

# Appendix E-1 Proposal Evaluation Process Description for Fall 2004 Request for Proposals (RFP) for Supply-Side Resources

Entergy Services, Inc. October 22, 2004 February 22, 2005

The statements contained in this Appendix are made subject to the Reservation of Rights set forth in the RFP and subject to the terms and acknowledgements set forth in the Proposal Submission Agreement.

## APPENDIX E-1 Proposal Evaluation Process Description for Fall 2004 RFP

## SUMMARY

This Appendix E-1 describes the process, criteria, and methods that ESI intends to use to evaluate proposals for the Capacity and energy resources submitted in response to this Fall 2004 RFP.

## **OVERVIEW**

ESI's process for evaluating proposals has been designed to achieve the following objectives: (a) treat all Bidders objectively and impartially; (b) protect the confidentiality of proposal information; and (c) comply with all applicable legal and regulatory requirements, including affiliate Code of Conduct requirements.

To achieve these objectives, ESI intends to use a carefully designed process that includes the following major features:

- An Independent Monitor who has participated in the design of the process and will monitor and oversee the evaluation process.
- A draft RFP issued prior to the Bidders' Conference which outlines the evaluation methodology. Final evaluation criteria will be determined following the technical conferences with prospective Bidders and regulatory bodies, and described in the final version of this Appendix E-1. Regulators and market participants may submit comments to ESI on the draft RFP and evaluation methods prior to ESI's finalization of the RFP.
- The proposal evaluation process will be conducted in a carefully controlled manner using procedures, methods and evaluation criteria described herein and Entergy System assumptions that have been developed and "sealed" prior to the receipt of proposals. ESI will document these key assumptions and model constructs and provide this documentation to the Independent Monitor no later than January 14March 10, 2005. Any modifications to these procedures will need to be discussed with and approved by the
- Independent Monitor prior to use by ESI.
- The results of ESI's proposal evaluation process are considered to be confidential and proprietary and will not be shared with Bidders, even after the Fall 2004 RFP has concluded, unless ESI is required to do so as further explained in Appendix F, Section 4. The Independent Monitor will oversee and, therefore, will have ongoing access to the proposal evaluation process, and the Staffs of interested regulatory commissions will be given access to the evaluation results upon request; however, all such information will be shared only on a confidential basis.

The process for protection of proposal information is further described in Appendix F.

## **Evaluation Methodology**

The overarching objective of the RFP is to procure resources to meet Entergy Operating Companies' supply objectives and provide power at the lowest reasonable total cost. The primary objective of ESI's resource planning process is to provide for both the limited-term and long-term Capacity and energy needs of the Entergy Operating Companies' regulated retail customers through the selection of a supply portfolio that is expected to result in the lowest reasonable cost (based upon information known at the time of the decision) while also meeting the planning objectives and constraints established by the Entergy Operating Committee.

## **1** Proposal Evaluation

The proposal evaluation process will be conducted by the Proposal Evaluation Team, with oversight from the Independent Monitor. Using the process outlined below, the Proposal Evaluation Team will evaluate proposals and propose a primary award list and a secondary award shortlist<del>, with the term "selected proposals" applying to both of these lists</del>. These lists will be presented to the Entergy Operating Committee for its decision regarding procurement of resources.

- 1.1 The Proposal Evaluation Team consists of an Economic Evaluation Teameconomic evaluation team, Transmission Factor Evaluators, and a Fuel Factor Evaluator. All team members are employees of ESI's System Planning and Operations group, and are distinct and separate from Entergy's Transmission Business Unit.
- 1.2 The Proposal Evaluation Team will evaluate the proposals received in response to this Fall 2004 RFP. The Independent Monitor will monitor ESI's evaluation. Prior to the evaluation of any proposal, the Independent Monitor will screen proposals to assure compliance with threshold requirements as specified in Section 3 of the RFP, and will redact any identifying information from the proposals prior to sending information about the proposals to different evaluators in the Proposal Evaluation Team.
- 1.3 The Proposal Evaluation Team will evaluate all conforming proposals and develop a list of selected proposals proposed primary award list and secondary award shortlist consistent with the Entergy System's needs described in Section 1.2 of the RFP main body.
- 1.4 As in ESI's prior RFPs, the primary consideration in evaluating individual proposals will be an objective evaluation of the economic impacts of a proposal on Entergy System total production costs using production costing models as well as and/or fundamental economic analysis based on spreadsheet models that compare the cost of alternatives in meeting various supply roles, (the "Economic Evaluation"). In addition, subject matter experts will review specific proposal characteristics such as fuel issues, credit risk, and potential transmission issues ("Factor Evaluation"). Given the standardization of products in this RFP compared to previous RFPs, the Factor Evaluation will be less extensive than in previous ESI supply-side RFPs.
- 1.5 The purpose of the Factor Evaluation is three-fold: (1) to estimate certain parameters necessary for the Initialinitial Economic Evaluation; (2) to estimate any economic

impacts based on a deliverability evaluation; and (3) to identify issues necessary to address in subsequent contract drafting if the proposal is selected to an primary award list (applies only to selected proposals).or secondary award shortlist.

- 1.6 The Initialinitial Economic Evaluation requires one or two pieces of information from the Factor Evaluation:
  - <u>Transmission Zonal Location</u>: Based on a proposal's information with regard to its point of interconnection to the Entergy grid, the Transmission Factor Evaluator will assign a transmission zonal location to each proposal.
  - \* <u>Fuel Cost Adders:</u> For proposals in the category Dispatchable MUCPA, where ESI would provide the fuel, the Fuel Factor Evaluator will estimate ESI's delivery cost for fuel to the specific plant associated with each such proposal.
- 1.7 ESI will initially evaluate each proposal's economic impact (excluding the Three-Year Reserve Capacity MUCCO product and LD products) on the Entergy System's total production costs, when that individual proposal is added incrementally to the Entergy System's existing resources. The Initialinitial Economic Evaluation will be based upon the net present value impact (on a per-MW basis) of the proposal on the Entergy System's total production costs, as modeled by a production costing model, levelized over the term of resource availability as appropriate for each proposal. The Initialinitial Economic Evaluation will also include a spreadsheet-based fundamental economic analysis based on a fixed set of assumptions by product and region with regards to dispatch level.

The production cost model will evaluate the incremental net cost or savingsimpact of each proposal based on production costing analyses that reflect the price and operational characteristics of each proposal, as provided in the proposal materials. The total production cost impact of the proposal will reflect the sum of the net fuel savings less the incremental fixed costs associated with the proposal. The analysis will rely on data and assumptions regarding the Entergy System's resource portfolio consistent with ESI's long-term resource planning models.

Using the results of these economic estimates, ESI will compare and rank proposals within each Product Category, from the one offering the most economic savings greatest benefit to the one offering the least economic savings benefit per MW added. This process will result in a "Product Category Supply Cost ranking" of proposals within each product type based upon their impact upon Entergy System's total production cost when added one at a time to the Entergy System's existing resources in the evaluation of the base case.

The evaluation will be performed for **a**-base, high and low gas price forecasts; additional sensitivities may be considered although none are expected at this time.

1.8 The Proposal Evaluation Team will select a number of the proposals, which are most economic across the different sensitivities, "the Candidate Proposals", for further review to assess the impacts of combinations of proposals upon total system production costs,

and potential transmission issues for the individual proposals. There is no predetermined number of Candidate Proposals to be selected.

- 1.9 The Candidate Proposals, with the exception of LD-proposals, will each be reviewed in a Deliverability Evaluation (see Appendix E-3), and the estimated economic value of the proposals may be adjusted based on that evaluation. Based on the potential change in a proposal's ranking given the result of the Deliverability Evaluation, the Proposal Evaluation Team will decide if any individual proposal should remain as a Candidate Proposal or if another proposal should substitute it and subsequently go through the Deliverability Evaluation.
- 1.10 The Proposal Evaluation Team will select a number of the combine the results from most economic proposals, combining the results from the Initialinitial Economic Evaluation and the Deliverability Evaluation for a review by the RFR Lead Team, and subsequent decision by the Entergy Operating Committee to develop a number of portfolios.
- 1.11 The portfolios will be evaluated by the economic evaluation team and the Transmission Factor Evaluator, and the most beneficial portfolios will be provided for a review by the RFP Lead Team, and subsequent decision by the Entergy Operating Committee.
- **1.111.12** The RFP Lead Team, in consultation with the Proposal Evaluation Team and the IM, will review the proposed primary award list of selected proposals and secondary award shortlist before a recommendation is made to the Entergy Operating Committee to transact on specific proposals. If so directed by the RFP Lead Team, the Proposal Evaluation Team will provide additional studies. Any additional studies requested will be performed on a non-discriminatory basis, in consultation with the IM and with contemporaneous documentation.
- **1.12**1.13 The selected proposals The proposed primary award list and secondary award shortlist, along with associated analyses, sensitivities and recommendations, will be presented to the Entergy Operating Committee for its review and decision.
- **1.131.14** If the Entergy Operating Committee determines that additional analyses or additional proposal combinations are required prior to its resource decision, it will request that the Proposal Evaluation Team conduct the appropriate analyses, consult with the IM, and present its findings to the Entergy Operating Committee. Any additional studies requested will be performed on a non-discriminatory basis, in consultation with the IM and with contemporaneous documentation.
- **1.141.15** The Entergy Operating Committee will decide which proposals make "the primary award list" in order to finalize Definitive Agreements with the respective Bidders, subject to appropriate due diligence and applicable regulatory review and negotiation of a Definitive Agreement; and which proposals to put on a back-up list, "the secondary award shortlist".
- **1.15**1.16 Awarded proposals then proceed to due diligence/negotiations/contract execution/regulatory review as appropriate. The Credit assessment of the awarded

proposals, as described further in Appendix E-2 will also take place after the Operating Committee decision described in section 1.141.15.

<del>1.16</del>1.17 Prior to the execution of a Definitive Agreement, the Entergy Operating Committee will decide which of the individual Entergy Operating Companies will participate in the Transaction.

#### 2 Factor Evaluation of Proposals prior to Initial Economic Evaluation

2.1 Transmission Zonal Location

The Transmission Factor Evaluator will identify the transmission zone applicable to each unit-specific contingent proposal (i.e., all proposals except LD products), based upon that resource's location within the Entergy System. For proposals from resources outside the Entergy System, the Transmission Factor Evaluator will assign the zonal location based on the interconnection point specified in the proposal.

2.2 Fuel Supply Costs

For Dispatchable MUCPA products, i.e. proposals with tolling agreements, the Fuel Factor Evaluator will assign a basis adder from Henry Hub or Houston Ship Channel and appropriate transportation costs, based on transportation rates on the pipelines specified in the proposals.

## Initial Economic

## **3.13** Initial Economic Evaluation of Individual Proposals by Product Category

The Initialinitial Economic Evaluation of individual proposals results in the ranking of individual proposals within product categories based upon the incremental economic impact (on a per-MW basis) of each proposal on the total production cost of the Entergy System across the evaluated sensitivities, verified by the fundamental economic analyses. The results include a "Product Category Supply Cost Ranking" that can be used to illustrate the relative costs or benefits of the proposal responses proposals and be used to evaluate alternative product mix portfolio alternatives.

<del>3.1.1</del>3.1 The Initial Economic Evaluation comparison will assess each individual proposal's incremental impact on Entergy System total production cost when the proposal is considered in conjunction with the Entergy System resource portfolio. The analysis will incorporate incremental fixed and variable (fuel and non-fuel) data as well as all relevant operational performance parameters. The figure of merit for the Initialinitial Economic Evaluation will be the net present value impact (on a per-MW basis) of the proposal upon the total Entergy System production costs levelized over the time period of the proposal.

- <del>3.1.2</del>3.2 One analytical tool for the Economic Evaluation will be a production costing model that uses information provided in the specific proposal, both proposal specific and pre-determined for the specific product, to examine the proposal's incremental production cost impact on the Entergy System. The model will rely on data and assumptions regarding the Entergy System's resource portfolio consistent with its longterm resource planning models. This analytical tool will be used on each proposal, except for Three-Year Reserve Capacity MUCCO products and LD products.
- 3.1.33.3 A second analytical tool will be fundamental spreadsheet analysis calculating the proposals' proposal's overall production cost or capacity cost under a given set of assumptions. All proposals will be evaluated with this tool, with assumptions appropriate for the specific product category.

#### 4 **Product Specific Economic Evaluation**

#### Day-Ahead Multiple-Year Unit Capacity Call Option Product (Day-Ahead MUCCO) 4.1

Analysis of proposals for this product will reflect the specific economic terms in each proposal, including the elements proposed by the Bidder as well as the pre-determined elements that are common to all proposals for this product and not subject to change by the Bidder. Specifically, offers for this product must include a proposed Option Premium to be specified by Bidder, in \$/kW-year. Other terms in the product include the following pre-established elements, which are not subject to modification by the Bidder: a variable O&M payment (\$1.00/MWh), Fixed Start-Up Payments (\$50.00 per MW per Start), a Fixed Guaranteed Heat Rate ((a) 7,900 Btu/kWh for an 8-hour through 11-hour dispatch Schedule, (b) 7,750 Btu/kWh for a 12-hour through 15-hour Schedule, or (c) 7,700 Btu/kWh for a 16-hour through 24-hour or longer Schedule), and a Gas Price (daily Henry Hub Index). The Bidders should assume that such Fixed Guaranteed Heat Rate includes all applicable adders, taxes, and start-up fuel payments, and Bidders should take this and all other pre-established product elements into account in developing and offering their proposed Option Premium. In addition, Bidders should include costs of any Third-Party Transmission Services in their proposed Option Premium.

- An incremental production cost impact will be evaluated for each proposal in the 4.1.1 production cost model expressed in an annuitized \$/kW-year.
- 4.1.2 An all-in production cost in \$/MWh will be calculated for each proposal using spreadsheet analysis.
  - > Fuel cost will be based on ESI's proprietary gas price forecast. The pre-established O&M and start costs will be added to arrive at a generator cost. To identify dispatch cost, the generator cost will be multiplied by a dispatch penalty factor depending on the location of the generator.
  - Each proposal's Option Premium will be allocated on a \$/MWHMWh basis based on a pre-determined expected capacity factor for the proposal as well as a range of capacity factors to enable cross-product comparison. The expected capacity factor will be a function of the location of the generator and defined based on ESI's

production cost modeling of this standardized product, for each of the transmission zones (i.e., Amite South, Central, WOTAB, and North) but will not be made available to the Bidders.

- The all-in production cost in \$/MWh will be calculated by adding the Option Premium, allocated across dispatched MWh, to the dispatch cost.
- The product will be compared to market prices for adjusted to equivalent products, 4.1.3 established immediately prior to the receipt of proposals.
- Intra-Day Peaking Multiple-Year Unit Capacity Call Option Product (Intra-Day Peaking 4.2 MUCCO)

Analysis of proposals for this product will reflect the specific economic terms in each proposal, including the elements proposed by the Bidder as well as the pre-determined elements that are common to all proposals for this product and not subject to change by the Bidder. Specifically, offers for this product must include a proposed Option Premium to be specified by Bidder, in \$/kW-year. Other terms in the product include the following pre-established elements, which are not subject to modification by the Bidder: a variable O&M payment (\$2.00/MWh), Fixed Start-Up Payments (\$75.00 per MW per Start), a Fixed Guaranteed Heat Rate (12,500 Btu/kWh), and a Gas Price (daily Henry Hub Index). The Bidders should assume that such Fixed Guaranteed Heat Rate includes all applicable adders, taxes, and start-up fuel payments, and Bidders should take this and all other preestablished product elements into account in developing and offering their proposed Option Premium. In addition, Bidders should include costs of any Third-Party Transmission Services in their proposed Option Premium.

- A production cost impact will be evaluated for each proposal in the production cost 4.2.1 model expressed in annuitized \$/kW-year. The proposals will be evaluated both as quick-start units, and as units with no quick-start capability.
- 4.2.2 A fundamental economic analysis will be performed for each proposal and each planning region using spreadsheet analysis.
  - roposals will be compared to cost and performance factors of existing Entergy peaking/reserve units which operate in a similar fashion. If ESI receives favorable 3year proposals, ESI expects to be able to move these peaking/reserve units into extended reserve shutdown or similar status subject to approval by the transmission system operator. The Option Premium therefore should be comparable to and competitive with ESI's avoidable forward cash cost, in order for the proposals to be economically attractive to ESI.
  - > Entergy peaking/reserve units may have additional minimum run requirements which require extended run and prior notice. The cost of these requirements will be factored into the evaluation and credited to the capacity costs of the proposals.
- 4.2.3 The product will be compared to market prices for adjusted to equivalent products, established immediately prior to the receipt of proposals.

### 4.3 Three-Year Reserve Capacity Multiple-Year Unit Capacity Call Option Product (Three-Year Reserve Capacity MUCCO)

Analysis of proposals for this product will reflect the specific economic terms in each proposal, including the elements proposed by the Bidder as well as the pre-determined elements that are common to all proposals for this product and not subject to change by the Bidder. Specifically, offers for these products must include a proposed Option Premium to be specified by Bidder, in \$/kW-year. Because this product is specifically designed to allow ESI to avoid operations and maintenance expenses for peaking, or peaking reserve, units (refer to Section 4.3.3 below) which the Entergy Operating Companies could shut downmay be able to displace as a result of accepting attractive proposals, ESI has restricted offers for this product to three year proposals. Given the cost characteristics of ESI's units that could be shut down, ESI expects that the proposals will be compared to forward costs in an approximate range of \$32.00-\$89.00 per kW-year for the Entergy Operating Companies' own similarly operated reserve units, with that target price range tied to the Entergy Operating Companies' avoided expected non-fuel O&M costs and capital additions at costs for the majority of these particular units, as further described in Section 4.3.3 below. Other terms in the product include the following pre-established elements, which are not subject to modification by the Bidder: a variable O&M payment (\$2.00/MWh), Fixed Start-Up Payments (\$75.00 per MW per Start), a Fixed Guaranteed Heat Rate (15,000 Btu/kWh), and a Gas Price (daily Henry Hub Index). The Bidders should assume that such Fixed Guaranteed Heat Rate includes all applicable adders, taxes, and start-up fuel payments, and Bidders should take this and all other pre-established product elements into account in developing and offering their proposed Option Premium. In addition, Bidders should include costs of any Third-Party Transmission Services in their proposed Option Premium.

- The proposals in this category will be evaluated strictly on capacity cost. The proposals 4.3.1 will be compared to existing Entergy peaking/reserve units which operate in a similar fashion. If ESI receives favorable proposals, ESI intends to enter into Transaction(s) negotiate Definitive Agreements for this product and thenalso may move its own targeted existing units into extended reserve shutdown or similar status. The Option Premium therefore has to be comparable to ESI's avoidable expected forward cash cost.
- Entergy peaking/reserve units may have additional minimum run requirements which 4.3.2 require extended run and prior notice. The cost of these requirements will be factored into the evaluation and credited to the capacity costs of the proposals.
- 4.3.3 Prior to the receipt of proposals in the Fall 2004 RFP, a list of potential units and their respective forward cash costs will be provided to the Independent Monitor and appropriate regulatory agencies only. These costs will be used in the analysis of the Three-Year Reserve Capacity MUCCO proposals. They include avoidable non-fuel O&M and capital costs to maintain the ability to operate the unit, but do not include the variable costs of operating the unit, costs of maintaining environmental permits, or Entergy service company costs. The forward cash cost for units that are expected to be included in the long-term Strategic Plan has been reduced by the estimated cost to place

the unit into storage, maintain the unit in storage, and return the unit to service. These three-year avoidable cost estimates are appropriate for use in analyzing the Three-Year Reserve Capacity MUCCO proposals in this RFP, and are appropriate given the expectation that units placed into temporary reserve may be needed as future supply options beyond the three-year horizon, and until such time that it becomes clear that units placed in reserve will never be returned to service, some longer-term costs of operation (such as permitting and preservation of the unit) are not avoidable.

4.3.4 Prior to the commencement of deliveries under a Definitive Agreement for a Three-Year Reserve Capacity MUCCO, ESI requires satisfactory Transmission Service Study Results from TBU verifying that the resource would qualify as a network resource for the entire three year period.

## 4.4 <u>Dispatchable Multiple-Year Unit Capacity Purchase Agreement (MUCPA) Product</u> (Dispatchable MUCPA)

Analysis of proposals for this product will reflect the specific economic terms in each proposal, including the elements proposed by the Bidder as well as the pre-determined elements that are common to all proposals for this product and not subject to change by the Bidder. Specifically, offers for these products must include a proposed Option Premium to be specified by Bidder, in \$/kW-year. Other terms in the product include the following pre-established elements, which are not subject to modification by the Bidder: a variable O&M payment (\$1.00/MWh) and Fixed Start-Up Payments (\$12,500 per Start). Energy pricing will be based on the unit's actual heat rate curve, to be provided by Bidder in the proposal and guaranteed by Bidder within 2%. In addition, Bidders should include costs of any Third-Party Transmission Services in their proposed Option Premium.

- 4.4.1 A production cost impact will be evaluated for each proposal in the production cost model expressed in annuitized \$/kW-year.
- 4.4.2 An all-in production cost in \$/MWh will be calculated for each proposal using spreadsheet analysis.
  - Fuel cost will be based on ESI's proprietary gas price forecast at the unit's base load heat rate. The pre-established O&M and start costs will be added to arrive at a generator cost. To identify dispatch cost the generator cost will be multiplied by a dispatch penalty factor depending on the location of the generator.
  - Any supplemental capacity over the base load capacity, e.g., duct-firing, will be assigned a specific capacity value based on incremental heat rate. The capacity value of the supplemental capacity will be credited to the Option Premium.
  - Each proposal's Option Premium, net of credit for supplemental capacity, will be allocated over the base load capacity based on expected capacity factor for the proposal as well as a range of capacity factors to enable cross-product comparison. The expected capacity factor depends on the location of the generator. The expected

capacity factor is defined based on production cost modeling, for each of the transmission zones Amite South, Central, WOTAB, and North, but will not be made available to the Bidders.

- $\triangleright$ The all-in production cost in \$/MWh will be calculated by adding the Option Premium, allocated across dispatched MWh, to the dispatch cost.
- The product will be compared to market prices for adjusted to equivalent products, 4.4.3 established immediately prior to the receipt of proposals.

#### 4.5 Into Entergy LD Products

Analysis of proposals for this product will reflect the specific economic terms in each proposal, including the elements proposed by the Bidder as well as the pre-determined elements that are common to all proposals for this product and not subject to change by the Bidder. Specifically, proposals for these products are based on energy pricing as follows: (a) for On-Peak proposals (7x16) or (5x16), Bidder will specify a Fixed Guaranteed Heat Rate, specified in Btu/kWh; and (b) for Off-Peak proposals (7x8), Bidder will specify a Fixed Energy Price, specified in \$/MWh.

- 4.5.1 Prior to receipt of proposals, the production cost model will be utilized to establish a demand curve reflecting the amounts of the different products that are desired on the Entergy System.
- An all-in production cost in \$/MWh will be calculated for each proposal using 4.5.2 spreadsheet analysis.
- The product will be compared to market prices for equivalent products, established 4.5.3 immediately prior to the receipt of proposals.
- Description of the Procedures and assumptions in the Initialinitial Economic Evaluation 4.6 common to more than one product.
- 4.6.1 Production cost modeling will be performed by utilizing PROSYM. The model will be populated with assumptions regarding the Entergy System consistent with overall longterm planning assumptions. The model will include the Entergy Operating Companies' existing resources and resources for which there exists a Lettercontract and/or a letter of Intent intent for a power purchase or an acquisition, as of the date of receipt of proposals in the Fall 2004 RFP<sup>1</sup>. The deficit or surplus between load and resources in any hour will be supplied from or to a modeled external market with access to economy energy. The evaluation of the LD products will be performed prior to the evaluation of any other

<sup>&</sup>lt;sup>1</sup> Any offers for purchase power contracts that are being considered by ESI due to directives from regulatory bodies as further described in Section 1.2 in the Fall 2004 RFP main body, and with an anticipated Delivery Term extending past June 1, 2006, may also be included as an existing resource.

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products. Therefore, any proposals selected from the LD product category will be added to the basecase for evaluation, prior to the evaluation of the other proposals.

- 4.6.2 For products (i.e., Day-Ahead MUCCO, and Intra-Day Peaking MUCCO, and the Dispatchable MUCPA) with pre-defined dispatch characteristics (i.e., heat rate, VOM and start costs), only one PROSYM run will be performed per region and capacity level for that specific product and capacity level. The PROSYM run will then be applied to all proposals of that product and capacity level in such region.
- 4.6.3 A dispatch penalty factor reflecting loss factors and the distance to load in the Entergy System is specified for each of the transmission zones (i.e. Amite South, Central, WOTAB, and North). The dispatch penalty factor is multiplied by the variable cost of the generator to identify a dispatch cost, i.e. the price at which it would dispatch when in the Entergy System. The dispatch penalty factor is applied in both the production cost model and in the spreadsheet analysis.

## 4.7 <u>Candidate Proposals</u>

After the Initialinitial Economic Evaluation, the Proposal Evaluation Team will select a number of proposals that will undergo the Deliverability Evaluation. These proposals, the Candidate Proposals, should represent the proposals with which Entergy is most likely to transact.

## **5** Deliverability Evaluation

5.1 The Deliverability Evaluation will assess whether a resource associated with a Candidate Proposal exhibits flowgate constraints. For Candidate Proposals that exhibit flowgate constraints, the The Deliverability Evaluation will assess the feasibility and cost of different flowgate constraint mitigation strategies, and if successful is described in identifying such strategy(ies), this analysis will identify the lowest cost option to mitigate such flowgate constraints. The cost of mitigation strategies will be assessed as "transmission economic adders" based on the following criteria.

If a Candidate Proposal exhibits no flowgate constraints, then the transmission economic adder is zero for the Candidate Proposal. If a Candidate Proposal exhibits flowgate constraints, then three different mitigation strategies are evaluated, and — to the extent that such strategies are feasible — the lowest cost option is selected for the economic adder. The cost implications of such mitigation option will be included as a transmission economic adder to the Candidate Proposal.

Threshold criteria have been established to gauge<sup>2</sup> the feasibility of each mitigation strategy. For Candidate Proposals that do not pass threshold criteria for at least one mitigation strategy

<sup>&</sup>lt;sup>2</sup> The Transmission Factor Evaluator can not determine the feasibility of an alternative with certainty, that analysis must be performed by TBU.

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the costs associated with the mitigation alternative "Active Transmission Management" will be applied Appendix E-3.

LD product proposals will not go through the Deliverability Evaluation.

## 5.2 AFC Based Evaluation of Candidate Proposals

AFC, Available Flowgate Capacity, is a measure of the transmission capacity available at a certain flowgate. Using the Entergy OASIS AFC analyzer and OASIS posted AFC load flow cases, the Transmission Factor Evaluator will assess whether a resource associated with a Candidate Proposal exhibits flowgate constraints.

- 5.2.1 Candidate Proposals, for which the AFC evaluation identifies no constraints, will undergo no further deliverability evaluation, and no transmission economic adder will be assessed on the Candidate Proposal.
- 5.2.2 Candidate Proposals, which the AFC evaluation identifies as having potential flowgate constraints, will be further evaluated to determine supply deliverability options, and the least cost supply solution, as further described below in Section 5.3. For these Candidate Proposals, the AFC evaluation will characterize the potential extent of the flowgate constraint both from a capacity and a duration viewpoint.
- 5.3 <u>Analysis of feasibility and delivery cost adder for delisting/displacement<sup>3</sup>-option for</u> <u>Candidate Proposals identified as having potential flowgate constraints as a result of an</u> <u>AFC evaluation by the Transmission Factor Evaluator</u>
- 5.3.1 The Transmission Factor Evaluator will conduct a delisting/displacement study for each Candidate Proposal identified as having flowgate constraints by the AFC-Based analysis, in order to determine whether these constraints could be mitigated by surrendering transmission service associated with Entergy's existing generating resources (delist/displacement candidates).
- 5.3.2 The analysis will be based on a comparison of the Candidate Proposal's response factor<sup>4</sup> compared with the response factor of each existing delisting/displacement candidate on each flowgate constraint identified in the AFC Based analysis.
- 5.3.3 If the analysis indicates that the flowgate constraint can be alleviated by delisting/displacement of existing resources, a delivery cost adder will be developed which estimates the required cost to replace delisted generating units. For the purposes

<sup>&</sup>lt;sup>3</sup> The terms "delisting" and "displacement" refer to study methodologies for evaluating new network resources. In general, a "delisting" study evaluates a new network resource as a long-term substitution for an existing network resource, while a "displacement" study evaluates a new network resource as a short-term substitution for an existing network resource. Source: Business Practice for network resource-Delisting/Displacement Studies, posted on OASIS.

<sup>&</sup>lt;sup>4</sup> "Response factor" refers to the percentage of a resource's power output that flows through a constrained transmission element due to the resource's location and the System's transmission network topology.

of this evaluation method, the delivery cost adder will be based upon a market capacity cost by month for replacement of delisted or displaced resources. Baseload resources will not be delisted.

- 5.4 <u>Analysis of delivery cost adder for active management of transmission service option for</u> proposals identified as having potential transmission constraints as a result of an AFC evaluation by the Transmission Factor Evaluator
- 5.4.1 The Transmission Factor Evaluator will identify the magnitude and period (months) during the contract term during which the Candidate Proposal's resource would be partially or completely unavailable if no flowgate constraint mitigation is assumed.
- 5.4.2 For 3-year Candidate Proposals, it is assumed that the seasonal/annual duration of potential constraints identified using the latter 12 months of AFC load flow cases will repeat each year.
- 5.4.3 For the purpose of this evaluation, the delivery cost adder will be based upon the reduction in system production cost benefit, as determined by the Initial Economic Evaluation, associated with reduced resource availability due to constrained months determined by the AFC analysis.
- 5.5 Analysis of feasibility and delivery cost adder for generation portfolio option
- 5.5.1 The Transmission Factor Evaluator will conduct a portfolio analysis to identify if the potential constraints for the individual Candidate Proposal evaluated could be alleviated by secondary purchases to create counter flow and thus mitigate the potential constraints. The "pool" of potential resources is not limited to proposals received in the RFP, but includes any remaining control area resources available. The expected dispatch availability (i.e., capacity type of all counter flow resources) must be expected to overlap all dispatch periods of the evaluated constrained resource. In addition, counter flow resources will be himited to two plants and cannot exhibit AFC constraints during constrained periods identified during the Candidate Proposal's contract period.
- 5.5.2 For the purpose of this constraint mitigation analysis, the delivery cost adder will be based upon a market capacity cost by month for counter flow purchases.
- 5.6 The lowest delivery cost adder of the analyses listed in Sections 5.3, 5.4, and 5.5, above or a combination of these analyses will be considered the transmission economic adder.
- 5.7 The transmission economic adder will be incorporated into the Initial Economic Evaluation, so that a proposal's economic value to the Entergy System reflect these additional delivery cost implications.
- 5.8 If the transmission economic adder changes the Candidate Proposal's relative position in the Initial Economic Evaluation, the Proposal Evaluation Team may replace the Candidate Proposal with another proposal as a Candidate Proposal.

## 6 Candidate Proposal Portfolio Analysis

Portfolios of Candidate Proposals ("Portfolios") will be developed, which will be composed of multiple Candidate Proposals exhibiting the largest sum of individual Candidate Proposal savings.

The simultaneous impacts to all flowgates of response factors associated with all Candidate Proposals within Portfolios will be calculated using publicly posted AFC data for the period of study. Response factors of Based on the results of the initial Economic Evaluation and the Deliverability Evaluation, the economic evaluation team will develop a number of portfolios of Candidate Proposals with the potential to provide the greatest benefit to the System.

The Deliverability Evaluation of the portfolios is described in Appendix E-3, section 5. After consultation with the Independent Monitor, certain proposals, not selected as Candidate Proposals, will may be evaluated, after consultation with the Independent Monitor, to determine if their potential counter-flow benefit to any resource Portfolio-portfolio of Candidate Proposals would provide sufficient economic benefit to warrant reduction of a previously applied delivery cost adder, which could result in a re-ranking and altimate inclusion of that certain proposal to one or more Portfolios.

PROSYM simulations of Portfolioportfolio production costs, with overall Portfolioportfolio capacity and availability adjusted for any reduction in Portfolioportfolio deliverability due to new or exacerbated flowgate constraints, will be performed to determine each Portfolio's overall System production cost benefit.

Final Portfolios portfolios will be ranked according to their overall economic benefit to the System.