

# Auctions & Competitive Bidding



When planned and executed appropriately, auctions and other competitive market mechanisms can achieve important objectives in selling or acquiring products, assets, resources, rights, and obligations. However, expertise, experience, and reputation are needed to ensure success. For two decades, CRA has designed, conducted, and monitored high-stakes auctions and other competitive transaction mechanisms in many industries and in more than a dozen countries. Our consultants also have helped clients participate successfully in auctions. Whether you want to maximize the value of your assets, minimize your procurement costs, or achieve other objectives, you'll find the expertise, experience, reputation, and support you need at CRA.

**CRA**  
International

## Full range of services

CRA provides a complete range of services to ensure success. We combine theory, market analysis, business principles, and practical experience tailored to industry realities in developing and implementing strategies and market mechanisms that best meet clients' objectives. We achieve lower information and transaction costs, improved market information, increased value, lower costs, and improved price realizations that benefit sellers and buyers. This enhances seller-buyer relationships and enables market participants to make better business decisions, invest their resources and assets more profitably, and manage their risks better. We have created and implemented highly successful single-seller multi-buyer, multi-seller single-buyer, and multi-seller multi-buyer market mechanisms and strategies that have created significant value for our clients.

We offer a full suite of services to businesses, governments, bidders, and other market participants in:

- Design of bidding mechanisms
- Implementation of bidding processes
- Software and hosting
- Market monitoring
- Bidder strategy and support
- Litigation and regulatory support

## Design

CRA develops an auction or other market design that fits your situation through:

- Confirming your objectives and desired outcomes; assessing policy, regulatory, and industry issues; defining the items to be sold or purchased consistent with the underlying assets, products, or contracts to be transacted; and identifying likely participants
- Evaluating the strengths and weaknesses of alternative bidding mechanisms and recommending the best design based on proven theoretical foundations and practical experience with real markets and transactions
- Formalizing clear, comprehensive rules that describe how the auction or market process will be conducted and that encourage competitive participation while preventing gaming opportunities and other non-productive behavior

## Implementation

CRA develops a detailed implementation plan that includes tasks, responsibilities, and the timeline. Depending on your needs, we can assume responsibility for document preparation, marketing and promotion, communications protocols, stakeholder consultations, information Websites, bidder information sessions, data rooms, bidder registration and qualification, customized

software such as our Auction Management System (AMS), demos, mock auctions, training, and hosting services for auctions and other trading events. We use our multilingual capabilities and experience to conduct trading events in several languages. CRA has designed and managed more than 150 successful trading events with transaction values ranging from hundreds of thousands to billions of dollars.

## Auction software, trading platforms, and hosting

CRA develops and customizes software applications, systems, trading platforms, and tools used to manage auctions and trading events and to support bidders and other participants. CRA has dedicated, full-time, in-house software engineers and IT experts with many years of experience developing the necessary infrastructure and managing successful trading events.

CRA hosts and manages single-seller multi-buyer, multi-seller single-buyer, and multi-seller multi-buyer trading events using a dedicated facility and resources, including secure IT, network, and telecommunications systems. We also provide a multilingual help desk. The number of participants in our trading events—whether for regional or global events—ranges from a few to hundreds.

CRA's auction and trading platforms comprise public information Websites and secure administration, bidding, and monitoring Websites that facilitate a complete, integrated solution for our clients' needs. Our secure, Web-based software is used to configure the various parameters and to manage and monitor each trading event in accordance with the market design and rules. The user interface allows bidders to submit bids, confirm them, and review results. The AMS platform enables hosting of trading events that include different implementations of multi-product, multi-lot, simultaneous, multiple-round auctions and other transaction mechanisms.

CRA's Bid Tracking Tool (BTT) software is used by bidders for real-time collection, analysis, and interpretation of auction data and results. It allows for a variety of displays, both default and user-defined. Other BTT features include automatic generation of bid submission files and generation of maps and mapping data. The BTT facilitates analysis of other bidders' actions to optimize the client's bidding strategy.

## Monitoring

For existing transaction mechanisms that we did not develop, CRA independently analyzes and monitors those mechanisms for you. We facilitate the entire process, improving the design and implementation of the market mechanism to ensure that it is conducted in accordance with your expectations and requirements. We can be involved from the initial stages through conclusion and provide a final report that includes an assessment of the process and the outcome as well as recommendations for improvements.

## Strategy and support

CRA provides auction and market participants with strategic advice and other valuable support services prior to and during the auction or market process. Depending on specific needs, we prepare participants for bidding processes through some or all of the following:

- Analyzing bidding mechanisms and rules and providing comments to the auctioneer or market administrator in support of our client
- Conducting financial analyses and valuation of the assets or products being offered
- Presenting seminars on auction and game theory, bidding strategies, and their practical applications
- Analyzing the specific market mechanism and rules and the implications and opportunities they provide
- Assessing competitors, including their likely strategies
- Assisting with the application and bidder qualification process
- Providing a logistics and operations plan and the support needed to be an effective participant with the right resources
- Assisting bidders in mock auctions and providing auction software training
- Customizing bid-tracking software tools to facilitate interpretation of bidding data and bidding behavior
- Providing advice on optimal bidding strategies and bids
- Monitoring and analyzing competitors' bids and behavior

## Litigation and regulatory support

CRA delivers expert regulatory and litigation services in disputes and other matters involving auction and other bidding mechanisms, including:

- Expert witness and other litigation support
- Analysis of bidding mechanism design
- Analysis of bidding rules and procedures
- Analysis of bids
- Assessment of bidding competition
- Assessment of the conduct of the overall process
- Data analysis

## Industries

The number of industries and agencies using competitive market mechanisms is growing. CRA offers its auctions and competitive bidding expertise, methodologies, and tools to a wide range of industries, including:

- Agriculture
- Commodities
- Energy
- Environmental
- Telecommunications
- Metals and minerals
- Transportation
- Chemicals
- Natural resources
- Oil and gas
- Intellectual property
- Health care
- Insurance
- Aerospace and defense
- Media and advertising

## Representative clients

Alberta Department of Resource Development

Arizona Public Service

Associação Brasileira dos Produtores Independentes de Energia Elétrica

Australian Communications Authority

Brazil Ministry of Mines and Energy

British Columbia Ministry of Transportation

Cofetel—Comisión Federal de Telecomunicaciones

Comcast Corporation

Commonwealth Edison/Exelon

Connecticut Department of Public Utility Control

The Dayton Power and Light Company

Duke Energy Ohio

Dynegy, Inc.

The East Ohio Gas Company dba Dominion East Ohio

FirstEnergy Corp.

Fritz Egger GmbH and Co

GE Energy Financial Services, Inc.

GlobalDairyTrade (Arla Foods, DairyAmerica, Fonterra, Murray Goulburn)

Horizon Wind Energy

Industry Canada

ISO New England, Inc.

New Jersey Board of Public Utilities

New Zealand Ministry of Economic Development

Nigerian Communications Commission

NV Nuon Energy Sourcing

Ocean Spray Cranberries, Inc.

OFCOM—Federal Office of Communications

Oregon Public Utility Commission

Public Utilities Commission of Ohio

RWE AG

Secofi—Commerce Ministry, Secretaría de Comercio y Fomento Industrial

Shaw Communications Inc.

SpectrumCo LLC

Trans-Elect Development Company LLC

US Federal Communications Commission

The World Bank

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## Case studies

### Global dairy trading platform

**Challenge:** New Zealand's Fonterra Co-operative Group Limited, the world's leading dairy exporter, needed improved price transparency, forward price information, and enhanced price risk management for itself and its customers.

**Solution:** CRA designed and developed the electronic trading platform GlobalDairyTrade (GDT). It is based on sound economics and auction theory as well as extensive CRA experience in auctions and market designs. Customers from around the world participate regularly in the trading events that CRA manages as the independent Trading Manager. In addition to Fonterra, GDT has grown to include other sellers and the multi-seller, multi-buyer GDT trading events produce benchmark prices relied on by the dairy industry.

### Electricity procurements

**Challenge:** Some electric utilities rely on a competitive bidding process to procure electricity supplies for its retail customers who do not choose their own supplier. Other companies also benefit from using competitive bidding procurements to lower their own energy costs.

**Solution:** CRA designs and implements periodic procurements for clients. The bidding formats have included structured "clock" auctions as well as requests for proposals (RFPs). CRA provides the various documents, hosts the information Website, qualifies bidders, educates and trains participants, and manages the procurements using its proprietary bidding site platform. Examples of our clients include Arizona Public Service, DP&L, Duke Energy Ohio, Duquesne Light Company, and FirstEnergy.

### Cranberry products trading platform

**Challenge:** Ocean Spray Cranberries, Inc. needed improved price transparency, forward price information, and enhanced risk management capabilities.

**Solution:** CRA designed and developed the electronic trading platform, CranberryAuction, which includes both a public information Website and a secure bidding Website. CRA utilized its extensive experience to develop a platform based on sound economic and auction theory that best meets the needs of Ocean Spray and its customers. CRA also manages the quarterly trading events. The trading events generate valuable, credible market information that allows Ocean Spray and participants to better manage their business, risks, and investments.

### Auctions of SO<sub>2</sub> and NO<sub>x</sub> emission allowances

**Challenge:** FirstEnergy Solutions wanted to offer for sale SO<sub>2</sub> and NO<sub>x</sub> emission allowances following the US Environmental Protection Agency Cross-State Air Pollution Rule (CSAPR) that requires 27 states to reduce power plant emissions that cross state lines.

**Solution:** As the Auction Manager, CRA developed and implemented the auction process, including document preparation, developing the auction design and bidding rules, hosting an information Website, qualifying bidders, educating and training bidders, and managing the auction using our secure bidding platform.

### Electricity open season bidding process

**Challenge:** GE Energy Financial Services wanted to have an open season bidding process that the Federal Energy Regulatory Commission (FERC) would approve in order to use market rates and to raise sufficient funding to install new technology, which would increase transmission capacity from New Jersey to New York City.

**Solution:** As the Auction Manager, CRA developed and implemented the open season process, which included product design, document preparation, auction design and rules, bidder qualification, a public information Website, marketing and promotion, customized bidding software, and hosting the auction. The auction sold the entire capacity available at a price that satisfied revenue requirements, and FERC approved the process.

## Bidder support in high-stakes spectrum auctions

**Challenge:** CRA has successfully advised bidders in many spectrum auctions around the world. Bidders typically need support in influencing the auction process and bidding rules, assessing competing bidders, developing bidding strategies and tactics, determining valuations of the spectrum assets, practicing in mock auctions, setting up effective “war room” logistics and software tools to support the bidding, and receiving real-time bidding strategy advice during the auction.

**Solution:** In the US AWS (Advanced Wireless Services) spectrum auction, CRA supported Comcast Corporation and other cable company members of the SpectrumCo bidding consortium. Our clients won their desired national footprint at a 50% discount compared to comparable licenses won by other bidders. Similarly, in Canada’s AWS spectrum auction, CRA supported Shaw Communications Inc., one of Canada’s leading telecommunications companies. Shaw acquired its desired licenses at prices significantly below those paid by other winning bidders for comparable licenses.

## RWE capacity auctions in Germany

**Challenge:** The German utility, RWE, needed an auction process to satisfy their regulatory agreement with the German Federal Cartel Office.

**Solution:** CRA developed the auction process and, as the Auction Manager, provided advice on product and contract design, developed the auction design and rules, drafted documents, customized our auction software, conducted mock auctions, and provided documentation. CRA conducted the 16 successful quarterly auctions.

## Natural gas procurement

**Challenge:** Oversee, improve, and monitor a wholesale natural gas procurement auction.

**Solution:** CRA was retained by the Public Utilities Commission of Ohio (PUCO) to be involved in all aspects of the procurement process including reviewing the product definition; reviewing draft documents; monitoring the marketing, promotion, and communications activities; reviewing bidder qualification criteria and bid evaluation criteria; verifying the bid evaluation; onsite monitoring and advice; and providing a post-auction report. CRA’s recommendations and oversight ensured the procurement was successful.

## Auction engagements with The World Bank

**Challenge:** Provide auction consulting services to countries supported by The World Bank.

**Solution:** The World Bank has engaged CRA to provide auction design, implementation, and other services to The World Bank and to countries for which The World Bank promotes improved market mechanisms. Our engagements for various countries have included spectrum, energy, and agriculture.

## Allocating mineral rights

**Challenge:** Design privatization auctions of gold, silver, and phosphate mining properties.

**Solution:** We assessed the tradeoffs between sealed bids and open bidding, combinatorial and non-combinatorial bidding, setting royalty rates and an installment-payment scheme, and the setting of minimum bids. Using various data and projections, we estimated the bidders’ degree of uncertainty over the valuation of each prospect. We then simulated the effects on bidder decisions and on expected auction revenue of alternative auction designs as a means of optimizing the royalty rate and minimum bids.

## Design and implementation of spectrum auctions

**Challenge:** Design and implement high-stakes auctions to sell spectrum licenses.

**Solution:** For a number of spectrum agencies in North America, Europe, and Asia Pacific, CRA has provided advice on the design and implementation of spectrum auctions. Our projects have included managing and hosting spectrum auctions both in English and in multiple languages.

## About CRA

CRA is a leading global consulting firm that offers business, financial, and economic consulting services to major law firms, corporations, and governments around the world. Founded in 1965, CRA has offices around the world. To learn more about our auctions and competitive bidding services, please visit us at [www.crai.com](http://www.crai.com).

### **Brad Miller**

Vice President, Practice Leader of  
Auctions & Competitive Bidding

+1-617-425-3384

[bmiller@crai.com](mailto:bmiller@crai.com)

[www.auctions.crai.com](http://www.auctions.crai.com)

[www.trading.crai.com](http://www.trading.crai.com)

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

