- How are prices for each lot determined at the outset of a round?
 - If no more than one bidder is interested the price remains the same
 - Otherwise, a percentage increase is applied corresponding to the level of demand and the pace of the auction
 - Bidders are able to adjust the set of lots they are bidding on to achieve the greatest difference between their own valuation and the going prices
- BOEM controls the auction's pace
- The example below increments prices based on fixed dollar amounts to make it easier to follow



Illustrative Default Increment Percentages for a Clock Auction



Ausubel and Cramton (2011c), p. 39.

Activity Rules



- Activity in the auction is measured in points that are assigned to each lot prior to the auction
 - The examples will use the simplest case where each lot corresponds to a single OCS block that is worth 1 point
 - A "bid eligibility rule" would determine the maximum number of lots (points) that a bidder is eligible to bid on in any round of the auction, based on their bid deposit amount and lot reserve prices
- Bidders may reduce, but not increase, the number of lots they bid on from one round to the next
 - A bidder's eligibility can only go down during the auction!
 - Example: If a bidder was eligible to bid on 8 lots going into a round but only bid on 6 lots, that bidder will only be eligible to bid on up to 6 lots in all subsequent rounds

Other Activity Rules



- Maximum eligibility requirements may be imposed to address competitive concerns
- Minimum lease size constraints may be used to ensure award of lease tracts of sufficient scale
- Bidders seeking more than one contiguous lease area must register for the auction as two separate bidding entities, each requiring a separate legal, technical, and financial qualification and other possible restrictions

Exiting the Auction



- A bidder exits the auction in the round where they either fail to bid on any lot or submit an exit bid for a package of lots
- Exit bids are only considered in a round in which the auction would normally end absent the exit bids submitted
- An exit bid is rejected if any lot in the package overlaps with...
 - One or more lots receiving a bid at the announced price for the round; or
 - Another exit bid package of greater value (that also satisfies the prior condition)

Stylized example based on Ausubel and Cramton (2011c) pages 21-34.

Bidding Constraints by Bidder



Prices	Bids by Round and Bidder		Demand
Round 1			
	Bidder A <mark>8</mark> Bidder B <mark>5</mark>	Bidder C 3 Bidder D 3	Bids Increment
10.0 10.0 10.0			2 3 3 3 2
10.0 10.0 10.0	1 1 1		1 2 1 2 1
10.0 10.0 10.0	1 1 1		1 2 1 1 0
10.0 10.0 10.0			1 1 1 0 0
	\$80 \$50	\$30 \$30	

Prices	Bids by Round and Bid	der	<u>I</u>	Demand	
Round 110.010.010.010.010.010.010.010.010.010.010.010.0	Bidder A 8 Bidder B 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 50	5 Bidder C 3 1 1 1 1 1 1 1 4 4 1 5 5 1 5 5 30 5 5	Bidder D 3	2 3 3 1 2 1 1 2 1 1 1 1	Bids Increment 3 2 2 1 1 0 0 0
Round 211.012.010.011.010.011.010.010.010.010.0	Bidder A 8 Bidder B 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 \$82 \$51	5 Bidder C 3 1 1 1 1 1 \$31	Bidder D 3	0 0 0 1 1 1 3 3 3 3 3 1	








Addressing Undersell

- Unsold lots are a potential concern since high-value areas may go unclaimed
 - Worst case occurs when all bidders drop out of the auction at the same time and do not submit exit bids



- The example showed a case where a large bidder withdraws leaving the area to two smaller bidders
- Two ways to address undersell were identified
 - Option 1 addresses the possibility of extreme undersell by evaluating all of the bid configurations submitted during the auction to maximize seller revenue, subject to the condition that the prevailing bids in the final round are included in the winning set of lots
 - The second option is the Package Auction (next section) and provides for a more robust approach to mitigating undersell
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Strengths



- <u>Simple bidding procedure</u> where bidders indicate their interest in each lot with a simple yes/no response at the prices announced by BOEM in each round limits exposure and allows for full substitution of lots during the auction
- <u>Price discovery process</u> encourages bidders to bid up to their valuation for a given package, prevents surprise outcomes, and discourages harmful bidding practices
- <u>Transparent format</u> is straight-forward to implement without deferring to complex, mathematical solutions to determine who won and at what price

Weaknesses



- <u>Bidding strategies</u> could leave bidders with a set of blocks, or "package", that is less valuable to them than if they had been able to express their interest in a range of packages
- <u>Potential undersell</u> could lead to some high-value lots remaining unclaimed at the end of the auction

Bidding Constraints by Bidder



Bids	Increment
4	3
3	2
2	1
1	0
0	0

Prices	Bids by Round and Bidder	Demand	and the second se
Round 1 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Bidder A 6 Bidder B 8 Bidder C 3 Bidder D 8 1	3 4 3 2 3 2 1 2 1 1 2 1	
Round 2 12.0 13.0 12.0 11.0 12.0 11.0 10.0 11.0 10.0 10.0 11.0 10.0	Bidder A 6 Bidder B 8 Bidder C 2 Bidder D 8 1	2 3 3 2 3 3 1 2 1 1 2 1	Bids Increment 4 3 3 2
Round 313.015.014.012.014.013.010.012.010.010.012.010.0	Bidder A 4 Bidder B 6 Bidder C 2 Bidder D 5 1	0 0 0 1 1 0 2 3 1 3 3 1	2 1 1 0 0 0
Round 4 13.0 15.0 14.0 12.0 14.0 13.0 11.0 14.0 10.0 12.0 14.0 10.0	Bidder A 4 Bidder B 3 Bidder C 0 Bidder D 4 1	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	83



Bidding Constraints by Bidder





Bidding Constraints by Bidder



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Multiple-Lot: Package Clock Auction Format



Basic Concepts



Starts with a SACA phase just like before (no exit bids)

- Once the SACA phase closes bidders are allowed to submit additional package bids during a supplemental, sealed-bid round
- Bid values for the additional packages are constrained based on how each bidder bid during the SACA phase
- The supplemental package bids are pooled with the bids from the SACA phase which are also treated as package bids in determining winners
- The winning set of packages are those which result in the greatest auction revenues at the prices bid
- The prices paid are calculated on a "second-price" basis to encourage bidders to bid their full value for each package

Supplemental Bid Rules



- All bidders may submit supplemental bids regardless of the round when they stopped bidding in the SACA phase
- Bidders who bid in the final clock round can increase their final bid by as much as they want
 - The maximum bid for packages of equal or lower size (activity points) is adjusted relative to this final bid amount based on lot prices in the final round
- Bidders are also allowed to bid on packages of greater size (activity points) than the bidder's eligibility in the final clock round
 - The maximum bid for such packages is limited to the value of the package in the last round where the bidder was eligible to bid for a package of that size (activity points)
- Referred to as a "revealed preference" activity rule

Second Pricing



- The winner in an auction for a single lot using a sealed-bid approach would only pay an amount equal to the secondhighest bid
 - If three bids of \$10, \$20, and \$30 are received then the price paid by the high-bidder is \$20
 - Approximates a competitive market clearing price since a bid of \$20.01 would still have won the auction
 - Prevents bidders from holding back, or "bid shading", to avoid overpaying for a package of lots
- The concept is similar for a multiple-lot auction
 - The smallest price that the winner can pay such that no other combination of bidders would have a higher value from their bids
 - Requires a complex, mathematical solver to generate



Starts with a simultaneous ascending clock auction (without exit bids)

Stylized example based on Ausubel and Cramton (2011c) pages 21-34.







Example where Bidder A does not submit supplemental bids



Determining maximum supplemental bid amounts for Bidder C

11	12	12
10	11	10
12	13	12
12	12	10

Round 3 Prices





Plan C3 3				
1	1	1		
SACA: \$31				
MAX: \$38				
S. BID: \$34				

Package of Equal Size

- Constrained by SACA FRB and Round 3 Prices
- Step 1: Add the supp. bid value of Plan C2
- Step 2: Add the value of Plan C1 in Rnd. 3
- Step 3: Subtract the value of Plan C2 in Rnd. 3
 - Calc: C2:Supp + (C1:R3 C2:R3)
 - 32 + (35 31) = 36

SACA Final Round Bid (FRB)

- Unlimited bid increase allowed on this package
- Bid increased by \$1 to budget of \$32

Package of Equal Size

- Same as above
 Calc: C2:Supp + (C3)
 - Calc: C2:Supp + (C3:R3 C2:R3)
 - 32 + (37 31) = 38



Determining maximum supplemental bid amounts for Bidder A

Round 3 Prices

11	12	12
10	11	10
12	13	12
12	12	10

<u>Bidder A</u>				
Plai	n A1	8		
1	1	1		
1	1	1		
1	1			
SACA: \$80				
MAX: \$91				
S. BID: \$90				

Plan A2 8				
1	1	1		
1	1	1		
1	1			
SACA: \$82				
MAX: \$92				
S. BID: \$90				

Larger Package than Final Round Bid

- Package valued at prices in the last round in which A was eligible to bid on up to 8 lots
- \$91 at Round 3 prices

Larger Package than Final Round Bid

- Same as above
- \$92 at Round 3 prices

Strengths



- <u>At least as efficient as the SACA format</u>
- <u>Helps mitigate undersell</u> by making it easy for bidders to submit a final offer on all of the lease options consistent with their business plans
- Price discovery process during the SACA phase enables bidders to bid up to their valuation for each of the lots and to submit informed final package bids during the supplemental round
- <u>Second-price</u> method encourages bidders to bid up to their valuation for each of the packages they submit

Weaknesses



- <u>Reliance on complex solution algorithms</u> may make the results seem less transparent to bidders requiring further analysis and explanation
 Bidders may perceive additional activity
 - rules as too complicated



Simultaneous Ascending Clock Auction (SACA) Phase

Prices	Bids by Round and Bidder	Demand
Round 1 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	Bidder A 6 Bidder B 8 Bidder C 3 Bidder D 8 1	3 4 3 2 3 2 1 2 1 1 2 1
Round 2 12.0 13.0 12.0 11.0 12.0 11.0 10.0 11.0 10.0 10.0 11.0 10.0	Bidder A 6 Bidder B 8 Bidder C 2 Bidder D 8 1	2 3 3 2 3 3 1 2 1 1 2 1
Round 3 13.0 15.0 14.0 12.0 14.0 13.0 10.0 12.0 10.0 10.0 12.0 10.0	Bidder A 4 Bidder B 6 Bidder C 0 Bidder D 5 1	0 0 0 1 1 0 2 3 1 3 3 1
Round 4 13.0 15.0 14.0 12.0 14.0 13.0 11.0 14.0 10.0 12.0 14.0 10.0	Bidder A 4 Bidder B 3 Bidder C 0 Bidder D 4 1	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Round 5 13.0 15.0 14.0 12.0 14.0 13.0 12.0 15.0 10.0 12.0 15.0 10.0 12.0 15.0 10.0	Bidder A 0 Bidder B 3 Bidder C 0 Bidder D 4 1	Clock Outcome 1 0 0 1 0 0 1 1 1 0 1 1 • 1 1

Bids	Increment
4	3
3	2
2	1
1	0
0	0

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Multiple Factor Auction (MFA) Format Design



Basic Concepts



1st Factor : Nth Factor

% Off Final Cash Bonus

- Opening phase of the auction allows bidders to submit their responses to a limited number of "Yes/No" evaluation factors that are evaluated by a review panel
- Each factor is worth a set percentage discount where the bidder's total percentage discount is the sum over all the factors
- Each bidder is informed by BOEM of their discount at the conclusion of the opening phase
- The second phase of the auction is conducted on a cash bonus basis using one of the standard auction formats
- Bidders deduct the percentage discount from their final cash bonus in the standard auction







Limited # of Yes/No Factors



- Helps ensure a fair and transparent process and eases the task of implementing the auction
- Supplements the technical and financial capability factors evaluated by BOEM through its bidder qualification process
- Preference for clear, <u>objective</u> factors that indicate a bidder has a higher probability of success in developing an offshore wind project on the OCS
 - Durable financial commitments
 - Developments on a limited lease in the WEA
 - Successful participation in a competitive request for proposal process for offshore wind in an adjacent state
 - Completion of scientific investigations within the WEA prior to the announcement of the lease sale

Yes/No Factor Examples



- Do you currently hold a firm financial commitment for the sale of at least 100 MW of power from a proposed offshore wind development in the lease sale area in the form of either:
 - A firm purchase power agreement (PPA) that has been approved by the state utility commission or its equivalent; OR
 - An ocean renewable energy credit approved by the appropriate state agency?
- Have you completed installation of a meteorological measurement tower on a BOEM limited lease located within the lease sale area?

Limited Discount %



- BOEM is not likely to offer a total discount of more than 25 percent on the basis of nonmonetary factors
- Technical and financial qualifications already screen out non-viable bidders
- Even modest discounts are likely to have a significant impact on auction results
 - Excessive discounts can lead to reduced participation from bidders who cannot achieve a sufficient discount
 - Bidders may feel compelled to invest in efforts to qualify for a greater discount
 - Factors such as holding a PPA or OREC may lower their cost of capital or subsequent development costs

Limited Use of MFA



- The auction formats described in this notice are considered sufficient to meet the agency's needs in a wide variety of contexts
- Multiple-factor auctions (MFA) are only being contemplated for use in a narrow range of circumstances
 - [D]uring the time that [BOEM] has been promulgating this rule, the States of Delaware, New Jersey, and Rhode Island have conducted competitive processes and have selected companies to develop wind resources on the OCS. We believe that the preexisting State processes are relevant to the competitive processes that [BOEM] is required to conduct following approval of this rule. We intend to do so by using a competitive process that considers, among other things, whether a prospective lessee has a power purchase agreement or is the certified winner of a competitive process conducted by an adjacent State. 74 Fed. Reg. 19,663 (Apr. 29, 2009).

Simple Example



	Bidder X	Bidder Y
Factor 1 (15%)	Yes [15%]	No [0%]
Factor 2 (5%)	Yes [5%]	Yes [5%]
Factor 3 (5%)	No [0%]	Yes [5%]
Total Discount	20%	10%
Cash Bonus in Auction	\$420,000	
(Less) Discount	(\$84,000)	(\$42,000)
Cash Outlay by Bidder	\$336,000	\$378,000

MFA Example #1

Stylized example based on Ausubel and Cramton (2011c) pages 21-34.

Bidding Constraints by Bidder



MFA Example #1



Multiple Factor Summary

	<u>Bidder A</u>	<u>Bidder B</u>	<u>Bidder C</u>	<u>Bidder D</u>
1 Holds an OREC or PPA?	YES 20%	NO 0%	YES 20%	NO 0%
2 Installed met tower?	NO 0%	NO 0%	YES 3%	NO 0%
3 Other work?	NO 0%	YES 2%	YES 2%	<u>NO 0%</u>
Total Discount	20%	2%	25%	0%


MFA Example #1

Simultaneous Ascending Clock Auction (SACA) Phase





MFA Example #2



Multiple Factor Summary

	<u>Bidder A</u>		Bide	<u>Bidder B</u>		der C	<u>Bidder D</u>
1 Holds an OREC or PPA?	NO	0%	YES	20%	NO	0%	YES 20%
2 Installed met tower?	NO	0%	NO	0%	NO	0%	YES 3%
3 Other work?	NO	0%	YES	2%	NO	0%	YES 2%
Total Discount		0%		22%		0%	25%



MFA Example #2

Simultaneous Ascending Clock Auction (SACA) Phase





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Comparison to RFP Format



- Avoids issues with using a sealed-bid approach to determining the winner
 - Allows overlapping interests to be resolved without resorting to arbitrary allocations or winner-takes-all approach
 - Consistent approach compatible with any of the proposed standard auction formats
- Minimizes controversy about the factors and the weights assigned to them
 - Clear to bidders about what level of discount they can expect to receive vis-à-vis other bidders
- Improves transparency by relying on objective evaluation factors
 - Incorporates adjacent-state processes in an impartial manner
 - Minimizes the incentive for bidders to expend capital prior to the auction

Thank You for Attending!

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- Workshop Materials
 - <u>http://www.boem.gov/Renewable-Energy-</u> <u>Program/Regulatory-Information/Renewable-</u> <u>Energy-Auction-Formats.aspx</u>