

ENTERGY ARKANSAS, INC.

2016 REQUEST FOR PROPOSALS FOR LONG-TERM RENEWABLE GENERATION RESOURCES

Bidders Conference

APRIL 26, 2016

CONFERENCE INTRODUCTION

Purpose of the Conference

 To give participants a high level overview of the 2016 EAI Request for Proposals for Long-Term Renewable Generation Resources (RFP) and related processes

Ouestions

- During the conference, questions should be submitted in writing using the paper provided at your tables
- After the conference, please submit all questions to the RFP Administrator through email at <u>eairfp@entergy.com</u>
- Questions and responses will be posted to the 2016 EAI RFP Website at http://entergy-arkansas.com/rfp/energy_capacity.aspx
- To the extent EAI's posted response differs from the verbal response given during the conference, the written response will control

Administrative

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- In the event of an inconsistency between the presentation and the RFP documents, the RFP documents will control
- Email the RFP Administrator at <u>eairfp@entergy.com</u> with any technical issues or questions

AGENDA

- Introductions
- EAI Overview
- Independent Monitor Comments
- 2016 EAI RFP Overview
- RFP Evaluation
- Overview of MISO Interconnection Process
- Q&A Session



INTRODUCTIONS

Entergy Presenters

Matt Wolf
 Kandice Fielder
 Misty Harris
 Christine Chen
 Thomas Kidd
 David Wilcox

EAI Resource Planning Team
Accounting Evaluation Team
Viability Assessment Team

Midcontinent Independent System Operator, Inc. (MISO) Presenter

Meera Shukla
 Sr. Engineer, Resource Integration & Planning

Additional Entergy Participants

Kurt Castleberry
 Matt Suffern
 EAI Resource Planning Team
 EAI Assistant General Counsel

John Pietras Sr. Counsel

Jaime Williamson
 RFP Administration Team

Daniel Boratko Deliverability Assessment Team

Independent Monitor

Elizabeth Benson

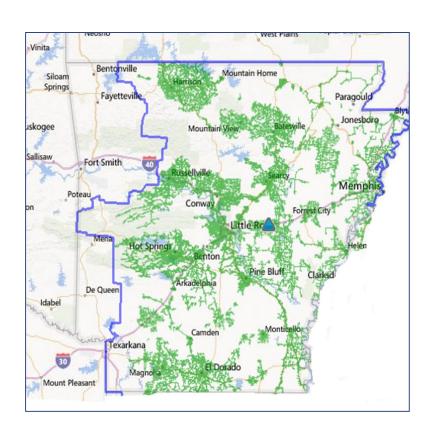


EAI Overview

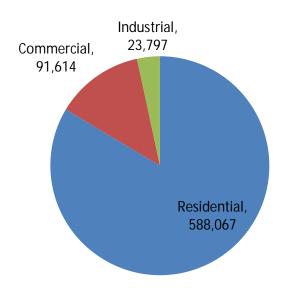
Kandice Fielder



EAI HAS APPROXIMATELY 700,000 CUSTOMERS



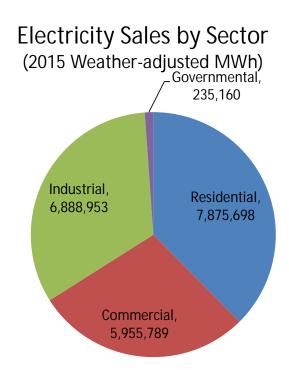
EAI Customers by Sector

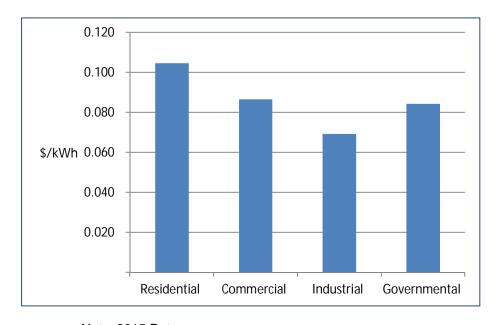


Note: 2015 data; approx. 700 Governmental customers (not shown)



USES OF ENERGY AND AVERAGE RATES





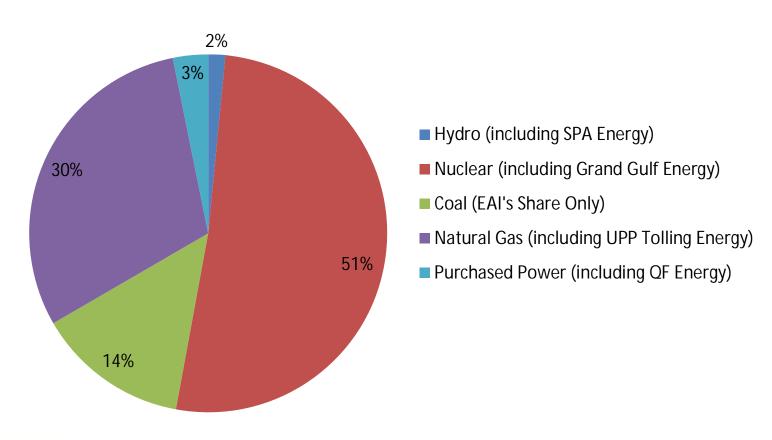
Note: 2015 Data



EAI GENERATION ENERGY MIX

Sources of Energy Serving EAI's Native Load and Wholesale Sales in 2015*

Based on billing data as of 2/16/2016





EAI GENERATION CAPACITY MIX

In October 2015, EAI filed its
Integrated Resource Plan ("IRP") with
the Arkansas Public Service
Commission (APSC). The Reference
Case portfolio optimization modeling
resulted in 4,850 MW of total
incremental capacity over the 20-year
IRP study horizon. Of that incremental
capacity, approx. 27% was from costeffective renewable resources.

Item #5 of the IRP Action Plan indicated EAI would continue to monitor its load and capability position and issue RFPs for resources as warranted.

The 2015 IRP Report can be found online at http://www.entergy-arkansas.com/transition_plan/.

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Capacity to Serve EAI's Native Load in 2016

Fuel Type	Capacity (MW)		
Nuclear	2,015		
Coal	1,029		
CCGT	1,598		
Conventional Gas	Gas 522		
Hydro	95		
Total	5,258		

Independent Monitor Comments

Elizabeth Benson



2016 EAI RFP Safeguards

- Independent Monitor
- RFP Confidentiality Requirements
- Protecting and Managing Proposal Information
- Communications Before and During the RFP Evaluation
- Q & A Process

Independent Monitor (IM)

- IM oversees all aspects of EAI's 2016 RFP
- IM ensures RFP design, solicitation, evaluation and selection are objective and impartial, and that no undue preference is provided to any proposal
- Detailed role described in IM Scope of Work which is posted to EAI's RFP Website - http://entergy-arkansas.com/rfp/energy_capacity.aspx

Conduct and Structural Protections

- RFP Confidentiality Requirements
 - All employees of Entergy Arkansas, Inc. (EAI) and Entergy Services, Inc. (ESI) who are associated with the RFP must observe confidentiality requirements related to proposal information
 - Details in RFP documents
- RFP Evaluation Teams
 - Composed of designated personnel. Composition and activities overseen by IM
 - Required to follow protocols governing their access to and uses of proposal information

Protecting and Managing Proposal Information

- All bidders, resources and proposals receive randomly generated identification numbers to mask their identity
- Proposal information distributed to designated RFP evaluation teams on a "need-to-know" basis only – e.g.,
 - economic evaluation pricing, and required operating information, but no bidder identifying information
 - viability evaluation due diligence information, but no pricing
- Proposal submission template and other tailored RFP documents separate proposal information into reports for each RFP evaluation team
- IM reviews all proposal information in detail (and redacts, as needed) before data reports are distributed to RFP evaluation teams

Communication During The RFP

- EAI's RFP Website is the principal means of communication regarding the RFP
- With the exception of public events such as this Bidders' Conference, all RFP questions/issues must be directed to the RFP Administrator at eairfp@entergy.com as described here today and on the RFP Website
- Unapproved contact about the RFP with any other EAI or ESI employee is prohibited and may result in bidder disqualification

Communication During The RFP

- An RFP Telephone Hotline will be available to help Bidders with questions regarding proposal registration and proposal submission.
 The Hotline number will be posted on the RFP Website
- Parties may contact the IM at any time and as needed with questions or unresolved issues. IM contact information is posted to the RFP Website

Communication During The RFP Evaluation

- Communication with bidders during the initial evaluation will occur when RFP evaluators need to obtain clarifying or additional information on proposals
- Evaluators will contact bidders through the RFP Administrator
- Bidders should direct any questions about the RFP to the RFP Administrator
- Bidders with transmission related inquiries must direct them to MISO as will be described today
- Except for transmission inquiries, any other communication with bidders will be under the supervision of the IM

RFP Question & Answer Process

The objectives of EAI's Question & Answer Process are:

- To encourage potential bidders and other interested parties to ask questions and seek any needed clarifications about the RFP
- To ensure to the maximum extent that all bidders have equal access to information that may be potentially relevant to their proposals
- To minimize the need for any party to disclose confidential information
- To ensure compliance with all applicable affiliate rules, RFP confidentiality requirements and other information sharing rules

RFP Overview

Kandice Fielder



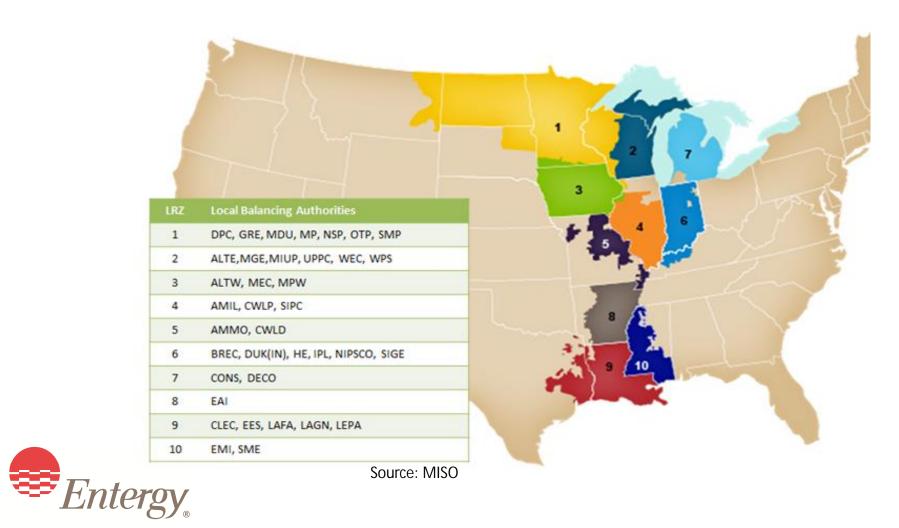
RFP OVERVIEW AND BASIC ELEMENTS

- The RFP will seek up to 100 MW of renewable capacity, energy and related products to meet EAI customers' needs beginning in June 2018
 - Proposals may begin deliveries as late as June 2020
- Eligible RFP participants:
 - Electric utilities
 - Marketers
 - Wholesale generators
 - Independent power producers
 - Qualifying facilities
- EAI is not evaluating a developmental self-build option in the RFP
- Competitive or regulated affiliates of EAI are not allowed to participate in the RFP



RFP OVERVIEW AND BASIC ELEMENTS

- Solicitation is open to resources located inside or outside the MISO footprint
 - EAI's load is located inside Local Resource Zone 8 of MISO
 - EAI prefers resources located inside MISO Local Resource Zone 8 but other resources will be considered.



SCOPE OF KEY RFP ELEMENTS

Installed Capacity (ICAP)

- Target: up to 100 MW
- Minimum quantity per proposal: 30 MW
- EAI is not currently bound by a renewable portfolio standard
- EAI may select more or less than the target quantity

Eligible Technologies

- Technology types are limited to commercially-proven biomass, wind, solar photovoltaic (solar PV) and run-ofriver hydro (hydro)
- Resources that can operate in a baseload, intermittent or dispatchable intermittent role

Eligible Resources

- Must be powered by an eligible technology
- May be an existing or a developmental resource
- Must be a single resource (or portion thereof); *i.e.*, Bidders are not permitted to combine capacity, energy, and related products from separate renewable generation facilities



SCOPE OF KEY RFP ELEMENTS

Eligible Transactions

- Power Purchase Agreement (PPA)
- Resource acquisition (limited to solar PV resources directly interconnected with the EAI transmission system)

Start Date

 The guaranteed start date for a PPA and the target closing date of an asset acquisition would be required to be no earlier than June 1, 2018, and no later than June 1, 2020

PPA Contract Term

 EAI will accept proposals with a delivery term of up to 20 years but no less than 10 years



Minimum Developmental Requirements and Interconnection

Kandice Fielder



Additional Considerations for Developmental Resources

- EAI has established a list of minimum requirements that Bidders must satisfy in order for Bidder to be assured that a proposal offering a Developmental Resource will be considered in this RFP
- A draft list of the minimum requirements was posted with the RFP Notice on March 15, 2016, and includes the following areas of focus:
 - Project overview
 - Bidder experience
 - Project development
 - Site control
 - Fuel supply & transportation
 - Environmental assessment & permitting
 - Electric interconnection
 - Water source

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- Project structure & finance
- Bidders will be required to submit detailed information supporting the minimum requirements as part of their proposal

ELECTRIC INTERCONNECTION

- Bidder will be responsible for and bear all the costs associated with the electric interconnection of the facility
- Interconnection requirements
 - For developmental resources located inside the MISO footprint, Bidders must have submitted a complete generator interconnection request for the proposed resource under the MISO Generator Interconnection process no later than July 11, 2016
 - For developmental resources located outside the MISO footprint, Bidders must provide a plan to complete the interconnection service request process of the applicable balancing authority for the resource by a time that supports the project schedule/start date
 - Resources must remain in the interconnection queue until the resource is eliminated or interconnection service is obtained
 - The amount of interconnection service should be no less than the amount of capacity offered in the proposal



Commercial Terms Overview - PPA

Matt Wolf



COMMERCIAL TERMS OVERVIEW

- EAI does not plan to post model contracts
- Term sheets will be posted with the RFP
- Bidders may propose exceptions to terms
 - EAI is under no obligation to agree to any exception
 - Requested changes may affect viability scores or eligibility



- Solar, Wind and Hydro proposals will be priced on a \$/MWh basis
 - Stated price for each year of the contract term
- Biomass proposals may utilize a capacity payment charge (\$/kW-Month) and a separate energy charge
 - Stated price for each year of the contract term for both energy and capacity
- Prices should not be indexed
- Proposal prices are expected to include ALL transmission-related costs, including:
 - Interconnection costs
 - Transmission/deliverability costs (upgrades and on-going service)
 - Transmission congestion costs, transmission losses



- The financial Point of Delivery will be the MISO commercial pricing ("CP") node that represents EAI's Native Load ("EAILD")
- EAI will consider a financial Point of Delivery on the EAI transmission system other than the EAILD CP node, but proposals should include detailed support regarding the expected congestion costs between that alternative delivery point and the EAILD CP node
- Any proposals offering power that would not be both physically delivered to the MISO system and financially delivered to the EAI transmission system will fail to meet the RFP minimum requirements and will be eliminated from the RFP
- The seller will be responsible for any costs that may be incurred to move the power to the EAI transmission system during the delivery term



	Resource Location		
Seller's Cost/Risk Category	Outside MISO	Inside MISO, Outside EAI footprint	Inside EAI Transmission Footprint
Interconnection Service	Seller's Cost and Risk (Include in Proposal Pricing)	Seller's Cost and Risk (Include in Proposal Pricing)	Seller's Cost and Risk (Include in Proposal Pricing)
Physical Transmission Service to MISO	Seller' Cost and Risk (Include in Proposal Pricing)	Seller' Cost and Risk (Include in Proposal Pricing)	Seller' Cost and Risk (Include in Proposal Pricing)
Any other Transmission Cost that may be required now or in the future to move power to the EAI's Transmission System	Seller's Cost and Risk (Include in Proposal Pricing)	Seller's Cost and Risk (Include in Proposal Pricing)	NA
Congestion Risk to the EAI Transmission System	Seller's Cost and Risk (Include in Proposal Pricing)	Seller's Cost and Risk (Include in Proposal Pricing)	NA
Congestion Risk from EAI Transmission System to EAI Load	Prefer Seller Takes Risk (Include in Proposal Pricing)	Prefer Seller Takes Risk (Include in Proposal Pricing)	Prefer Seller Takes Risk (Include in Proposal Pricing)
Capacity Market Risk	Seller takes Risk on any price deviation between Resource and EAI's Local Resource Zone 8	Seller takes Risk on any price deviation between Resource and EAI's Local Resource Zone 8	NA



- Tax credits, if any, should be factored into the proposal pricing
- The proposal cannot be contingent on actual interconnection costs, transmission costs, congestion costs, tax credits or any other bidder's costs or credits



- Seller should expect to be the Market Participant representing the renewable facility
 - However, EAI will have the right to assume the market participant responsibilities
- Seller will be responsible for all MISO fees and charges applicable to the facility and performance under the PPA
- Seller will be required to offer the facility into the day-ahead energy market and will be responsible for costs associated with any deviations between the day-ahead schedule and actual production
 - EAI will be responsible for any costs incurred due to deviations caused by its elective dispatch directions



- Minimum Energy Requirements:
 - One year, two consecutive years, any three years
 - Liquidated damages and/or termination rights
- Capacity Accreditation
 - Full load test required
 - Minimum size requirement
- Guaranteed Commercial Operating Date ("COD")
 - Delay damages

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- Capacity re-sizing
- Termination rights for extended delays
- EAI will be entitled to all current and future capacity credits, environmental credits/attributes, and other electric products from the facility

- Treatment of planned maintenance will be based on the technology utilized
- ❖ EAI will have the right to curtail deliveries of energy under the PPA, but EAI will be responsible for paying Seller for the power curtailed, subject to certain offsets and other limitations



- All change-in-law risk will generally be allocated to the Seller
- The start of the PPA delivery term will be predicated on EAI's receipt of required governmental approvals and satisfaction of other conditions
- In general, Seller will be responsible for PPA costs incurred by EAI during the delivery term but disallowed by an EAI regulator
 - In its Special Considerations, Bidder may propose an alternative treatment of regulatory disallowance costs
 - Regulatory disapproval of EAI's recovery of PPA costs during the delivery term will provide EAI with a right to terminate the PPA



Commercial Terms Overview - Acquisitions

Matt Wolf



COMMERCIAL HIGHLIGHTS FOR ACQUISITIONS

- Asset purchase, not stock
- Solar PV facilities only
- Proposal pricing should not include tax credits or bonus depreciation
- Must be interconnected directly to the EAI transmission system
- Facility performance testing and consequences



COMMERCIAL HIGHLIGHTS FOR ACQUISITIONS

- No assumed liabilities for period prior to effective closing date
- End of month closing date (existing resources)
- Subject to regulatory review and approval
- Hart Scott Rodino and 203 approval timing



Tentative RFP Schedule, Bidder Registration and Proposal Submission

Misty Harris



TENTATIVE SCHEDULE

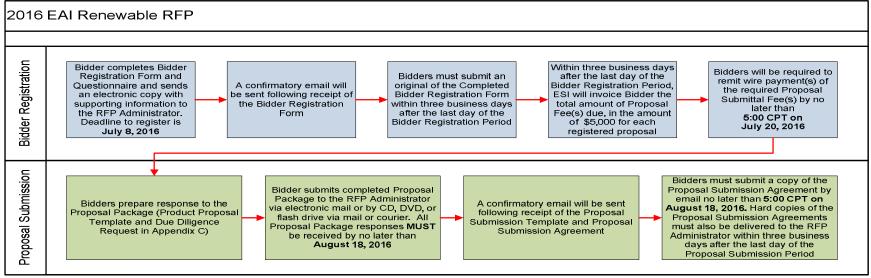
Activity	Target Date*		
Bidders Conference	April 26, 2016		
RFP Issued	Late May 2016		
Bidder Registration Period	July 5 – July 8, 2016		
MISO Generation Interconnection Study	July 11, 2016		
Proposal Fees Due	July 20, 2016		
Proposal Submission Period	August 15 – August 18, 2016		
Announce Primary Shortlist	October 2016		
Announce Primary/Secondary Selections	February 2017		
Begin Comprehensive Due Diligence and Negotiations	February 2017		
Notify Secondary Selection List of Intent to Proceed	2017		
Execute and Deliver Definitive Agreement(s)	June 2017		
Regulatory Approvals	May 2018		

^{*} All dates (other than the Bidders Conference date) and periods are tentative and subject to change. Definitive dates will be included as part of the final RFP documents

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BIDDER REGISTRATION AND PROPOSAL SUBMISSION

- Bidder registration and proposal submission will utilize forms and templates posted to the 2016 EAI RFP Website, including:
 - Bidder Registration Form
 - Proposal Package
 - Proposal Submission Template
 - Due diligence questionnaire(s)
 - Proposal Submission Agreement
- All proposal-related document submissions must be made via courier or e-mail
 - Original copy of executed Bidder Registration Form
 - Original copy of executed Proposal Submission Agreement
 - Responses to Proposal Submission Template and diligence requests (special delivery rules apply)
 - EAI will not accept paper copies of electronic proposals





BIDDER REGISTRATION AND PROPOSAL SUBMISSION

Proposal Submission Fees

- \$5,000 for each registered proposal
- Bidder invoiced within three business days after EAI's receipt of executed Bidder Registration Form
- EAI must receive the Proposal Submission Fee for each registered proposal no later than 5:00 p.m. CPT on July 20, 2016 (current schedule)
- If Bidder misses the payment deadline for a proposal, Bidder's proposal will not be considered

RFP Hotline

 An RFP hotline will be available during bidder registration and proposal submission periods to assist Bidders with technical questions regarding either process



RFP EVALUATION



Evaluation Overview

Kandice Fielder



OVERVIEW

- ❖ The RFP evaluation will seek to identify proposals that meet EAI's needs and RFP requirements, taking into account reliability, risk mitigation, EAI customer costs and other relevant factors
- All aspects of the RFP evaluation are overseen by the IM
- Six RFP Proposal Evaluation Teams will evaluate proposals:
 - Economic Evaluation Team (EET)
 - Delivery Assessment Team (DAT)
 - AURORA Modeling Team (AMT)
 - Viability Assessment Team (VAT)
 - Credit Evaluation Team (CET)
 - Accounting Evaluation Team (AET)
- The EAI Resource Planning Team, with input and analysis from each of these teams, will develop recommendations for EAI's management



EVALUATION PROCESS

- Two-stage evaluation process:
 - Phase I
 - Proposals will be screened for compliance with threshold requirements, including minimum requirements
 - Proposals will be assigned a preliminary economic ranking
 - Based on the Phase I evaluation results, EAI may reduce the number of proposals and develop a preliminary shortlist at the end of Phase I
 - Phase II (remaining proposals only)
 - Proposals will be reviewed and assessed based on economics, viability, transactional considerations (including credit and commercial terms), and other factors
 - Based on qualitative and quantitative assessments, proposals will be assigned a final proposal ranking and a recommended disposition
 - Proposals will be placed on a primary or secondary selection list or eliminated from further consideration at the end of Phase II
- The process is designed to be fair, impartial, and applied consistently to all bidders
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SELECTION PROCESS

Primary selection list

- Bidder(s) with a proposal on the primary selection list may be required to enter into a letter of intent (LOI) to proceed to a definitive agreement
- Due diligence/finalization and execution of definitive agreement(s) would follow LOI execution
- Inclusion on primary selection list is not acceptance of proposal or related contract terms
- No requirement for EAI to place any proposal on primary selection list

Secondary selection list

- Bidder(s) with a proposal on the secondary selection list may be invited to negotiate the terms of a contingent LOI and/or definitive agreement or may simply be advised of proposal status
- Bidder(s) on the secondary selection list would execute a definitive agreement only if a Bidder(s) on primary selection list is removed from list
- Bidder(s) must hold open offer for three months after notification of selection



Economic Evaluation

Christine Chen



ECONOMIC EVALUATION INTRODUCTION

- The Economic Evaluation Team will conduct an economic evaluation of proposals submitted in the RFP
- The economic evaluation will
 - utilize tools and methods commonly used by EAI for long-term planning and resource evaluation, including, but not limited to, net benefit analysis (Excel & Aurora)
 - involve additional tools as appropriate to effectively evaluate proposals relative to the objectives of the RFP, including, but not limited to, qualitative considerations
 - consider imputed debt and risks associated with market conditions (e.g., fuel prices and carbon compliance costs) across a range of potential outcomes.
 Additional scenario and/or sensitivity analyses may be performed as needed
- This evaluation will measure how each proposal economically impacts EAI customers
- The economic evaluation will measure the net benefit provided by each proposal
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ECONOMIC EVALUATION

Phase I Preliminary Shortlist

- The purpose of this phase of the evaluation will be to identify the most economic proposals for preliminary shortlist consideration
- Proposal cost will be the primary driver in Phase I economic evaluation, including, but not limited to (as applicable): capacity payment, energy payment, variable O&M and imputed debt
- A net benefit analysis based on spreadsheet models will be conducted in this phase. The net benefit of a proposal will be determined by subtracting the total fixed costs and variable costs from the projected capacity and energy revenues

Phase II Detailed Evaluation

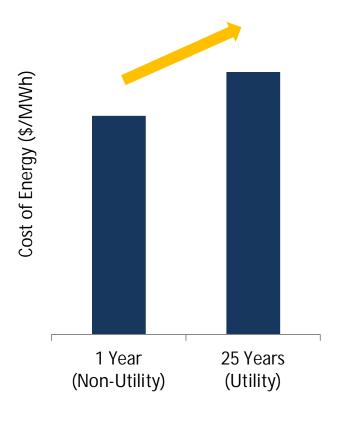
- The purpose of Phase II economic evaluation will be to evaluate the Shortlist proposals in greater detail
- The evaluation will utilize a production cost model (Aurora) to assess the effect of each proposal on total EAI supply cost
- The results of the production cost modeling will then be coupled with an assessment of each proposal's fixed costs and capacity revenue to determine the net benefit of the proposal
- Sensitivity analysis will be conducted to evaluate risks associated with imputed debt, market conditions and others as needed



ECONOMIC EVALUATION ITC NORMALIZATION

- In December 2015, federal renewable energy tax credits, including investment tax credit ("ITC"), were extended as part of the Consolidated Appropriations Act of 2016
- Utilities are required under the tax code to normalize the benefits of the ITC over the depreciable life of the asset
- Non-utility owners, however, are allowed to take the tax benefit in the first year of the resource in service
- This difference has the effect of increasing the cost of energy from a renewable resource owned by a utility as compared to one owned by a non-utility owner

ITC Normalization Impact Illustrative Only





Accounting Evaluation

Thomas Kidd



ACCOUNTING EVALUATION

- Accounting Evaluation Team will assist the EAI team to understand the accounting impacts associated with Bidder proposals, including, but not limited to:
 - Whether a proposed PPA contains a lease and, if so, whether the lease would result in the recognition of any long-term liability for EAI or its affiliates under the rules in effect during the term of the proposal (ASC 840/ASC 842 analysis)
 - Whether the legal entity owning the proposed generating asset is a variable interest entity (VIE), and if so, who would consolidate the VIE throughout the PPA term (ASC 810 analysis)
 - Whether a proposed PPA is or includes a derivative, and if so, the appropriate accounting for the derivative (ASC 815 analysis)
 - Other accounting impacts from the proposal
- The expected RFP requirements include:
 - EAI will not accept proposals for PPAs that would result in the recognition of a long-term liability for EAI or its affiliates ("on-balance sheet accounting")
 - Bidder will certify that a proposed PPA does not result in on-balance sheet accounting and provide similar certifications periodically if the parties enter into a PPA
 - Bidder will be required to make available all information required to verify and/or independently determine the accounting treatment associated with a proposal

EAI will not accept the risk of any transfer to its books of any long-term liability associated with a PPA arising out of the RFP



Viability Assessment

David Wilcox



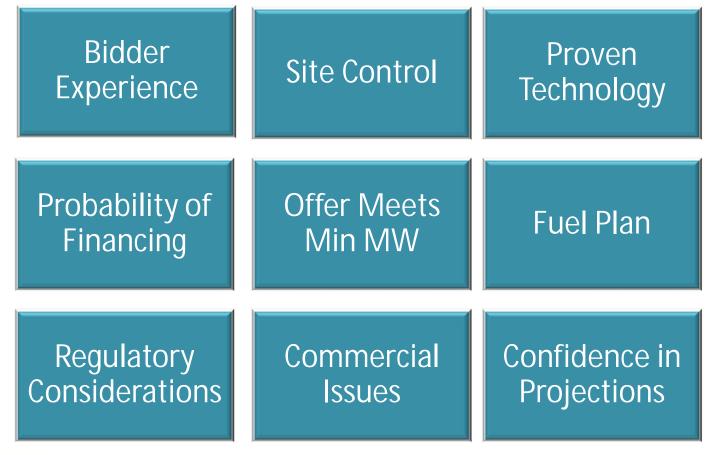
VIABILITY ASSESSMENT

- The VAT includes subject matter experts from the following focus areas:
 - Commercial
 - Plant & Equipment/Operations & Maintenance
 - Environmental & Permitting
 - Fuel Supply & Transportation
 - Technology
 - Others as needed
- The VAT's key objectives are to:
 - review responses provided in due diligence questionnaires, proposal templates and clarifying questions (if applicable),
 - assess the viability of the resources and corresponding proposals bid into the RFP, and
 - confirm the operational characteristics provided by Bidders are reasonable and credible
- Two-phased analysis
 - Phase I: Evaluate and provide minimum threshold compliance results
 - Phase II: Perform additional due diligence using Phase II scorecards



VIABILITY ASSESSMENT

- The VAT's role includes evaluating elements of the proposals not assessed by other evaluation teams
- Some of these elements are shown below.





VIABILITY ASSESSMENT - PHASE I

- Phase I will consist of an initial VAT assessment that includes confirmation of Bidder provided self-assessment
 - One-page self-assessment is required for each proposal
 - Proposal is for an eligible technology by an eligible participant from an eligible resource
 - Proposal offer meets MW minimums and maximums
 - Delivery term for PPAs or expected remaining useful life of resource for acquisitions is at least 10 consecutive years
 - Proposal is for years for which EAI is seeking resources in the RFP
 - Resource is free of fatal flaws and operational or permitting restrictions
 - Developmental resources must meet published minimum requirements
- The VAT will confirm to each of the other evaluation teams and the EAI Resource Planning Team that a Bidder's proposal meets the minimum thresholds (or notify them of discrepancies)



VIABILITY ASSESSMENT - PHASE II

- During Phase II, the VAT will provide a more detailed evaluation and assessment
 - Evaluating a key list of attributes associated with each of the focus areas identified for the viability assessment
 - The attributes will be assessed in a detailed scorecard using a 1-4-7-10 scale ultimately leading to a total viability score for each proposal
 - Confirm the Bidder information provided is reasonable and credible, including: site control, operating parameters, technology, heat rate, emission rates, fuel adders, and fuel resource assumptions
 - At the conclusion of the VAT's Phase II analysis, the VAT will develop, and seek concurrence
 of the IM with a final viability score
- The VAT will provide the EAI Resource Planning Team both:
 - Confirmation that Bidder's proposal is reasonable, or will provide an alternative view for EAI Resource Planning Teams' use
 - A final viability evaluation with supporting documentation for further review



Credit Evaluation

David Wilcox presenting on behalf of Laura Hamner



CREDIT EVALUATION

- The Credit Evaluation Team (CET) will
 - Evaluate Bidder creditworthiness
 - Help determine amount and type of credit support required
 - Assess other credit-related matters as needed
- In general, a Bidder will not be excluded or prohibited from participating in the RFP on the basis of credit
- Credit postings will not be required prior to LOI execution
- \$2 million letter of credit will be required with LOI execution between EAI and Bidder/Seller
 - Letter of Credit form will be attached to the credit appendix



CREDIT EVALUATION

- Credit assessment of Bidder/Credit Support Provider with public information
 - The CET will assign a credit rating based on, among other things, evaluations of:
 - Standard & Poor's and Moody's credit ratings, when available
 - 10-K/10-Q/8-K filings
- Credit assessment of Bidder/Credit Support Provider with private information
 - The CET utilizes an internal model to assess a credit rating based on the Bidder's financial metrics and business risks
 - Request two years of audited financial statements from Bidder or Credit Support Provider
 - Financial statements include balance sheet, income statement, cash flow statement, notes and auditor's opinion
 - If financial information is consolidated with other entities, all data related solely to the offering entity will be extracted and submitted as separate documents by Bidder
 - Credit-related diligence materials provided by Bidder



CREDIT EVALUATION

- The CET/EAI will determine the required credit support amount and form of collateral during negotiation of any definitive agreement
 - Security requirements will be based on, among other things:
 - Creditworthiness of bidder or guarantor
 - Entergy Corp credit exposure
 - Contract tenor and type
 - Other contract/proposal terms
 - Financial environment
 - Acceptable forms of collateral may include:
 - Parental guaranty
 - Letter of Credit from a bank acceptable to the CET/EAI
 - Cash collateral
 - Lien on the project or other assets
 - Other forms of credit support suggested by Bidder and acceptable to the CET/EAI
 - Combinations of the foregoing



MISO Interconnection Process

Meera Shukla







Generation
Interconnection
Queue

Introduction

Pre-Queue Overview

System Planning & Analysis Phase

Definitive Planning Phase

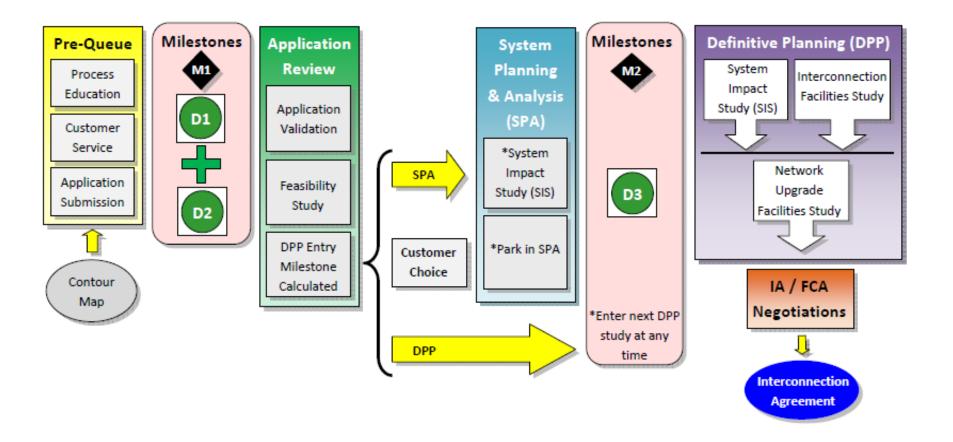
Interconnection Agreement

Special Studies

List of Reference Materials and Contacts

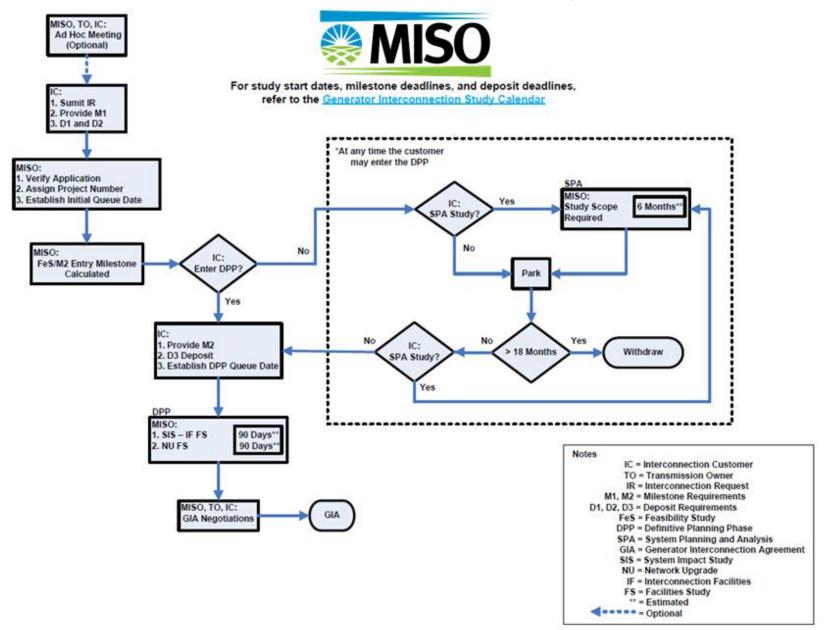


Generation Interconnection Process...





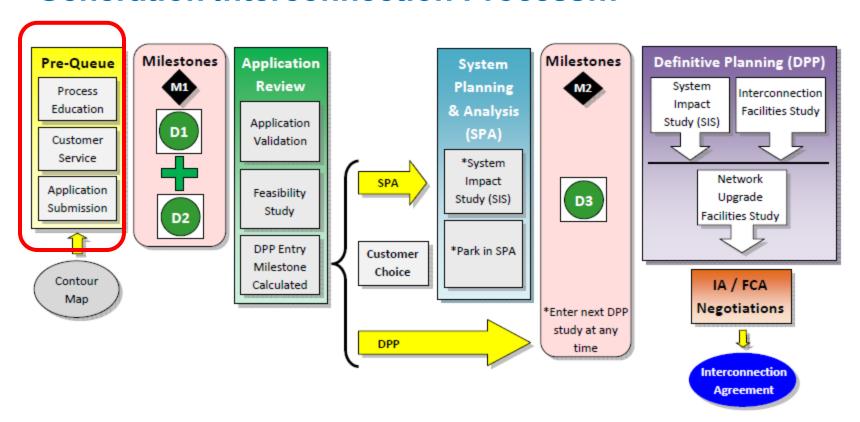
Generation Interconnection Queue







Generation Interconnection Process...



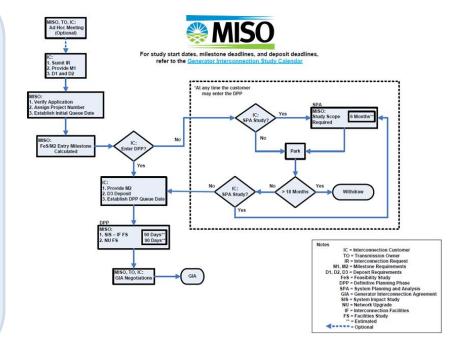
Ref	Description	Refund	<6 MW	≥6 but ≤ 20 MW	> 20 but ≤ 50 MW	> 50 but ≤ 100 MW	> 100 but ≤ 200 MW	> 200 but ≤ 500 MW	> 500 but < 1000 MW	≥ 1000 MW
D1	Application Fee/Fund FeS	No	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
D2	Fund System Impact Study (SIS)	Yes	\$10,000	\$20,000	\$30,000	\$60,000	\$60,000	\$60,000	\$90,000	\$120,000
D3	Fund DPP and Restudies	Partial	\$40,000	\$100,000	\$150,000	\$210,000	\$260,000	\$360,000	\$440,000	\$520,000



Process Education and Customer Service...

Pre-Queue Phase

- Consists of a dedicated group within Resource Interconnection Planning (RIP)
- Includes ad hoc information sessions upon customer request
- Assists, educates and informs customers prior to submitting an application
- Includes contour map creation
- Supported by MISO website at www.misoenergy.org



Generation Interconnection Queue

APPENDIX 1 TO GIP INTERCONNECTION REQUEST FOR A GENERATING FACILITY

1.	The undersigned Interconnection Customer submits this request to interconnect its Generating Facilit										
	located in Cour				, [State], with the Transmission System pursuant to a Tariff.						
2.	* 7	* This Interconnection Request is for (check one):									
	0	A proposed new Generating Facility.									
	0	An increase in the generating capacity or a Material Modification of an existing Generating Facility.									
	0	An Interconnection Request made in connection with a Generating Facility proposed for inclusion in a resource solicitation process.									
	0	Network Resource Interconnection Service for a Generating Facility in commercial operation or with an executed GIA.									
3.	* The type of interconnection service requested (check one as appropriate):										
	0	Energy Resource Interconnection Service									
	0	Network Resource Interconnection Service									
	0	Network Resource Interconnection Service in connection with a resource solicitation process									
	0	Net Zero Interconnection Service									
4.	Th	The Interconnection Customer provides the following information:									
	a * Address or location or the proposed new Generating Facility site (to the extent										
		known) o	r, in the case of a	n existing Generating Facility, the name and specific							
		location of the existing Generating Facility;									
	b	* For new Generating Facility, maximum MW (Megawatt)/ MVAR (Megavar) electrical output:									
			Summer (net)	MW	MVAR at	degree	s C				
		7	Winter (net)	MW	MVAR at	degree	s C				
	MW MVAR of an existing Generating Facility:										
		Maximum electric output before increase									
			ummer (net) incre	MW	MVAR at	degrees C					
		V	Vinter (net) increas	se of	MW	MVAR at	degrees C;				



M1 Milestones...

Technical Milestones

Step-up Transformer Data to Pointof-Interconnection (POI)

Generation Output (MW)

One-Line Diagram

Technical Data to Run Studies

POI

Generic Stability Model

Impedance from Collective Substation to POI

Non-Technical Milestones

Complete and Valid Application

Proof of site control or \$100k deposit (dedicated refundable deposit)



Application Study Deposits...

Deposits for Feasibility & System Impact Study (SIS)

D1 Application Fee / Feasibility Study Funding

• Non-refundable

D2
System Impact
Study Funding (SPA
or DPP)

- Unused portion is returned to customer if customer withdraws during SPA
- For withdraws during a group study, the customer is responsible for their share of the group study costs
- Unused balance is held by MISO if customer proceeds to DPP
- Customers shall pay actual cost of studies. Deposits are only the Tariff expected amount required to fund the studies

Deposits for Deliverability Only Study

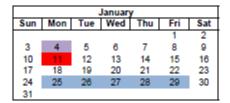
Deposit for a Deliverability-only Study

- The study deposit for an Interconnection Request to change Energy Resource Interconnection Service (ERIS) to Network Resource Interconnection Service (NRIS) for a Generating Facility in commercial operation or with an executed GIA shall be \$35,000
- D1 application deposit is also required for a deliverability study



Generation Interconnection Study 2016 Calendar...

2016 Study Calendar



February											
Sun	Mon	Mon Tue Wed Thu Fri Sa									
	1	2	3	4	5	6					
7	8	9	10	11	12	13					
14	15	16	17	18	19	20					
21	22	23	24	25	26	27					
28	29										

March									
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		1	2	3	4	5			
6	7	8	9	10	11	12			
13	14	15	16	17	18	19			
20	21	22	23	24	25	26			
27	28	29	30	31					

	April									
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	May									
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29	30	31								

	June										
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12	13	14	15	16	17	18					
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l											

	July									
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10	- 11	12	13	14	15	16				
17	18	19	20	21	22	23				
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31										

August											
Sun	Mon	Tue	Wed	Thu	Fri	Sat					
	1	2	3	4	5	6					
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28	29	30	31								

September									
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· '									

u Fri Sat
1
7 8
3 14 15
21 22
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	November									
Sun	Mon	Tue	Wed	Thu	Fri	Sat				
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13	14	15	16	17	18	19				
20	21	22	23	24	25	26				
27	28	29	30							

December										
Sun	Mon	Tue	Wed	Thu	Fri	Sat				
				1	2	3				
4	5	6	7	8	9	10				
11	12	13	14	15	16	17				
18	19	20	21	22	23	24				
25	26	27	28	29	30	31				

Notes

- Valid applications must be received by close of business (5:00 p.m. Eastern) 14 calendar days prior to start of Feasibility Study.
 MISO will receive and evaluate applications for completeness prior to the deadline and notify of any deficiencies to be corrected.
 Some dates were adjusted to achieve Monday start dates and to avoid Holiday conflicts.
- A Feasibility Study will take 10 business days, with results posted within 5 business days. Feasibility Studies will be preformed three times during each DPP cycle.
- 3. M2 milestone payment and D3 deposit must be received by close of business (5:00 p.m. Eastern) 30 calendar days prior to start of DPP study.
- 4. DPP two cycles in a calendar year .
- 5. SPA Study Scope Appendix 2 to GIP Att. A must be received by close of business (5:00 p.m. Eastern) on the posted SPA Study Scope form due date.
- 6. SPA SIS will start on a periodic basis, with the Interconnection Customer assigned to the next scheduled SIS after receipt of a completed Study Scope

Valid Application Required due date (Note 1)
Feasibility Study Start date (Note 2)
M2 milestone payment & D3 Deposit due date (Note 3)
DPP Study Start date (Note 4)
SPA Study Scope form due date (Note 5)
SPA Study Start date (Note 6)

Application Submission...

Customer submits interconnection request

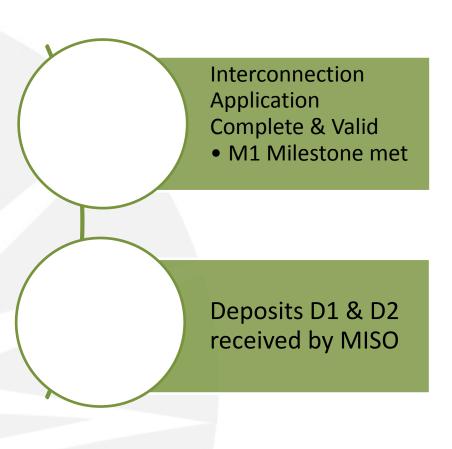
- Appendix 1: Interconnection Request
- Attachment A: Generating Facility Data Unit Ratings
- Attachment B: Interconnection Study Agreement
- Attachment C: Confidentiality Agreement
- Appendix 2 Attachment A: System Planning & Analysis (SPA) Scope (Optional)

MISO acknowledges receipt of request



Application Validation - Initial Queue Date established upon completion of all items below:

MISO reviews the application for completeness Verifies information and clarifies any ambiguity Customer contacted for clarification etc. MISO notifies customer of any deficiencies Customer submits a complete and valid application
Likely affected Transmission Owners (TOs) are sent a copy of the Interconnection Request application Scoping call



Feasibility Study...

Requirements

Complete/valid request received 14 calendar days prior to start

Study

- Preliminary evaluation of the Interconnection Request's impact to the transmission system
- Used to determine constraints on the transmission system for the purpose of calculating FeS portion of the DPP Entry Milestone
- The Feasibility Study report will show the results of the (M2) DPP Entry Milestone calculation

Timelines

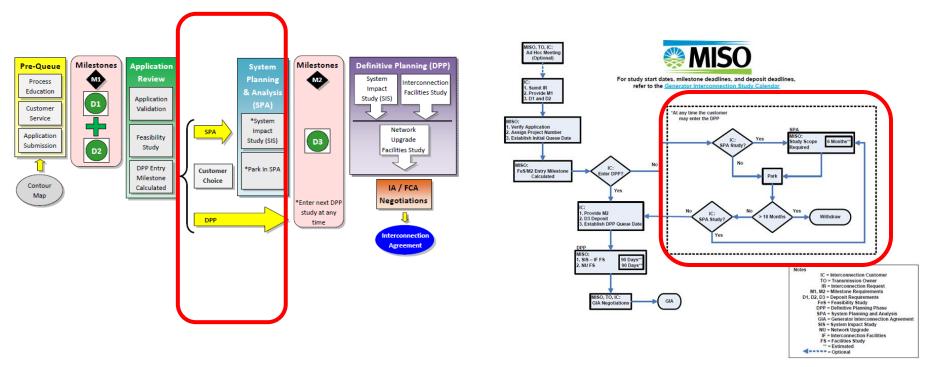
- Conducted three times per DPP cycle
- MISO will use reasonable efforts to complete the study within 10 business days





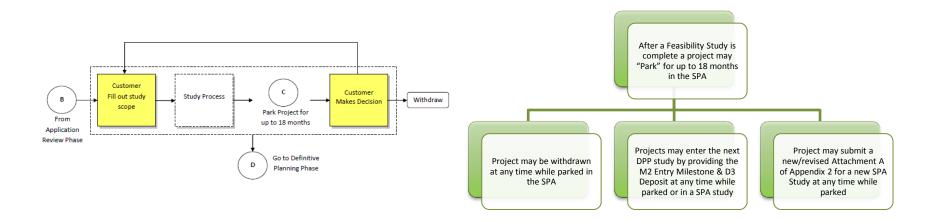
System Planning and Analysis Phase

Generation Interconnection Process...

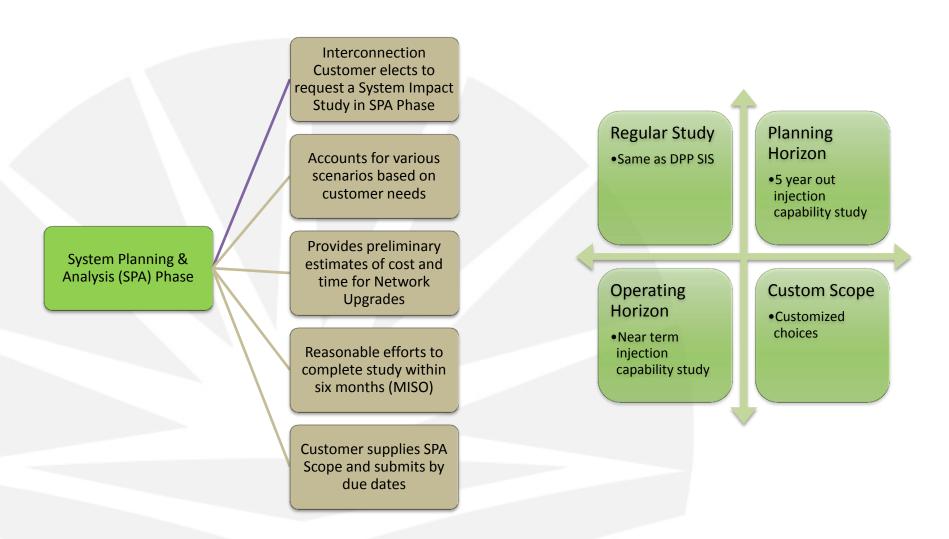




Overview of System Planning and Analysis



System Impact Study

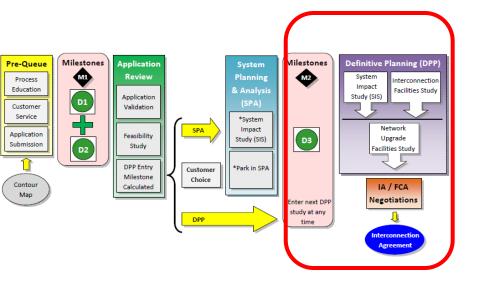


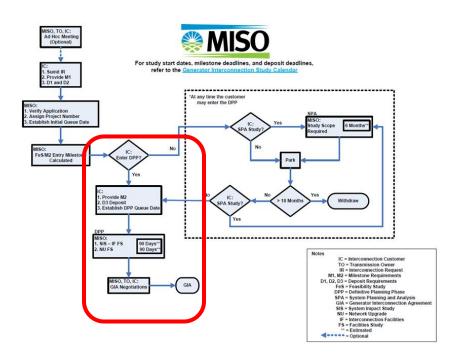
^{*} Results of SPA studies are for information purposes only and non binding



Definitive Planning Phase

Generator Interconnection Process...





Ref	Description	Refund	<6 MW	≥6 but ≤ 20 MW	> 20 but ≤ 50 MW	> 50 but ≤ 100 MW	> 100 but ≤ 200 MW	> 200 but ≤ 500 MW	> 500 but < 1000 MW	≥ 1000 MW
D1	Application Fee/Fund FeS	No	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
D2	Fund System Impact Study (SIS)	Yes	\$10,000	\$20,000	\$30,000	\$60,000	\$60,000	\$60,000	\$90,000	\$120,000
D3	Fund DPP and Restudies	Partial	\$40,000	\$100,000	\$150,000	\$210,000	\$260,000	\$360,000	\$440,000	\$520,000



M2 Milestones...

Technical Milestones

Definitive Stability Model*

Definitive Point of Interconnection*

Definitive One-Line Diagram*

Definitive Generation Output (MW)*

Non-Technical Milestones

Proof of Site Control

DPP Entry Milestone (Calculated in the Feasibility Study)



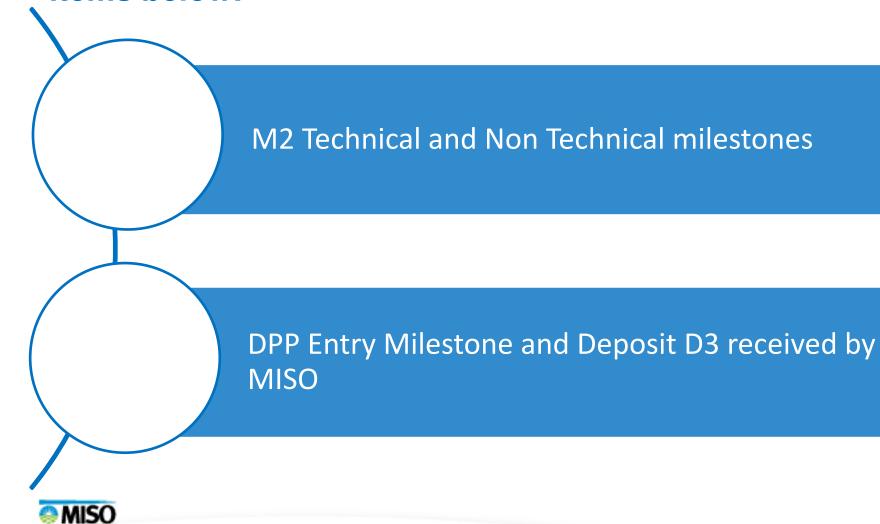
D3 Study Deposit...

D3 Study Deposit

- Definitive Planning Phase (DPP) Facility Study funding
- Customers shall pay actual cost of studies
- Unused portion of D3 is returned to customer at commercial operation or it is replaced with an irrevocable letter of credit 30 calendar days after execution of a non-provisional GIA



DPP Queue Date established upon completion of all items below:





DPP Study...

Two-part DPP Study

System Impact Study – Interconnection Facilities Study

Network Upgrades Facilities Study

Performed concurrently

• 90 calendar day timeline

- Planning level estimate for network upgrades and customer interconnection requirements
- 90 calendar day timeline



DPP Study...

System Impact Study Scope

Thermal Analysis Voltage Analysis Stability Analysis Short Circuit Analysis Deliverability Analysis Affected System Study Shared Network Upgrades

Facilities Study Scope

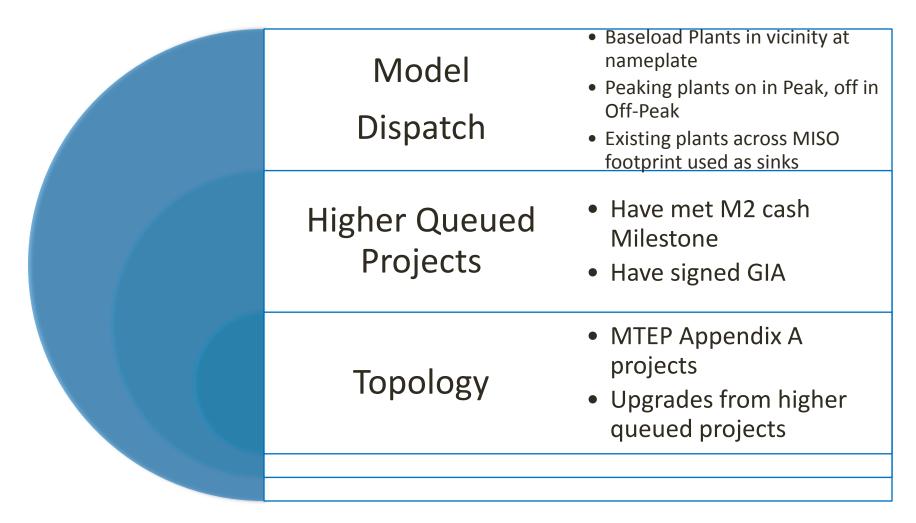
Interconnection
Substation
Facilities
(Phase I)

- Determine facilities
- Interim report

Network Upgrade Facilities (Phase II)

- Incorporate network upgrades identified in SIS
- Final Facilities
 Study report issued

Model Assumptions





ERIS Thermal & Voltage Analysis

Generator Injection Constraint Criteria

- System intact: 5% distribution factor cutoff
- Contingency: 20% distribution factor cutoff
- Overloaded Facility or overload-causing Contingency at generator's outlet
- Impacts on affected systems based on the affected systems' criteria
- 1% voltage degradation due to Study Generator
- Generator is greater than or equal to 20% of the applicable rating (normal or emergency) of the overloaded facility
- Additional constraints per transmission owners' planning criteria
- N-2 Analysis on Selected P3 contingencies

Thermal Constraint Mitigation

- Obtain limiting elements from impacted TOs on all constraints
- Constraints verified by ad hoc group
- Available transmission plans considered for potential mitigation
- AC verification performed when constraints mitigated in DC analysis
- Additional study may be required to identify & evaluate Transmission solutions to Sub-Transmission issues

ERIS - Stability and Short Circuit Analysis

Stability

- Thermal mitigation Included
- Study performed on most conservative scenario
- Study generators dispatched at nameplate
- Local and regional disturbances studied
- Mitigation identified for observed criteria violations

Short Circuit Analysis

- Single Line-to-Ground and Three Phase faults up to three busses away from study generator POI
- Breaker Duty Violations attributed to generator require mitigation



Deliverability Analysis

Summer Peak Case used

- Overloads with 5% DF due to N-1 contingencies are considered additional deliverability constraints
- All study generators evaluated at 100% nameplate

Deliverability White Paper on Methodology

• https://www.misoenergy.org/layouts/MISO/ECM/Redirect.aspx?ID=90065



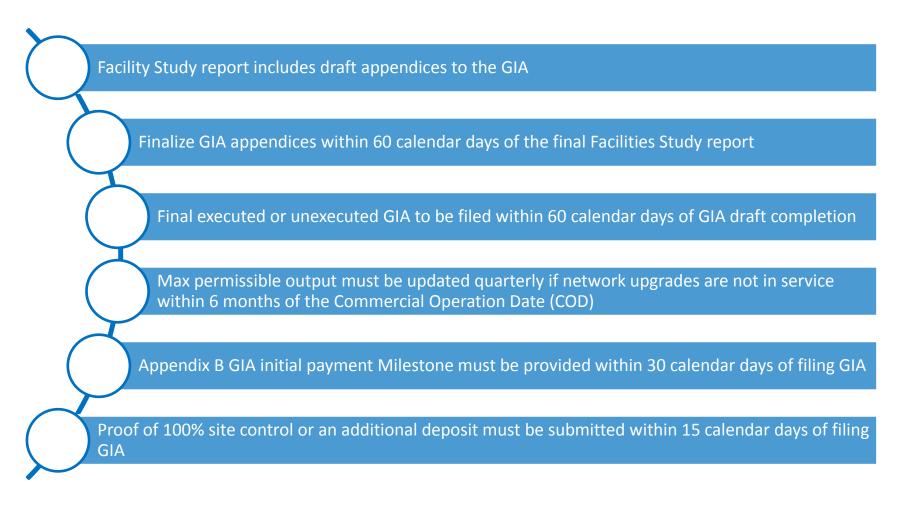
Ad Hoc Group Input

Group Input

- Review models and provide contingencies
- Validate constraints; provide limiting elements
- Suggest conceptual plan options
- Identify need for analysis & suggest mitigation options
- Provide fault scenarios
- Review/provide fault currents
- Identify scenarios for P3 contingencies and develop solutions to potential cascading issues
- Provide input on cost and schedule



Generator Interconnection Agreement (GIA)...





Post Generator Interconnection Agreement – Suspension of Construction...

Permitted only for Force Majeure reasons

When coming out of Suspension with only partial construction resulting in reduced capacity, recovery eligibility is reduced on a pro-rata basis relative to the new size of the project

Will require an up-front payment equivalent to greater of network upgrade costs or \$5 million

Suspended Interconnection Requests may be revisited periodically to ensure customer is working toward coming out of Suspension

Could result in forfeiture of any remaining funds from D3 deposit







Special Studies...

Net Zero

Optional Study

Provisional IA Study

Fast Track Process



List of Reference Materials and Contacts...

Documents

Business Practice Manual: Generator Interconnection BPM - 015:

https://www.misoenergy.org/Planning/GeneratorInterconnection/Pages/ProceduresRequirements.aspx

MISO Committees, Work Groups, and Task Forces

https://www.misoenergy.org/StakeholderCenter/CommitteesWorkGroupsTaskForces/IPTF/Pages/home.aspx

Generator Interconnection Ad-Hoc Requests

https://www.misoenergy.org/Planning/GeneratorInterconnection/Pages/Ad-HocandWorkshops.aspx

Generator Interconnection Study Calendar, GI Process flowchart, and GI Checklist:

https://www.misoenergy.org/Planning/GeneratorInterconnection/Pages/ProceduresRequirements.aspx

Generator Interconnection Contour and Queue Maps:

https://www.misoenergy.org/Planning/GeneratorInterconnection/Pages/ContourMaps.aspx

Generator Interconnection Application:

https://www.misoenergy.org/Planning/GeneratorInterconnection/Pages/RequestsandApplication.aspx

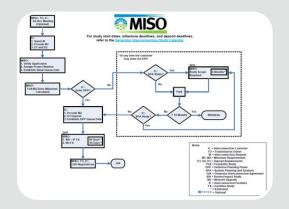
Contacts

MISO Client Relations 866-296-6476 clientrelations@misoenergy.org

Resource Interconnection

- Paul Muncy
 - **–** 317-249-5632
 - pmuncy@misoenergy.org
- Diana Vasquez
 - **–** 317-249-5119
 - dvasquez@misoenergy.org
- Aneta Godbole
 - 317-249-5213
 - agodbole@misoenergy.org







FeS SPA DPP

-Quick reference to MISO GI queue process

- -Scheduled due dates and start dates for GI studies.
- -Due dates are firm.

- -FeS: Required study to calculate M2 DPP entry milestone dollar amount.
- -SPA study is not required. Can be used as an optional study phase or project parking space (up to 18 mo).
- -DPP is for projects ready to put cash at risk and move forward in the study process ASAP toward a GIA.



List of Acronyms

COD	Commercial Operation Date
D1	Deposit 1
D2	Deposit 2
D3	Deposit 3
DF	Distribution Factor
ERIS	Energy Resource Interconnection Service
DPP	Definitive Planning Phase
FCA	Facility Construction Agreement
FERC	Federal Energy Regulatory Commission
FeS	Feasibility Study
FS	Facility Study
GIA	Generation Interconnection Agreement
GIQ	Generation Interconnection Queue
IA	Interconnection Agreement
IC	Interconnection Customer

List of Acronyms

ICT	Independent Coordinator of Transmission
IF	Interconnection Facilities
IR	Interconnection Request
LGIA	Large Generator Interconnection Agreement
M1	Milestone 1
M2	Milestone 2
МТЕР	MISO Transmission Expansion Plan
MVP	Multi Value Project
NRIS	Network Resource Interconnection Service
NU	Network Upgrade
PIA	Provisional Interconnection Agreement
POI	Point of Interconnection
SIS	System Impact Study
SPA	System Planning and Analysis Phase
ТО	Transmission Owner

Example 1 – M2 Calculation

Project A

- MW Size: 200 MW
- Schedule 7 \$/MW Yearly Rate = \$ 32,702.0669
- **Schedule 7 Cost**= 200*32,702.0669 = \$6,540,413.38
- FeS Results
 - Number of 230 kV Constraints: 3, Cost Equivalent = 3*200,000 = \$600,000
 - Number of 115 kV Constraints: 2, Cost Equivalent = 2*130,000= \$260,000
 - Number of 345 kV Constraints: 1, Cost Equivalent = 1*350,000 = \$350,000
- Total FeS Cost = \$1,210,000.00
- **DPP Entry Milestone** = 0.1*(\$1,210,000.00 + \$6,540,413.38) = \$775,041.34
- Acost/mw = (DPP Entry Milestone/MW Size) = 775,041.34 /200 = \$3,875.21 / MW
- Min Cap on DPP Entry Milestone = \$2,000/ MW
- Max Cap on DPP Entry Milestone = \$10,000/MW
- \$2,000< Acost/mw <\$10,000 DPP Entry Milestone within Min and Max Cap.



Example 2 – M2 Calculation

Project B

- MW Size: 50 MW
- Schedule 7 \$/MW Yearly Rate = \$ 32,702.0669
- **Schedule 7 Cost**= 50*32,702.0669 = \$1,635,103.35
- FeS Results
 - Number of 230 kV Constraints: 1, Cost Equivalent = 1*200,000 = \$200,000
 - Number of 161 kV Constraints: 29, Cost Equivalent = 29*130,000= \$3,770,000
 - Number of 115 kV Constraints: 6, Cost Equivalent = 6*130,000= \$780,000
- Total FES Cost = \$4,750,000.00
- **DPP Entry Milestone** = 0.1*(\$4,750,000.00 + \$1,635,103.35) = \$638,510.33
- B_{cost/mw} = (DPP Entry Milestone/MW Size) = \$638,510.33/50 = \$12,770.21/MW
- Min Cap on DPP Entry Milestone = \$2,000/ MW
- Max Cap on DPP Entry Milestone = \$10,000/MW
- B_{cost/mw} >\$10,000, DPP Entry Milestone crossed Max cap.
- New DPP Entry Milestone = 50* Max Cap= 50*\$10,000 = \$500,000



Additional MISO Information



ADDITIONAL INFORMATION ON MISO

MISO Website - https://www.misoenergy.org/Pages/Home.aspx

Entergy

- MISO Markets and Operations Website -https://www.misoenergy.org/MARKETSOPERATIONS/Pages/MarketsOperations.aspx
- Becoming a Market Participant Website -https://www.misoenergy.org/StakeholderCenter/MarketParticipants/Pages/BecomingaMarketParticipants/
 nt.aspx
- Market Participant Resources -https://www.misoenergy.org/StakeholderCenter/MarketParticipants/Pages/MarketParticipants.aspx
- Generator Interconnection <u>https://www.misoenergy.org/Planning/GeneratorInterconnection/Pages/GeneratorInterconnection.asp</u>
- Long-Term Transmission Service - <u>https://www.misoenergy.org/Planning/LongTermTransmissionService/Pages/LongTermTransmissionService.aspx</u>
 - Interested Bidders can also contact the MISO-South Main Office by phone at (501) 244-1500

Q&A SESSION

Bidders may submit questions in writing to the RFP Administrator at eairfp@entergy.com



Q&A FOLLOW-UP

- Questions received during today's conference will be posted to the RFP Website: http://entergy_arkansas.com/rfp/energy_capacity.aspx
- EAI encourages written questions/feedback about the RFP from market participants and other interested parties
- Questions may be emailed to the RFP Administrator at eairfp@entergy.com

