

**RESPONSE OF THE KENTUCKY MUNICIPAL ENERGY AGENCY TO THE
ENERGY + ENVIRONMENTAL ECONOMICS, INC. REPORT TO THE ELECTRIC
AND WATER PLANT BOARD OF THE CITY OF FRANKFORT, KENTUCKY (FPB)
AND TO FPB REQUESTS ADOPTED ON JUNE 20, 2017**

The Kentucky Municipal Energy Agency (“KyMEA” or the “Agency”) appreciates this opportunity to respond to requests from the Frankfort Plant Board (“FPB”) for additional information and responses from KyMEA arising out of FPB’s review of KyMEA activities and contracts. FPB requested responses to each of the twenty recommendations presented in the June 16, 2017 report by Energy + Environmental Economics, Inc. FPB also adopted some related requests at its June 20, 2017 meeting, to which responses are provided in items 21 through 30 below.

Before responding to the individual items, KyMEA provides some general information that pertains to many of the specific recommendations or requests.

FPB has collaborated for decades with its fellow municipal electric systems in Kentucky through an informal group of requirements customers of Kentucky Utilities Company (“KU”) and through what is now the Kentucky Municipal Utilities Association. This collaboration has produced millions of dollars of savings over the years to the residents and businesses who are served by the FPB. Throughout this period, KU sold electricity to FPB at wholesale, and FPB had no meaningful input or control over the decisions made by KU regarding the types of electric generating resources that would be used to serve FPB.

In late 2013, FPB and the other KU requirements customers undertook an intensive review to determine whether it was in the best interests of each of them to continue to buy all their electric power from KU or whether less expensive alternatives might be available that would also enable FPB and the others to plan together and decide which power supply resources they wished to pursue in the future. Based on the promising results of this review, in April 2014, FPB and eight others (plus Benham, whose contract KU had already terminated), gave the required five years’ notice to terminate their contracts with KU.

Because many of the recommendations and suggestions relate to how decisions should be made within the Agency, it may be helpful to review the consensus that FPB and the other KyMEA Members reached, after much discussion, for their governance and voting mechanisms within KyMEA.

Formation of Kentucky Municipal Energy Agency

In September, 2015 ten municipal electric systems in the Commonwealth of Kentucky formally joined together and established KyMEA pursuant to Sections 65.210 to 65.300 of the Kentucky Revised Statutes (the “Interlocal Cooperation Act”). KyMEA was formally created through the execution of an Interlocal Cooperation Agreement (the “Interlocal Agreement”) by

the ten municipal electric systems. The Interlocal Agreement is the organizational and governing document of KyMEA. The original ten municipal electric systems establishing KyMEA were from the following cities:

Barbourville
Bardwell
Benham
Corbin
Falmouth

Frankfort
Madisonville
Owensboro
Paris
Providence

This milestone was reached after months of effort by the municipal utility systems to develop appropriate terms for the Interlocal Agreement. Representatives from the individual municipal systems, including from FPB, met monthly beginning in January 2015. They reviewed multiple drafts and discussed various possible alternative provisions for the organization and governance of the new agency. Eventually, they reached consensus on a draft, and the governing bodies of each of the ten municipals reviewed and approved the Interlocal Agreement during the summer of 2015.

In September 2016, the Berea municipal electric system joined KyMEA as its eleventh member (hereinafter the eleven municipal electric systems shall be collectively referred to as the “Members”).

The Interlocal Agreement summarized the reasons for the Agency’s establishment as follows:

(a) to assist the Members in securing reliable, cost effective, and environmentally responsible energy sources or more effective uses of energy sources to supply the demands of the Members’ residents and businesses; and

(b) to seek a mutual advantage for its Members from the coordinated planning, permitting, acquisition, construction and operation of new and existing facilities, and from joint purchases, sales and exchanges of electric power and related sources, as well as from joint electric power supply projects and any and all facilities, including all equipment, structures, machinery, and tangible and intangible property, real and personal, for the generation or transmission of electrical energy, including any fuel supply or source useful for such projects.

KyMEA Governance

KyMEA is governed by a Board of Directors composed of one Director (the “Director”) designated by the governing body of each Member of the Agency, who shall serve at the pleasure of the Member designating him or her. A Member may designate an alternate Director (the “Alternate Director”) to serve in the absence of its Director. The Alternate Director shall

have the power and authority to participate and vote in matters of the Board of Directors or any committee established by the Board of Directors in the absence of the designated Director. There is no term limitation for the Director or Alternate Director appointed by the governing body of the Member.

The Director and the Alternate Director must each be a member of the governing body or a senior management employee of the Member or the Member's electrical utility system.

The governing body of a Member may replace its Director or Alternate Director at any time by written notice filed with the Secretary of the Agency. The notice shall be given by the person or entity authorized to give such notice in the ordinance or resolution of the Member on file with the Agency authorizing execution of the Interlocal Agreement. In the absence of an appropriate designation in such ordinance or resolution, the notice must be signed by the presiding officer or clerk/secretary of the Member. The replacement Director or Alternate Director named in such notice shall be entitled to vote on behalf of the Member from the time of receipt of the notice by the Secretary until receipt of further notice from the Member.

Since the formation of KyMEA and until recently, Frankfort's Director and Alternate Director have been Vent Foster and Herbbie Bannister, respectively. Currently, they are Herbbie Bannister and Hance Price, respectively.

Voting Provisions for Agency Board of Directors

As part of their development of the Interlocal Agreement, the municipal representatives focused on establishing voting provisions that would allow the Agency's Board to make decisions in a manner that would best serve the objectives of encouraging collaboration and building consensus within the Agency. They wrestled with the inherent tension between preserving autonomy of individual members and being able to plan long-term collectively for the group to take advantage of economies of scale for the benefit of all Members. Again, multiple drafts were reviewed and refined over a period of months, resulting in the carefully struck balance in the voting provisions in both the Interlocal Agreement and the AR Contract.

Under the Interlocal Agreement, each Director shall be entitled to one vote on a matter submitted to a vote of the Board of Directors; provided, however, that any Director voting in the minority shall have the right to call for reconsideration based on a weighted vote (a "Weighted Vote"), except that no Weighted Vote may be called for election of Board officers or removal of a Director or officer.

If a Weighted Vote is called on an eligible matter, the motion for reconsideration must receive a majority of the weighted votes of the Directors present in order to vacate the original per capita vote. The formula for the determining each Member's number of weighted votes is based upon the following formula:

$$(MTER \div TERAM) \times 100$$

For the purpose of the formula, "*MTER*" means a Member's total energy requirements

purchased or consumed during the Agency's preceding fiscal year by such Member from any resource designated by the Agency as a resource controlled, managed or dispatched by the Agency measured at or adjusted to the points of delivery from the transmission system and "TERAM" means the sum of the MTER quantities determined for all Members for the preceding fiscal year of the Agency. Each Member's number of weighted votes as determined by the formula shall be rounded to the nearest one-tenth.

For the period prior to the provision of power supply to a Member by the Agency, the Member's energy requirements shall be based on the appropriate amounts purchased or consumed under the Member's existing power supply arrangements.

Agency Officers

The officers of the Agency consist of a Chairman, a Vice Chairman, a President, a Treasurer and a Secretary, and such other officers, including one or more additional Vice Chairmen, Assistant Treasurers, or Assistant Secretaries, as the Board of Directors may determine. The Chairman and any Vice Chairman shall be Directors, but other officers need not be a Director. A person may hold more than one office at the same time except that the Chairman and the Secretary may not be the same person. The Treasurer and all Assistant Treasurers may be required to give the Agency a bond for the faithful performance of his or her duties in such sum and with such surety or sureties as shall be determined from time to time by the Board of Directors.

The initial elected officers of the Agency shall serve until the 2017 annual meeting. Thereafter, the elected officers shall serve for two (2) year terms. No individual shall serve as the Chairman or as the Vice Chairman for more than three (3) consecutive terms. If any elected office becomes vacant, it shall be filled by a special election at the next meeting of the Board convened for that purpose. The Chairman may appoint a person to hold the vacant office until the special election. An officer elected at a special election shall serve for the unexpired term of the person who has vacated the office.

The principal executive and administrative officer of the Agency employed or appointed by the Board of Directors, shall serve as the President of the Agency. The President shall be a non-elected officer of the Agency and shall serve as an ex officio, non-voting member of the Board of Directors and the Executive Committee.

The officers of KyMEA are:

Ron Herd (Corbin)	Chairman
Josh Callihan (Barbourville)	Vice-Chairman
Terry Naulty (Owensboro)	Treasurer
____(____)[To be added]	Secretary

Until his resignation from the KyMEA Board in June 2017, Vent Foster (FPB) had served as KyMEA's Secretary from the time the officers were first elected.

Power Supply and All Requirements Members

In 2015 and 2016, the Agency solicited Requests for Proposals (“RFPs”) for baseload and peaking power supply resources to develop the initial building blocks of a power supply portfolio. The RFPs were solicited pursuant to the provisions of competitive negotiations under the Kentucky Model Procurement Code. In June 2016 based upon an extensive evaluation by KyMEA’s Board, Power Purchase Agreements (the “PPAs”) were entered into with Big Rivers Electric Company, Illinois Power Marketing Company and Paducah Power System.

Over a six-month period coinciding with negotiation of the PPAs, the KyMEA Directors worked to develop a form of an All Requirements Contract (the “AR Contract”) under which those Members that desired to take all requirements service (“AR Service”) from KyMEA could do so.

Development of the AR Contract began in late 2015. Concepts of the AR Contract were presented during KyMEA Board meetings beginning January 22, 2016. During this process, KyMEA Board Members met regularly to review possible concepts and alternatives for the AR Contract, as well as multiple successive drafts of the agreement. Prior to the KyMEA Board’s adoption of the final form of the AR Contract, it was sent to all of the Members expressing interest in AR Service. A number of teleconferences and meetings with Members’ counsel and/or consultants were held to solicit and incorporate feedback and comments into the draft AR Contract. For example, a number of changes were included in the contract to refer explicitly to renewable resources at the request of representatives of FPB, after participation by some FPB Board Members in some of KyMEA’s regular public meetings. In July 2016 the Agency Board approved the final form of the AR Contract and submitted the same to its Members desiring AR Service for review and approval by the Members’ governing bodies. From July to early September 2016, eight Members, including the FPB, approved and executed the AR Contracts (the “AR Members”).

In 2017, FPB retained a consultant, Energy + Environmental Economics, Inc. (“E3”), to review and advise FPB as to its participation in KyMEA. On June 16, 2017 E3 issued and presented its report to the FPB Board (the “E3 Report”). The E3 Report contained a number of recommendations for FPB’s consideration in its continued participation as a Member of KyMEA. The FPB Board at its meeting on June 20, 2017 requested KyMEA to address these recommendations as well as certain other requests of the FPB Board (the “E3 Recommendations and FPB Requests”). The KyMEA Board reviewed the E3 Recommendations and FPB Requests at its June 22, 2017 Board meeting and after further review and discussions at its July 26, 2017 Board meeting, KyMEA hereby submits its responses to the E3 Recommendations and FPB Requests.

KyMEA Responses to E3 Recommendations and FPB Requests

1. To improve communication and increase the levels of responsibility and accountability the Agency has to Members, employee(s) of Member utilities could be seconded to the Agency to oversee Agency activities including activities performed by consultants. A description of Agency rate design methodology is an upcoming activity that could benefit from Member involvement.

The Agency is governed and managed by its Board of Directors. The Agency's Board is made up of one Director from each Member. The Member's governing board appoints its Director and an Alternate Director to serve on the KyMEA Board. KyMEA planning and decision making is Member directed. KyMEA is subject to Kentucky's Open Records and Open Meetings laws, and its Board meetings are open to the public. In addition, KyMEA uses a website/portal on which information regarding its meetings and the presented documentation is available for public review. Some KyMEA Members, such as FPB, have a link to the KyMEA portal on their own websites.

KyMEA is in the process of conducting a search for its President and Chief Executive Officer. KyMEA has hired the firm of MyCoff Fry & Prouse LLC to conduct a national search for qualified candidates for the position. It is expected that the President and CEO will be hired around the end of 2017.

2. Modify the Interlocal Agreement to enable a Member to decline participation in a PPA that the majority of Members vote to approve.

The Interlocal Agreement is the organizational and governing document of the Agency. Its purpose is to provide the framework for how the Agency is to be governed and operated. To further define how it operates and conducts its business, the Agency has adopted By-laws and Policies, which allows for a more efficient method of establishing its operating rules and policies than by amending the Interlocal Agreement.

A key role of any joint action agency is to perform long-term planning of power supply resources to serve its members. As potential resources are brought to the attention of the Agency by its Members or are identified by Agency staff, they are presented to the Agency Board members for consideration. Those directors will make their priorities and objectives known so that they can be taken into account in planning and developing the portfolio that best serves everyone's needs. After all, the Agency is only there to serve and provide benefits for its Members by offering the opportunity to act as a group for mutual advantage. As part of that process, the Interlocal Agreement and the AR Contract already anticipate that not every Member may wish to participate in every resource or PPA that the Agency undertakes. They were specifically structured to provide a mechanism to handle resources (including PPAs) in which not every AR Member may wish to participate. In that event, a Project can be established for the resource, and Members not wishing to participate are protected from any of the costs of the Project. The Interlocal Agreement in Article II, Section 4 provides:

“Section 4. Designation of Projects. To establish or undertake, from time to time, specific projects for the benefit of one or more of its Members (each a “Project”), the Board of Directors shall adopt a resolution authorizing said Project, designating it as a Project of the Agency, and identifying the Members who may be interested in participating in the Project.

If fewer than all of the Members of the Agency are interested in participating in a Project, a Project Committee shall be established in accordance with Article III, Section 4.

Unless a Member elects to participate in a particular Project, that Member shall not be liable to the Agency, any other Member of the Agency or any other person, company, organization or entity for the operation, maintenance, construction, development, acquisition, performance, funding, financing, costs, or expenses of the Project, or for claims, demands, causes of action, obligations or liabilities of any kind arising out of, or related to, the Project.”

The Interlocal Agreement at Article II, Section 6 also specifically indemnifies a Member who does not want to participate in a project from the cost or expense of such project:

“Section 6. Indemnification. The Agency and the Members participating in a Project shall indemnify and hold harmless any Member not participating in the Project for any costs, expenses, claims, causes of action, obligations, or liability, financial or otherwise, which in any way arise out of or relate to such Project, including without limitation any attorney's fees and/or defense costs. All costs, fees and expenses incurred by the Agency to indemnify or hold harmless non-participating Members shall be charged solely to the Members participating in the Project.”

In developing these provisions, FPB and the other Members struggled to establish an appropriate balance between preserving individual Member autonomy and providing the ability for the group through KyMEA to plan and efficiently administer a power supply portfolio and to achieve economies of scale. As a Member considers its own individual interest in maintaining autonomy, it is also appropriate for it to consider its interest in the Agency being able to function efficiently to keep the costs of the power supply to its Members as competitive as possible. The KyMEA governance provisions described earlier are a good example of the balance the KyMEA Directors reached by consensus. The weighted voting provisions that protect larger Members such as FPB were supported by the smaller Members, because they recognized that FPB and the larger Members had more at stake economically and that it would not be healthy for the Agency to allow the smaller Members to dictate policies or actions not favored by the larger Members. At the same time, FPB and the other larger Members agreed that it would not be appropriate for a single large Member to be able to veto any action with which it disagrees, because it would foster internal divisiveness and be a recipe for gridlock. The governance provisions are structured to encourage the Members to reach consensus. If a controversial proposed action is rescinded by a Weighted Vote, the Interlocal Agreement effectively sends the Members back to the drawing board to work out an alternative that can garner broader support.

The municipal electric systems in Kentucky have worked together collaboratively and successfully for decades. To the extent some of the recommendations push in the direction of greater autonomy for individual Members, FPB may wish to consider the advantages of creating incentives for the Members to find common ground for the benefit of all Members and the benefits of preserving the balance reached among FPB and the other Members over the months of development of the Interlocal Agreement and the AR Contract. FPB has always been a leader and strong supporter of collective action by the municipals for the benefit of the residents and businesses of Frankfort and the other municipals. As a result, many of the smaller municipals traditionally have given strong consideration to FPB's perspective on how best to move forward successfully as a group, and that pattern has continued within the Board of Directors of KyMEA.

With respect to the specific recommendation here, there is ambiguity as what is intended as far as the timing of when a Member would decline participation in a PPA. The negotiation of a PPA for a particular resource occurs only after a thorough planning and procurement process. That process needs to be premised on a clear understanding of what anticipated loads the Agency is planning for, because that affects the optimal desired resource mix, the ability to achieve economies of scale, and the ability to obtain attractive offers from prospective suppliers based on certainty as to the size of the proposed purchase. As discussed above, in the early stages of the planning process, the Members (and especially FPB as the largest AR Member) will determine which resources they wish KyMEA to pursue, and there are options to structure a resource as a Project to accommodate resources in which not all Members wish to participate. By the same token, by the time the planning and procurement process undertaken for a resource to serve the loads of a particular group of Members has reached the stage of a negotiated PPA, it is not in the interest of the Members for there to be an opportunity for individual Members to opt out. Certainly if circumstances have changed and there are reasons not to approve the PPA, Members would have every opportunity to discuss whether to go forward with the PPA, but it is the Board's responsibility to resolve the matter as a collective decision of the Members. Otherwise, it would be impossible for the planning and procurement process to function efficiently and cost effectively, due to the lack of certainty regarding what is being planned for, with the result of missed opportunities and higher costs to all Members.

3. *Revise the AR Contract and Interlocal Agreement to clearly state that Members may participate individually or with a subset of Members in PPAs as well as in Generation Resource Projects or Projects as defined in the Interlocal Agreement. Clarify that such PPAs can include fossil, renewable and/or storage technologies. This may require modifying the Interlocal Agreement to prevent a Member that does not receive an allocation of power from a proposed PPA from voting for or against KyMEA's entering into the PPA on behalf of a Member or subset of Members.*

As stated above the Interlocal Agreement provides for the participation of one or more Members in Projects, including PPAs. There is no prohibition or limitation in the Interlocal Agreement or in the AR Contract as to the type of resources than can be pursued through a PPA as a Project. In addition, the definition of "Attributes" in the AR Contract specifically includes "all aspects of the resource or its output from which value may be derived," including "energy storage" and "environmental characteristics". Therefore there is no reason to clarify that no

types of technologies are excluded.

As stated above in Article II, Section 4, the Interlocal Agreement provides for the establishment of “Project Committees” which make decisions and recommendations regarding the Project. Members who do not participate in the project do not sit on the Project Committee and therefore do not have a Project Committee vote. This is also true for the Project that KyMEA has already designated as the All Requirements Project and its Project Committee.

With respect to voting for or against entering into a PPA, even though the resource may be only for the benefit of a Member or subset of Members, the obligations are undertaken by the Agency as a whole as the party to the PPA with the resource provider. Therefore, Members who are not participating in the resource nevertheless have an interest in ensuring that the financial well-being of the Agency is not adversely affected by the proposed transaction. The decision to execute a PPA is a decision of the entire KyMEA Board to take on the obligations under the PPA, and it is appropriate that no Board Member be excluded from voting on that decision.

4. Ensure that critical issues are codified in Agency contracts rather than implemented via policies that may be easily changed or left to interpretation in the future.

The Agency attempts to codify all critical issues in its contracts and agreements. However, because it is impossible or impractical to anticipate future needs or changes in the electric industry, it is in the interest of FPB and all Members for the Agency to maintain its flexibility to adopt policies or procedures consistent with existing contracts for unforeseen future changes in the industry. All Members have a say in the development and adoption of KyMEA policies, and the governance structure under the Interlocal Agreement and Project Committees helps ensure that all viewpoints are represented and given weight in that process.

5. Direct KyMEA to carry out an IRP with a term of at least 10 years and preferably 20 years, from 2019. The IRP should be performed per industry best practices. Members should be consulted extensively to incorporate the procurement desires of all Members, including any future renewable energy projects and Member load characteristics including the impacts of any future distributed resource programs. IRP results should inform future Agency procurement activities.

“IRP” stands for Integrated Resource Plan. One definition of the IRP follows. We anticipate that most definitions would be similar in concept.

The integrated resource plan (IRP) is a comprehensive decision support tool and road map for meeting the company's objective of providing reliable and least-cost electric service to all of our customers while addressing the substantial risks and uncertainties inherent in the electric utility business. The key elements of the IRP include: a finding of resource need, focusing on the first 10 years of a 20-year planning period; the preferred portfolio of supply-

*side and demand-side resources to meet this need; and an action plan that identifies the steps we will take during the next two to four years to implement the plan.*¹

KyMEA has not published a document titled “IRP”. Nonetheless, KyMEA has purposely accomplished each of the planning steps normally included in an IRP. The power supply planning process was carried out in a manner that is appropriate considering the key factors that distinguish KyMEA from other utilities using IRP processes.

Key factors that distinguish KyMEA from most utilities that do publish IRPs follow.

1. KyMEA was formed by its Members initially to provide resources sufficient to reliably serve the entire load of the AR Members by May 2019. Most utilities are planning the next resource additions to an existing system of resources. The additional resources being added generally serve a relatively small percentage of the utility’s load.
2. Most large, vertically integrated utilities plan resources to serve the utility’s customers. Therefore, these utilities can implement demand-side resources working directly with its customers. KyMEA, and other similarly situated suppliers, is planning resources to serve its Members’ customers. KyMEA has no direct relationship with its Members’ customers and cannot unilaterally decide to implement demand-side resources on Members’ systems.
3. In the initial planning and decision-making process, the KyMEA’s Board carefully considered and determined that self-build options (i.e., building a generation plant) are not in the KyMEA Members’ interest at this time. Most utilities consider self-build options as the primary option for providing new resources. In KyMEA’s case, self-build options would require approval by each Member of financing and contracts to assume a share of the rights and risks of ownership, which would be a lengthy process. In addition, self-build options involve lead times for planning, engineering, and construction that are longer than the time available to KyMEA if KyMEA is to provide service beginning in May 2019. Self-build options would entail commitments to a resource for its life and would not allow KyMEA’s Members to benefit from economies of scale inherent in larger generation resources. However, the Members could benefit from those economies of scale and limit commitments to specific resources to much shorter periods by having KyMEA make purchases from owners of larger, existing generation resources that are willing to contract for a portion of the resources’ useful life.
4. KyMEA is procuring its first 10 years of power supply through bi-lateral power purchase agreements (“PPAs”). Procurement of those PPAs is subject to Competitive Negotiation provisions of Kentucky’s Model Procurement Code (KRS Sections 45A.345 to 45A.460). The applicable statute, and the desire of potential counterparties to maintain confidentiality of key information, make it important for

¹ <http://www.pacificorp.com/es/irp.html>

KyMEA *not* to publish certain data and comparisons of options as is often done in an IRP document.

Key Aspects of an IRP (from the Definition Quoted Above)	Consistency of KyMEA's Planning Process with the Typical IRP Process
Planning Objectives	
➤ Reliable electric service	<ul style="list-style-type: none"> ➤ KyMEA is planning the capacity and energy resources needed to reliably serve KyMEA's AR Members, including the Members' reasonable share of regional reserve capacity. ➤ KyMEA is arranging for firm transmission to assure reliable delivery of power to the Members.
➤ Least-cost electric service	KyMEA's objective has been to assemble a least-cost portfolio that would allow KyMEA to set rates competitive with KU under a very wide range of possible circumstances and would be environmentally responsible.

<p>➤ While addressing the substantial risks and uncertainties inherent in the electric utility business</p>	<p>KyMEA identified key risks and uncertainties and is actively managing those risks.</p> <p>Some of the major risks and KyMEA’s approach to managing those risks are addressed below.</p> <p>➤ Future fuel price uncertainty</p> <ul style="list-style-type: none"> • Managed by planning a balanced portfolio of coal and natural gas-fueled conventional resources, hydroelectric and other renewables, and ensuring flexibility to purchase from and sell into the MISO market if beneficial to KyMEA’s members. • KyMEA’s portfolio is intended to have proportionately more natural gas-fueled generation and renewables than KU’s portfolio. <p>➤ Volatility of capacity and energy market prices</p> <ul style="list-style-type: none"> • Managed by entering bi-lateral contracts of differing lengths to ensure KyMEA is not dependent on purchasing capacity and energy in volatile short-term energy markets. • Also managed by negotiating rights, but not obligations, to extend Paducah and BREC PPAs another 10 years as a hedge against potentially higher market prices in the late 2020s and 2030s. <p>➤ Counterparty Risk – Managed by negotiating suitable credit standards and support in each PPA and contracting with multiple parties.</p> <p>➤ Regulatory Risk</p> <ul style="list-style-type: none"> • Managed by assembling a diversified portfolio having proportionately more natural gas-fueled resources than KU, and accepting less or no more risk than KU related to coal plant and carbon environmental regulation. • Limited length of commitment to IPMC’s coal resources to 3 years and to BREC’s coal resources to 10 years • Limited exposure to differences in State implementation plans for carbon regulation beyond 2022 by contracting with BREC for coal capacity and energy located in Kentucky as opposed to other proposals from plants located in other States. • Also managed by planning to meet capacity sufficiency standards in accordance with good utility practice.

Elements of an IRP	
1. A finding of resource need	<ul style="list-style-type: none"> ➤ KyMEA’s “need” is clearly established by the requirement to serve the total load (approximately 300 MW) of the AR Members beginning in May 2019. ➤ Planning has proceeded using reasonable forecasts of the Members’ capacity and energy requirements through 2029, but understanding and planning for the possibility that loads could be higher than or lower than now forecast.
2. Focusing on the first 10 years of a 20-year planning period	<ul style="list-style-type: none"> ➤ KyMEA’s planning has focused on the 10 year period from May 2019 through May 2029. ➤ KyMEA also has the right, but no obligation, to extend the Paducah and BREC PPAs for another 10 years after May 2029. ➤ KyMEA is working to procure a PPA for a natural gas resource that would provide capacity and energy beginning in June 2022 and extend for 15 to 20 years thereafter. ➤ In Section 6(b), the AR Contracts between KyMEA and each Member provide that: <i>“the Agency’s power supply planning horizon shall be at least ten (10) years, and the Parties anticipate that the Agency will enter into power supply-related commitments both shorter and longer than the notice of termination period specified in Section 2(a).”</i>
3. The preferred portfolio of supply-side and demand-side resources to meet this need	<ul style="list-style-type: none"> ➤ KyMEA has identified the “preferred portfolio” of supply-side resources in accordance with the objective explained above through the competitive procurement process mentioned in item 4 above this table. ➤ Each PPA counterparty was identified as the lowest cost provider with the strongest qualitative assessment score among comparable proposals. ➤ Competing, but higher cost, proposals also included sales of capacity and energy at market-based prices. As a result, KyMEA could enter into the PPAs with the assurance it was agreeing to purchase power under the most favorable terms available. ➤ As explained in item 2 above this table, KyMEA has not been tasked by its Members to develop demand-side resources. However, KyMEA has anticipated that some demand-side resources will be implemented by its Members and its Members’ customers. KyMEA has flexibility to adjust its supply-side portfolio as planning continues and to sell capacity and energy in the event need for supply-side resources is reduced below current forecasts.

<p>4. An action plan that identifies the steps KyMEA will take during the next two to four years to implement the plan</p>	<ul style="list-style-type: none"> ➤ KyMEA has been actively implementing its “action plan” to ensure the resources and related transmission arrangements and organizational capabilities are in place to serve the AR Members by May 2019. ➤ The action plan was first developed just after KyMEA’s Members gave notice in spring 2014 to terminate their wholesale power contracts with KU effective May 2019 and has been expanded and updated as decisions have been made. ➤ Key tasks on the current plan for the next two years include: <ul style="list-style-type: none"> ○ Contracting before the end of 2017 for a natural gas resource to provide capacity and energy effective June 2022; ○ Establishing initial operating budgets and all-requirements rate schedules by early 2018; ○ Hiring a CEO in late 2017; ○ Hiring other staff and entering into a 3rd party service contract(s) for 24x7 dispatch, market interaction, and transmission scheduling services in mid-2018; and ○ Implementing new delivery point metering equipment that will be necessary to commence service by May 2019.
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An IRP typically is developed considering input from the utility’s customers. Specific planning goals and priorities are established by regulators, boards, and management to guide the planning effort. The Members’ representatives, who are typically utility system managers or in smaller Members elected officials, that serve on the KyMEA Board have directed KyMEA’s process and provided input and direction on the Members’ behalf. Presentations concerning KyMEA’s planning goals, objectives, approach, results, and power supply costs have been made to the governing boards of the Members in public sessions. Those governing boards have provided direction to their representatives to KyMEA’s Board to support or provide input to KyMEA’s planning efforts.

An IRP typically includes quantitative and qualitative analysis of alternatives over at least the 10-20 year planning horizon under base case and other assumptions. Specific risks and uncertainties are considered and in many cases quantitated. Very substantial and thorough analyses of all alternatives have been presented to the KyMEA Board at every key step in the procurement process.

An IRP typically includes projections of the utility’s power supply costs under the “preferred portfolio”. Projections of KyMEA’s power supply costs have been presented to KyMEA’s Board and its Members’ governing boards.

Portions of an IRP are often treated as confidential information. In KyMEA’s case, this has been the case since the planning effort is wholly based on competitive procurement of power supply resources.

Overall, KyMEA has used best practices in planning its power supply portfolio. It has not published an IRP document. As KyMEA matures as an organization, experience with other joint action agency public power organizations would suggest that KyMEA will assist its Members with demand-side resources. Initially, KyMEA's focus has been using all of the applicable techniques normally used in preparing an IRP to plan the supply-side resources necessary to reliably and cost-effectively serve the total loads of its AR Members. KyMEA's planning and implementation process has been progressing in a relatively short period in accordance with a clearly defined 2 to 4 year "road map" as is often set forth in an IRP document.

KyMEA's Board can assure its Members that the processes normally included in an IRP process that are applicable to KyMEA's situation have been undertaken effectively on the Members' behalf.

6. *Regarding the SEPA Contract, FPB should ensure that:*

a. *SEPA contract Attributes directly serve FPB load and offset capacity procurement. While this will occur pursuant to Section 3 (d), because the SEPA contract reduced Agency procurement, the impact is similar to a transfer pursuant to AR Contract Section 3 (e).*

b. *Attributes will be used to serve only FPB's load.*

c. *FPB retains all environmental Attributes, and*

d. *Attributes revert to FPB immediately if FPB is no longer a Member of KyMEA or is no longer a party to the AR Contract.*

These recommendations pertain to the proposed KyMEA Contract for Integration of Member-Owned Resource, under which FPB's entitlement to capacity and energy marketed by the federal Southeastern Power Administration ("SEPA") would be integrated into the All Requirements Power Supply Resources portfolio ("SEPA Contract"). The SEPA Contract offers an opportunity for FPB to realize the full benefit of its SEPA entitlement through an assured monthly capacity payment (or credit) for the ten-year term of the agreement, plus payment for FPB's SEPA energy entitlement based on market prices during hours when those prices are anticipated to be the highest.

Because FPB and the other AR Members with SEPA entitlements have been unable in recent years to obtain capacity value for those SEPA entitlements, they have only been able to achieve benefits associated with the energy, which in many periods were not large enough to cover the total delivered cost of their SEPA allocations. In short, the SEPA Contract offers the opportunity to replace "red ink" with a positive cash flow for FPB's SEPA entitlement, because the capacity payment alone is expected to nearly cover the entire cost of the entitlement, and the additional energy-related compensation is expected to more than cover the remaining cost.

We understand the objective of the E3 recommendations to be to ensure that FPB benefits to the maximum extent from its SEPA entitlement. Each of the AR Members with SEPA entitlements shares the same objective, and the SEPA Contract achieves that result. In order to optimize the capacity value of the SEPA entitlements, it was assumed during the KyMEA procurement process to establish the initial power supply portfolio elements that each AR Member would elect to integrate its entitlement into the portfolio. In this manner, the SEPA entitlements “offset capacity procurement,” consistent with the later recommendation by E3. E3’s recommendation acknowledges that through the proposed Member-Owned Resource contract for SEPA integration under Section 3(d) of the AR Contract, the SEPA contract “reduced Agency procurement.”

That is the reason that KyMEA is in a position to offer a capacity payment (or credit) in the SEPA Contract, and that payment reflects the actual avoided capacity cost that KyMEA was able to achieve by not having to acquire the capacity elsewhere. That payment is directly linked to KyMEA’s cost of peaking capacity under its power purchase agreement with Paducah Power System, which escalates from an initial amount of \$3.85/kW-month over the ten-year term of both the Paducah and the SEPA Contracts.

We do not understand the E3 comment about a “transfer pursuant to AR Contract Section 3(e).” The SEPA Contract is a contract for a Member-Owned Resource under Section 3(d) of the AR Contract. The SEPA entitlements are not being treated as a Generation Resource Project under Section 3(e).

As was explained to E3’s representative during meetings in Frankfort last month, it would not be in FPB’s interest to treat FPB’s SEPA allocation as serving only FPB’s load. This is because the relative amounts of the SEPA allocations of each AR Member were established decades ago and no longer reflect the current relative loads of the Members. Instead, it is to FPB’s advantage for all the SEPA entitlements to be “pooled” in the KyMEA power supply portfolio and used to serve the AR Members in proportion to their current loads. At the same time, the SEPA Contract provides for FPB to be compensated under the SEPA Contract for every kilowatt of its SEPA capacity entitlement and for every kilowatt-hour of energy associated with its entitlement.

With respect to environmental Attributes of FPB’s SEPA entitlement, there are currently none, because the entitlement is expressed in terms of capacity and energy entitlements. To the extent that environmental Attributes may become available to FPB under its contract with SEPA in the future, the KyMEA SEPA Contract provides that any net revenues or other benefits obtained by KyMEA from such Attributes will be allocated directly and exclusively to FPB. The SEPA Contract’s definition of Attributes encompasses “all aspects of the resource from which value may be derived, including electric capacity, electric energy, and any other characteristics.”

Finally, with regard to the recommendation that the Attributes of FPB’s SEPA entitlement should revert to FPB if FPB is no longer a member of KyMEA or a party to the AR Contract, the SEPA Contract provides that it will terminate on the effective date of termination of FPB’s AR Contract. Upon termination of the SEPA Contract, all Attributes of FPB’s SEPA entitlement will revert to FPB. In short, it appears that all of the recommendations concerning

FPB's SEPA entitlement will be effectively achieved through the proposed SEPA Contract.

7. *Modify the AR Contract to clearly state that NEM and DR program coordination with the Agency shall not be unreasonably constrained, that all members are not required to implement identical programs, that an individual Member's program implementation will not be impeded by other Members, and to clarify that a Member's metered load is not adjusted for (i.e., is net of) output related to energy efficiency, DR, and NEM.*

As the Members developed the AR Contract, they asked for it to be clear that each Member, including FPB should retain full authority to pursue energy efficiency, demand response (DR), and net energy metering (NEM) programs and policies as they wished. As a result, Section 3(f) contains an explicit provision addressing the concerns that seem to underlie this recommendation. It states:

Nothing in this contract shall interfere with a Member's authority to implement demand response, net metering or energy efficiency programs.

The only requirement in the AR Contract regarding these types of programs is that the Member must coordinate with KyMEA—and thereby with its fellow Members—prior to their implementation, and the programs shall be subject to review by the All Requirements Project Committee “in the interest of achieving consistency of such programs and avoiding cross-subsidization among the All Requirements Members to the extent practicable.” That requirement was adopted to provide a basis for the Members to coordinate their development of such programs so that each Member could take into account any impacts its programs might have on other Members. It does not, however, negate or limit the first sentence of Section 3(f) quoted above, which protects each Member's authority to implement such programs as it sees fit. It expressly achieves the E3 recommendation that an individual Member's program implementation will not be impeded by other Members.

With respect to the Member's metered load, energy efficiency, DR, and NEM programs are generally intended to reduce the loads on the Member's system. When they do so, the Member's actual, reduced load will be automatically reflected in the metered amounts of the Member's demand and energy that will be used to determine charges for demand and energy from KyMEA to the Member. In contrast to the provisions in Section 3(d) of the AR Contract concerning contracts that a Member may choose to enter into for Member-Owned Resources, there is no provision in the AR Contract under which KyMEA would be entitled to adjust the metered load of the Member based on the fact that its metered load may have been reduced as a result of energy efficiency, DR or NEM programs. Stated simply, those programs are not “Member-Owned Resources” as those are addressed in Section 3(d). There is no need to modify the AR Contract to prevent an adjustment of the type postulated in the recommendation.

8. *Modify the Interlocal Agreement and AR Contract to compel KyMEA and/or consultants acting on its behalf to procure and schedule resources in the least-cost manner per the portfolio of attributes desired by Members.*

Over the long history of the Members working together to manage their wholesale power supply arrangement with KU, the AR Members have obtained substantial benefit from acting together to realize certain economies of scale and greater influence. The Members expect to obtain even more benefit by acting together through KyMEA.

KyMEA's current power supply portfolio is the product of the Members establishing clear objectives through their KyMEA Board representatives to guide the planning process. The key objective established by the KyMEA Board has been to assemble the least-cost resource plan consistent with a portfolio structure that would remain competitive with KU over a very wide range of potential future scenarios. More information is provided about KyMEA's power supply planning process in answer to recommendation 5 above.

Section 6(a), (b), and (c) of the AR Contracts between KyMEA and each Member currently provide the kind of commitment sought in this recommendation as follows, **with highlights added**.

SECTION 6. Covenants of the Agency

- (a) **In performing its duties under this Contract, the Agency's goal will be to minimize the costs of reliably serving the All Requirements Members' collective requirements,** to the extent feasible within practical limitations and equitable considerations, and in all cases subject to Section 24(b).
- (b) The Agency shall coordinate with the All Requirements Project Committee in identifying and acquiring All Requirements Power Supply Resources involving commitments of one (1) year or longer, subject, however, to the obligation of the Agency to maintain the financial health of the Agency and to comply with any Bond Resolution and other contractual, regulatory, or legal requirements. **To achieve long-term economic benefits, the Agency's power supply planning horizon shall be at least ten (10) years,** and the Parties anticipate that the Agency will enter into power supply-related commitments both shorter and longer than the notice of termination period specified in Section 2(a).
- (c) **The Agency shall use commercially reasonable efforts to market, under economically advantageous terms and conditions, electric power and energy and other Attributes that, in the sole judgment of the Agency, can be sold without adversely affecting performance by the Agency under this Contract** or resulting in the breach of any Agency covenant or contract.
- (d) The Agency shall use its best efforts in accordance with Prudent Utility Practice to provide a constant and uninterrupted supply of electric power and energy under this Contract.

- (e) In addition to the delivery of power and energy pursuant to this Contract and the performance of all acts and actions incident thereto, the Agency agrees that it will perform, or cause to be performed through third-party providers, services, including: (i) coordinating and monitoring the investigating, studying, planning, engineering, designing, financing, installing, constructing, acquiring, operating, maintaining, retiring, decommissioning, or disposing of any part of the System; (ii) issuing and selling Bonds; (iii) planning, undertaking, coordinating, and monitoring the economic dispatching and scheduling of power and energy to the All Requirements Members; (iv) reviewing and paying of invoices related to the AR Project; (v) complying with all NERC standards applicable to the Agency; and (vi) providing such other services as the All Requirements Members may request and the Board of Directors determines to be feasible and appropriate.

If in Section 6(a), KyMEA is “to minimize the costs of reliably serving the All Requirements Members’ collective requirements,” KyMEA must plan resources as provided in Section 6(e)(i) and cause “the economic dispatching and scheduling of power and energy to the All Requirements Members” as provided in Section 6(e)(iii) above in a least-cost manner consistent with other pertinent considerations.

Focusing for a moment on this notion of “least-cost manner”, if all parameters affecting costs would be certain, then determining the “least-cost manner” to obtain and deliver power supply would be a straightforward accounting process. Unfortunately, many important parameters (e.g., fuel prices, regulatory frameworks, tax and other governmental policy, environmental policy) are uncertain over the long time frames over which power supply resources must be planned. Accordingly, the power supply planning process includes a robust consideration of costs and risks. KyMEA has proceeded with its power supply planning in a way that would allow it to be competitive with KU under a very wide range of future conditions.

For instance, if KyMEA assumes today that the only scenario that can occur is extremely low natural gas prices, KyMEA might assemble a portfolio of 90% natural gas resources. If natural gas prices do stay low in all years of the 10-30 year term of the transaction or life of the resource, KyMEA will have achieved least-cost. However, if future conditions result in very high natural gas prices², another option KyMEA may have considered might be proven to be the least-cost. Accordingly, least-cost must always be interpreted as meaning the “lowest cost consistent with managing key risks.” For KyMEA, key risks to manage are those that could result in KyMEA’s cost of power being higher than KU’s in the future.

9. *Clarify the AR Contract to state that renewable Attributes of Member-Owned Resources (i.e., RECs) are retained by Members when the contract is transferred to KyMEA.*

² For instance, natural gas prices could be much higher than now assumed due to regulations against fracking driving up supply costs or driving supply down, or large exports of liquefied natural gas or significant reduction in use of nuclear and coal resources driving up demand for natural gas.

If a Member chooses to enter into a contract for Member-Owned Resources, Section 3(d) of the AR Contract provides that KyMEA will integrate and schedule Attributes—which includes environmental or “renewable” attributes, such as renewable energy credits (RECs)—from the Member-Owned Resource in accordance with the its standard procedures for all other All Requirements Power Supply Resources. Section 3(d) further provides that the Member shall be paid or credited for those Attributes as measured by the KyMEA’s actual or estimated net avoided costs resulting from its use of the resource. In addition, it states that if KyMEA markets the Attributes—such as by selling the RECs associated with the resource, if that were economically advantageous—the net revenues received by KyMEA for them would be paid or credited exclusively to the Member owning the resource, less a reasonable allowance for the cost of administration. In any event, the full value of all Attributes of the Member’s resource (less an administrative allowance, where applicable) is to be paid or credited to the Member.

If the Member prefers, the AR Contract further provides that the Member-Owned Resource contract can be structured so that rather than integrating the resource into the KyMEA power supply portfolio, KyMEA will market all of the Attributes of the resource for the Member’s benefit. In that case, Section 3(d) provides again that the net revenues received by KyMEA for the Attributes would be paid or credited exclusively to the Member, less a reasonable allowance for the cost of administration. In both cases, all of the economic benefits of the environmental Attributes are retained by the Member.

A third option exists under the AR Contract, which is that the Member can elect not to enter into a Member-Owned Resource contract. In that event, the Member would also of course retain the renewable Attributes and all other Attributes of the resource and would be free to market them to one or more third parties to realize the economic benefits of its resource.

10. To ensure that Agency services are procured at lowest cost, Agency consulting contracts for professional services above a certain dollar threshold should be awarded via competitive procurement and Member utilities should be allowed to compete. Entities engaged should be required to provide adequate insurance including professional liability insurance.

KyMEA has adopted the Kentucky Model Procurement Code for purchasing its goods and services. When KyMEA issues an RFP for goods or services that its Member utilities might be able to provide, the Members are welcome to respond to the RFP. For goods or services that do not involve an RFP, Members who may wish for their utilities to be considered as the provider will be participants in the relevant KyMEA meetings and will have the opportunity to inform the other Members of what can be provided by their utilities. The Agency's consulting services were initially undertaken through its separate Members to help in the formation of KyMEA, and they were assumed and contractually entered into by KyMEA after its formation. Nothing prevents KyMEA from awarding future contracts via competitive procurement. The Agency's consultants and attorneys carry professional liability insurance.

11. Direct KyMEA to conduct future procurement with full transparency to Members. Members should receive real-time information with respect to procurement processes provided appropriate confidentiality provisions have been put in place. Detailed historical bid data should be released to Members.

KyMEA has and will continue to use the Kentucky Model Procurement Code for its procurement of goods and services. In particular for the procurement of power supply resources, the Agency issues RFPs which are then vetted by the Agency's Board with the help of its consultants. Typically competitive negotiations are undertaken by the Board with the responders that are susceptible of being awarded a contract. A responder is chosen from that group if competitive negotiation is successful in obtaining a beneficial contract for KyMEA. Members are provided complete transparency regarding these processes in the regular KyMEA meetings and through direct participation in the processes to the extent desired. The information and process for negotiation are available for review by Member governing bodies and their representatives assuming compliance by the Member with KyMEA's Policy Relating to Confidential Information to assure that appropriate confidentiality provisions are honored in compliance with the Kentucky Model Procurement Code and Kentucky open records law.

12. Modify the AR Contract to include an appendix describing the methodology for how Member power rates will be calculated. The methodology should ensure that the rates accurately charge each Member for its consumption and reflect the Attributes of Member-Owned Resources. The issues of how to procure for and allocate costs to Members that join KyMEA in the future and how to bill Members that receive partial requirements service should also be specified.

During the development of the AR Contract, KyMEA considered including an exhibit or appendix describing the methodology or protocol for determining AR rates and charges. KyMEA decided not to do so because over time the appendix would lose its relevancy and become outdated. For example, in a relatively short period of time, purchased power agreements may be replaced with generation projects or other market purchases which could significantly change the underlying cost structure. Considering that setting of rates would be accomplished by direction and decisions of the AR Project Committee and the KyMEA Board composed of representatives of each affected Member, KyMEA decided that including appropriate principles in the AR Contract would be the appropriate way to proceed. Principles prescribed in the AR Contract for setting AR Rates are found in Section 5, Rates, and include:

1. Rates will be established and maintained that provide revenues sufficient, but only sufficient, to cover KyMEA's cost of service (essentially a pass-through);
2. The AR Project Committee must establish the AR Rate in accordance with generally accepted ratemaking principles and procedures; and
3. Ratemaking methods used must be consistent with Prudent Utility Practice.

The following key provisions are included in the AR Contract regarding establishment of AR Rate Schedules.

1. The Member shall pay the Agency for all electric power and energy furnished at the Point(s) of Delivery hereunder and for all services related to the All Requirements Project at the rates and on the terms and conditions set forth in the Rate Schedule. (Section 5(a))

2. The Board of Directors may revise and place into effect new Rate Schedules from time to time. (Section 5(a))

3. The Agency staff shall assist the All Requirements Project Committee in developing and designing the rates in the Rate Schedule in accordance with generally accepted ratemaking principles and procedures to provide revenues to meet the anticipated Revenue Requirements, and the Board of Directors shall not unreasonably withhold its approval and establishment of rates so developed by the AR Project Committee. (Section 5(b))

4. The ratemaking methods used by the Board of Directors to establish rates and charges for all products and services the Agency provides to its members shall be consistent with Prudent Utility Practice. (Section 5(b))

5. The Board of Directors shall establish and maintain rates in the Rate Schedule hereunder and under the other All Requirements Power Sales Contracts that will provide revenues which are sufficient, but only sufficient, to meet the anticipated Revenue Requirements of the Agency. (Section 5(b))

Ratemaking provisions contained in the AR Contract and further described above reflect concepts, methodologies, and practices consistent with generally accepted ratemaking and Prudent Utility Practice. As such, AR Contract rates are to meet the following criteria for service provided by municipal agencies:

- Rates will be based on a philosophy which calls for the lowest reasonable prices consistent with Member requirements for quality service that is efficiently rendered
- Rates will be cost based and will generate sufficient revenues to meet Revenue Requirements
- Rates will be consistent with historical rate forms and will be competitive with regional utility systems
- Rates will consider and reflect overall revenue stability and avoid undue price fluctuations
- Rates will be equitable among Members taking into consideration the cost to provide service

- Rates should be simple and understandable

According to KyMEA's implementation schedule and work plan, the process of establishing an initial Operating Budget and AR Rate Schedule to apply when KyMEA begins serving the AR Members in May 2019 is just beginning and is scheduled to be completed by early 2018. During that process, KyMEA plans to confirm and refine goals and objectives and establish initial accepted processes. KyMEA believes the result of this initial rate development process will effectively establish the AR Rate setting process description sought in this particular E3 recommendation.

The KyMEA Board has the expectation that KyMEA's AR Rates will be designed to fairly and proportionately allocate KyMEA's cost of service among the KyMEA AR Members such that the AR Members will share proportionately in the benefits relative to levels charged by KU.

More generally, key priorities for setting KyMEA's AR Rates include:

1. Equitable allocation of KyMEA's costs
 - Among the AR Members
 - Relative to KU formula rates
2. Rate adequacy and stability
 - Sufficient to cover the portion of KyMEA's total costs properly allocable to the AR Members, including working capital needs
 - Multi-year plan for making any base rate adjustments in a timely fashion
 - Fuel or purchased power adjustment clause
 - Allows base rate components to change less often
 - Passes through highly variable costs
 - Controls working capital requirements
3. Providing a multi-year rate planning horizon for the Members

Figure 1 set forth below illustrates the process for functionalizing, and then allocating KyMEA's costs among its various Member groups (AR Members, OMU, and Transmission-only Members) and then classifying costs as either demand or energy related. Generally, allocated AR demand costs would drive AR Demand Rate levels and energy costs would drive AR Energy Rate levels charges to the AR Members. Charges to OMU and the Transmission-only customers will essentially pass through the costs properly allocable to those Members.

Fair, Well Established Processes

KyMEA's All Requirements Rates will be established by KyMEA's AR Project Committee and Board

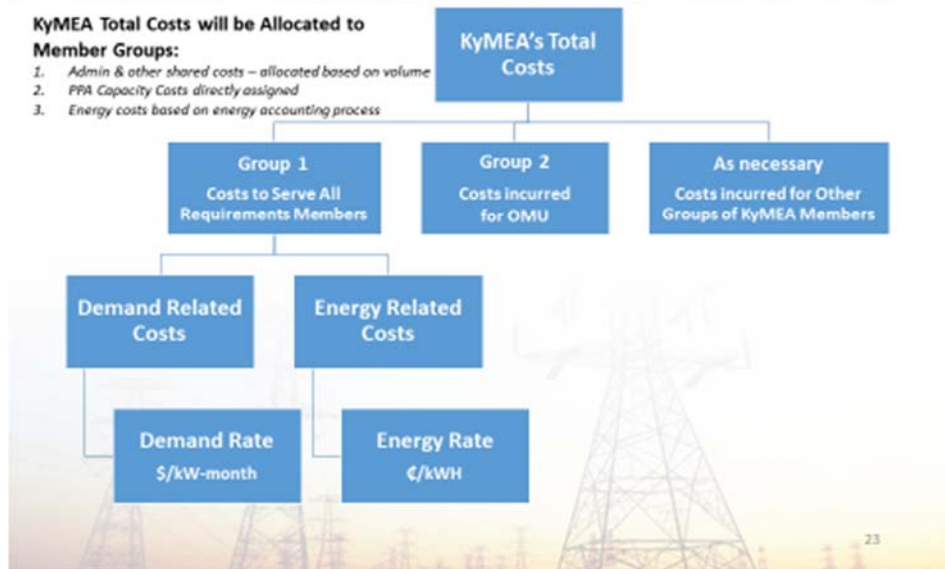


Figure 1- Cost Allocation, Functionalization and Classification of KyMEA Total Costs for Setting AR Rates

The structure of KyMEA's AR Rates are expected to be as illustrated in Figure 2 that follows.

KyMEA's All Requirements Charges to Members

- Similar in Form to Current Wholesale Charges from KU, but Components 1 through 3 are Projected to be Lower in the Future than KU Charges

4 Main Components of Monthly Charges				
Component		Billing Units		Rate
1. Demand Charge	=	Monthly Member Peak Demand (kW)	times	\$/kW-mo.
2. Energy Charge	=	Monthly Energy (kWh)	times	€/kWh
3. Fuel or Purchased Power Adjustment	=	Monthly Energy (kWh)	times	€/kWh
4. Transmission LGE/KU Sched 1 and 10	=	Monthly Member Demand at Time of Trans. System Peak (kW)	times	\$/kW-mo.

Figure 2-Structure of KyMEA's AR Rate Schedule

As shown in Figure 2, the components of the rate schedule will be similar to the components of the KU schedule, but the rate levels for the key demand and energy components of the KyMEA AR Rate are projected to be lower. Similarities between the existing KU's rate design and KyMEA's initial rate design are purposeful, as KyMEA Members desire to have a comparable degree of savings upon transition from the KU contract to the AR Contract.

The component of the AR Rate that recovers costs incurred under the LGE/KU transmission tariff would be very similar to transmission charges now incurred by the AR Members purchasing power from KU. In addition to the components shown, directly assignable charges (e.g., delivery point and metering related charges) would also be charged to the AR Members on a pass-through, cost of service basis.

Figure 3 below shows the results of an analysis provided to FPB during the summer of 2016. The analysis was prepared to illustrate that FPB could expect that the AR Rates would be implemented in a manner that would fairly and proportionately allocate KyMEA's costs of service among the AR Members. Notice that all KyMEA AR Members are projected to have approximately the same percentage of difference in charges relative to KU. The height of the bars varies by Member because of differences in the Member's load factors, which is a term used to relate (a) the monthly amount of energy each Member requires as a proportion of (b) its monthly peak demand.

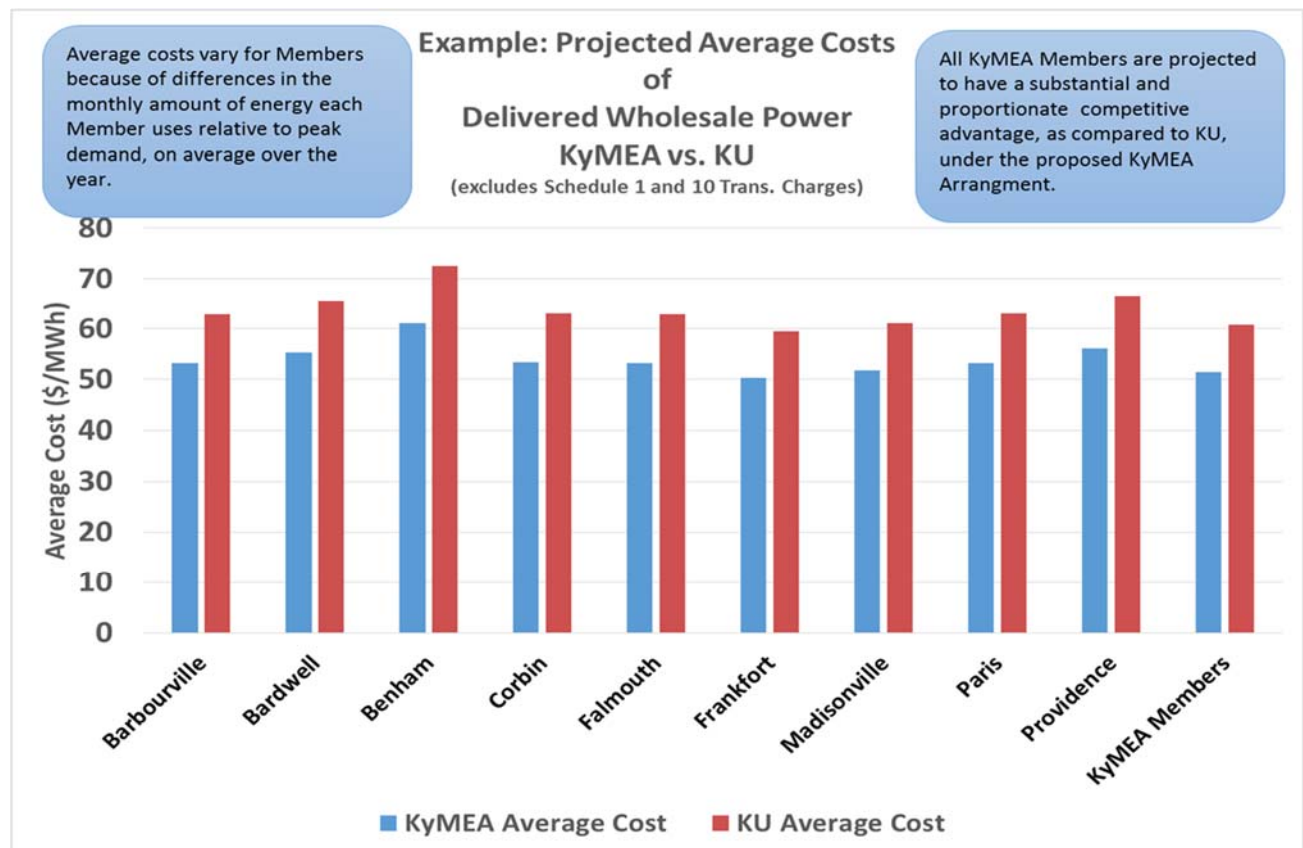


Figure 3- Proportionate Sharing of Benefits

The key objectives and processes the AR Project Committee and KyMEA Board plan to use for AR Rate setting are sound and in accordance with the standards established by the AR Contract. The AR Rate Schedule is to be developed by the AR Project Committee. Representatives from each AR Member serve on that Committee and will provide direction, input and guidance to the process. After the AR Project Committee has approved an Operating Budget and an AR Rate Schedule according to its voting process, the entire KyMEA Board will review and vote as to whether to approve the Operating Budget and Rate Schedule prior to implementation.

The Board plans to develop an initial Operating Budget and AR Rate Schedule during FY 2018 so that the AR Members can have the benefit of that information for each Member's planning and budgeting processes.

The Operating Budget and AR Rate Schedule implemented in May 2019 would be established in late 2018 or early 2019 by reflecting any changes in costs that occur in the next year as KyMEA finishes its implementation processes.

13. Ensure the AR Contract clarifies that no hold harmless obligation results from the inclusion of Member-Owned Resources in the KyMEA portfolio if such resources were known to exist at the time of the September 2015 and subsequent procurement solicitations.

Section 3(d) of the AR Contract contains the provisions under which Member-Owned Resources may be included in the KyMEA power supply portfolio. As discussed above, the mechanism for doing so is through a Member-Owned Resource contract between the Member and KyMEA. Section 3(d) contains no provision that would impose a hold harmless obligation on a Member. The absence of any hold-harmless obligation is consistent with the principles underlying the treatment of Member-Owned Resources under Section 3(d), under which KyMEA's compensation to the Member for Member-Owned Resources shall not exceed the value of the resource to KyMEA. These principles and provisions ensure that the inclusion of the resource in the KyMEA portfolio will not impose an economic burden on the other All Requirements Members. Accordingly, there is no basis in principle or in the AR Contract for the imposition of a hold harmless obligation on the Member entering into a Member-Owned Resource contract with KyMEA, regardless of whether the resource was known to exist at the time of the September 2015 and subsequent procurement solicitations. Therefore, the desired result of this recommendation has already been achieved in the AR Contract as it currently exists.

As discussed elsewhere, among the flexible provisions of the AR Contract are those that allow KyMEA to designate a project or resource as a Generation Resource Project, when fewer than all of the All Requirements Members are interested in participating in a given resource. Section 3(e) of the AR Contract addresses Generation Resource Projects. It provides that the participants in the Generation Resource Project shall bear all the costs associated with the Project and shall be entitled to all the benefits derived from the Project. It further provides that the participating Members must hold harmless the non-participating AR Members from any adverse

economic consequences to them resulting from the inclusion of the Generation Resource Project in the KyMEA All Requirements Power Supply Portfolio. Section 3(e) does not apply to resources that are included in the KyMEA portfolio through a Member-Owned Resource contract. It only serves to protect those AR Members who choose not to participate in a Generation Resource Project from being adversely affected economically by that Project's inclusion in the KyMEA portfolio.

14. Modify AR Contract Section 3 (h) to explicitly state that a Member is not prohibited from entering into new contracts for Member-Owned Resources during the Service Term.

Section 3(h) of the AR Contract spells out the exceptions under which an AR Member may purchase power from a source other than KyMEA. It includes an explicit exception for purchases “expressly permitted in this Contract (including the provisions for *Member-Owned Resources*, Generation Resource Projects, and net metering)” Nothing in the AR Contract prohibits a Member from entering into new contracts for Member-Owned Resources at any time, including during the Service Term. Therefore, the desired result of this recommendation has already been achieved in the AR Contract as it currently exists.

15. Per AR Contract Section 3 (b), clarify that PURPA contract Attributes are allocated to all Members in each scenario.

Section 3(b) of the AR Contract provides that “[e]ach PURPA purchase made by the Agency in an All Requirements Member’s stead pursuant to the FERC waiver shall be an All Requirements Power Supply Resource.” All Requirements Power Supply Resources are defined in the AR Contract to include power purchase agreements for the “delivery of electric power and energy and related Attributes.” Section 3(f) of the Agreement states the Parties’ intent that the capacity and energy output of each All Requirements Power Supply Resource (other than Member entitlements to Attributes of Generation Resource Project resources, which are allocated in proportion to Members’ project participation shares) shall serve the load of each AR Member in proportion to the Member’s load in order to facilitate efficient power supply planning and implementation. It follows that, unless a Member requests (and the KyMEA Board agrees to) an exception, the PURPA contract Attributes will be allocated to all AR Members in proportion to their loads. Because the costs of the PURPA purchases are costs of the All Requirements power supply portfolio, they would be included in the Revenue Requirements under the AR Contract, with the result that the costs would be allocated to all AR Members as well. This would be the case under both scenarios addressed in Section 3(b), i.e., regardless of whether the PURPA purchase is made directly by KyMEA or is made by the Member and sold to KyMEA at the price paid by the Member.

16. Clarify the AR Contract to explicitly state that All Requirements Power Supply Resource Attributes are allocated Members in proportion to Member loads, with energy-related Attributes such as renewable energy credits (RECs) allocated proportional to member energy

usage and capacity Attributes allocated proportional to Member capacity loads.

As discussed in response to the immediately preceding recommendation, with the exception of Member entitlements to Attributes of Generation Resource Project resources, which are allocated in proportion to Members' project participation shares, the AR Contract explicitly contemplates that the Attributes of All Requirements Power Supply Resources will serve the load of each AR Member in proportion to the Member's load. To the extent those Attributes include RECs that can be used to meet future environmental requirements, the cost savings, as compared with having to purchase RECs in the market, would reduce the Revenue Requirements that are recovered in the charges to all AR Members, so all AR Members would share in those savings. Similarly, if it were advantageous to sell RECs associated with the All Requirements Power Supply Resources, the net revenues received would reduce the Revenue Requirements and the charges to the AR Members.

As noted, however, the specific allocation of All Requirements Power Supply Resource Attributes to Members depends on the particular resource, with Generation Resource Projects being the most obvious example of an exception to the general principle of load-proportional allocation. Furthermore, as discussed in response to E3 recommendation number 12, there are disadvantages in attempting to prescribe specific allocation requirements either for resource Attributes or for resource costs in the text of the AR Contract, given the impossibility of anticipating all the future circumstances that the AR Project Committee may be called upon to take into account in developing those allocations over time. For this reason the AR Members chose in the AR Contract to express the general intent of load-proportional allocations, without unduly tying the hands of the AR Members by adoption of a rigid requirement that would apply even when outweighed by countervailing considerations that all AR Members might agree should be taken into account.

17. Investigate modifying the AR Contract to state that a Member that is not a party to the Interlocal Agreement cannot be a party to the AR Agreement.

The Interlocal Agreement is clear that the Agency undertakes and provides services to its "Members". Article II, Section 3 provides that:

“Section 3. Implementation of Services with Members. In exercising its powers to provide its Members with various resources, services and/or benefits, the Agency may establish and enter into agreements with one or more of its Members:

(a) to provide all requirements power supply services to Members (an “All Requirements Agreement”);”

Under the Interlocal Agreement, if an electric system is not a “Member,” it may not contract to be served under the AR Contract. However, if an AR Member terminates its membership in KyMEA, its obligations under its AR Contract remain in effect.

18. *Modify AR Contract to explicitly allow implementation of a direct load control program enabling a Member to directly reduce load on its system.*

It is not in the best interest of FPB or any other Member to try to use direct load control programs to reduce the AR Requirements loads served by KyMEA. Observed efforts by other utilities consistently show that the Member will not receive the full value of the program and may shift costs to other Members.

Rather, it is in the best interest of FPB and all other KyMEA AR Members that direct load control programs are treated as Member-Owned Resources under the AR Contract. The Member-Owned Resource Contract will provide the Member the greatest chance of success and pass along the full benefit of the program realized by KyMEA to the Member or Members that undertake direct load control programs³.

To be clear, as used here “direct load control” applies to a system used by a load serving entity to interrupt service to a customer or a customer’s end-use device. Conservation programs and demand response programs are *not* direct load control programs.

Conservation programs modify customers’ electric consumption by changing efficiency of end-use devices or of heated or cooled living or working space. Demand response programs cause electric consumers to voluntarily modify use in response to pricing signals. Under the AR Contract, to the extent conservation and demand response programs alter usage of electricity by an AR Member, the Members AR billing demands and energy requirements would be reduced⁴.

KyMEA intends its charges to the KyMEA Members will be based on demand and energy rates applied to monthly demand and energy quantities metered at the delivery points where power and energy are delivered from the LGE/KU transmission system to the Members. The demand rate is expected to be in the range of \$10 to \$12 per kilowatt of demand measured each month (\$/kW-mo.). The Member’s Billing Demand is expected to be defined as the largest amount of energy delivered to the Member over any hour of the month. The arrangement is intentionally similar to current KU billing arrangements.

³ Section 3(g) of the AR Contract provides: “Any ability by the Member to directly control and reduce load on the Member’s electric system shall be addressed through an agreement between the Agency and the Member for compensation as a Member-Owned Resource pursuant to Section 3(d). The activation of any such direct load control shall be coordinated with the Agency for the benefit of the All Requirements Project as a and as measured whole, rather than being used by the Member to reduce its individual billing demands under this Contract.”

Section 3(d) provides: “Payments or credits to the Member for the Attributes of a Member-Owned Resource shall not exceed their value to the Agency, as specified in the agreement by the Agency’s actual or estimated net avoided costs resulting from the Agency’s use of the resource or, if the Agency markets the Attributes, the actual or estimated net revenues received by the Agency for the Attributes less a reasonable allowance for the cost of administration. Member-Owned Resources shall not be used to serve the Member’s load directly or to reduce the Member’s billing demands under this Contract.”

⁴ Section 3(g) of the AR Contract provides: “Nothing in this contract shall interfere with a Member’s authority to implement demand response, net metering, or energy efficiency programs.” Such programs would reduce AR billing demands and energy requirements of a Member. Demand response programs cause electric consumers to voluntarily modify use in response to pricing signals.

For example, assuming the demand rate is \$10/kW-mo., the Member could save \$10 for each 1 kW that could be “shaved” using a direct load control system. If the Member could shave 1 kW load in all 12 months using its load control system, the Member could save \$120 per kW per year of load controlled (\$120/kW-yr.).

By contrast, the AR Contract provides that KyMEA would enter a Member-Owned Resource Contract to pay a Member for load shaving capability based on the costs that KyMEA can truly avoid using the load control system. Let’s assume KyMEA can save \$50 per kW of load control capability in the summer months. So, under the Member-Owned Resource contract with KyMEA, the Member would receive a payment of \$50/kW-yr. for its ability to control load.

The \$120/kW-yr. savings if the direct load control system is used to reduce the Member’s load seems much more attractive to FPB than \$50/kW-yr. of credits from KyMEA if the system is used under a Member-Owned Resource Contract. Why is that it not then best interest of FPB or any other Member to try to use direct load control programs to reduce the AR Requirements loads served by KyMEA?

There are several problems with this simple comparison. The following issues vary in magnitude depending on whether the system controls loads of residential, commercial or industrial customers, but the issues apply to some degree across the all customer groups. When the following issues are considered, it becomes clear that the Members are far better off if direct load control programs are treated as a Member-Owned Resource so the Member undertaking a program receives a fixed credit per kW of load reduction capability.

1. The reduction in the Member’s peak load cannot be achieved 12 months per year, but the credit under the KyMEA Member-Owned Resources Contract is not dependent on frequent use of the system to interrupt load.
 - a. If the system is used to reduce Member monthly peak loads:
 - i. The Member would have to interrupt participating customers many hours each month due to the uncertainties as to when the peak load will occur during the month.
 - ii. If customers are interrupted frequently, participation in the program will be reduced dramatically and program penetration (market share) will suffer.
 - iii. Load control devices often are used on end-use devices that do not have the same level of load year around. For instance, a device controlling an air conditioner may achieve some demand reduction in the summer, but not much in the winter.
 - iv. In spite of its best efforts, the utility will miss (achieve no demand reduction) multiple months per year, particularly in the spring and fall months.
 - v. Operating costs would be very high due to the labor required to predict when to shave load and the labor associated with managing a program that causes customers inconvenience.

- b. By contrast, under a Member-Owned Resource Contract, interruptible load would be treated by KyMEA as reserve capacity.
 - i. KyMEA would try to operate the load control system very infrequently and then only during the most extreme weather conditions when load control can be expected to be most effective. Customers may not be interrupted at all during some years.
 - ii. Customer satisfaction with the program and therefore penetration will be much higher.
 - iii. To receive its credit, the Member would need to install the load control system and demonstrate its capability periodically.
 - iv. The Member would incur far lower labor costs associated the load control system.
- 2. If the Member could achieve a higher reduction in charges from KyMEA than the amount the system actually saves KyMEA by using the system to reduce monthly billing demands, the AR Demand Rate established under the AR Contract would have to be higher to recover the difference in KyMEA's costs⁵.
 - a. Accordingly, the net savings to the Member would be (i) the reduction in billing demand times the demand rate, offset by (ii) the total billing demand times the increase in the demand rate;
 - b. Other AR Members would also incur higher charges (which we have referred to as shifting costs to other Members); and
 - c. If most Members implement similar load control systems, the net effect on all Members will tend toward KyMEA's true savings rate - \$50/kW-year in the example above.
- 3. Another illustrative example is to recognize that direct load control is essentially a peaking resource available to be used in a reserve capacity mode and making sure that the value received for a Member's direct load control is aligned with the value produced. If a Member is compensated at the AR Demand Rate, which includes a blend of peaking resources, baseload resources, and market purchases, the Member may receive a benefit that exceeds any cost savings. Under the Member-Owned Resource Contract, the benefit received corresponds to the value received.

⁵ KyMEA's demand rate, in general terms, will be KyMEA's "fixed" or "demand-related" costs divided by the total billing demands of its AR Members. Fixed costs would include all capacity payments under PPAs, including capacity credits to Members under Member-Owned Resource Contracts, less revenues from capacity sales. Therefore, if capacity charges are reduced by more than the reduction in KyMEA's fixed costs, the demand rate will need to be higher.

19. *FPB should ensure that the AR Contract and Interlocal Agreement provide the appropriate level of latitude with respect to what level of contracted versus market purchases is appropriate.*

The AR Contract for but does not specify the mix of contracted and market purchases appropriate for KyMEA's portfolio of power supply resources. It also does not specify the mix of resources to be purchased and owned by KyMEA. This flexibility reflects and is in alignment with AR Member interests.

Specifying any particular mix of the various strategies for obtaining power supply resources for KyMEA's AR Portfolio in the AR Contract would not be in the interest of FPB and the other KyMEA Members.

Other municipal electric systems have worked together for 30 years and more through their joint action power agencies – and are still benefiting from that cooperation. The structure of KyMEA and the AR Contract with its Members was fashioned so that its provisions could be effective and applicable for a very long period into the future. Any provision placed in the AR Contract to define today the specifics or structure of KyMEA's portfolio would be very unlikely to stand the test of time and would potentially limit the KyMEA Board's effectiveness in managing KyMEA's power supply portfolio.

Decisions of that nature are best made by KyMEA's Board, from time to time, considering analyses of market conditions and trends and power supply planning objectives as conditions and KyMEA's portfolio change over time. Each KyMEA Members' governing board appoints, and provides guidance to, a director to represent that Member on KyMEA's Board. Accordingly, each Member has continual opportunities to provide guidance and input as decisions are made. If KyMEA's Board decides to own a project that would involve financing by KyMEA, the AR Contract provides for each Member's governing board to consider whether to participate in that project.

Options available to KyMEA for obtaining power supply resources include:

1. Purchase capacity and energy under bi-lateral contracts
 - a. Capacity and energy together in one contract or in separate contracts
 - b. Contract term lengths can be anywhere from short-term (e.g., a less than a year) to long-term (e.g., 3, 5, 10, 20, 30 years and presumably longer in rare cases)
2. Purchase capacity and energy from organized markets, for example:
 - a. MISO or PJM capacity market auctions
 - b. MISO or PJM energy markets
 - i. Day ahead (amount to be purchased is scheduled the day before the energy is to be delivered) or
 - ii. Intraday (amount to be purchased is scheduled during the day energy is to be delivered)

3. Own a generation resource

- a. Sole ownership – for instance, a 25 MW solar plant
- b. Joint ownership – for instance, a 100 MW ownership interest in a natural gas combined cycle plant that is 300 MW to 1,100 MW in total size.

Due to the complex range of options and the information needed to make good decisions about the options, it would not be in FPB's or other KyMEA Member's interest to try to define the best mix between the above options or even the best mix between purchasing capacity under bilateral contracts of various lengths versus through one to three year MISO/PJM capacity auctions.

To date, KyMEA anticipates the following mix of the above options will be used for the benefit and service of FPB and the other AR Members. More options will be implemented at various stages in the future.

1. Bi-lateral contracts

Term	Products	Counterparty	Beginning
3 year	Capacity and energy	IPMC	June 2019
10 year	Capacity and energy	BREC	June 2019 with 10-year unilateral extension option
10 year	Capacity and energy	Paducah	June 2019 with 10-year unilateral extension option
15 to 20 year	Capacity and energy	TBD - NGCC Resource owner	June 2022 Purchased power agreement with option to co-own
10 to 20 year	Energy primarily, but some capacity	TBD - Renewable project owner	Between May 2019 to June 2022
Daily and hourly	Capacity sales and energy purchases and sales	Pooling agreement with OMU	May 2019
One month	Capacity and energy	Paducah and BREC	Only for May 2019

2. Purchases from and Sales from Organized Markets - on a normal every day basis

- a. Day ahead MISO market
- b. Intraday MISO market
- c. Capacity market purchases and sales as needed and economic

With regard to the above options that are now being implemented:

- The KyMEA Board has been determining the best, most attractive, and least-cost amounts and mixes of the long-term, bi-lateral contracts for FPB and the other KyMEA Members through multiple RFP processes.
- KyMEA's Board, through its staff and a 3rd party contractor (providing 7x24 dispatching and market transaction management services), will determine the best, most attractive, least-cost amounts and mixes of purchases from and sales to organized markets.
- The pooling contract transactions with OMU (and potential other entities in the future) will be determined hourly, daily, weekly and monthly according to terms of transaction accounting in the pooling contract managed by KyMEA staff and its 3rd party contractor.

With regard to contracting strategy, KyMEA's Board has established objectives to guide KyMEA's power supply planning process and portfolio make-up. Future KyMEA Boards may modify those objectives for good reason. A primary goal has been to achieve a least-cost power supply portfolio, consistent with the priority that the portfolio must have a balance of resources that will enable KyMEA to remain competitive with KU over a very wide range of future scenarios.

KyMEA is striking a balance between bilateral contracts of different terms, and transaction beginning dates, and leaving some portion of the portfolio flexible for determination in future periods.

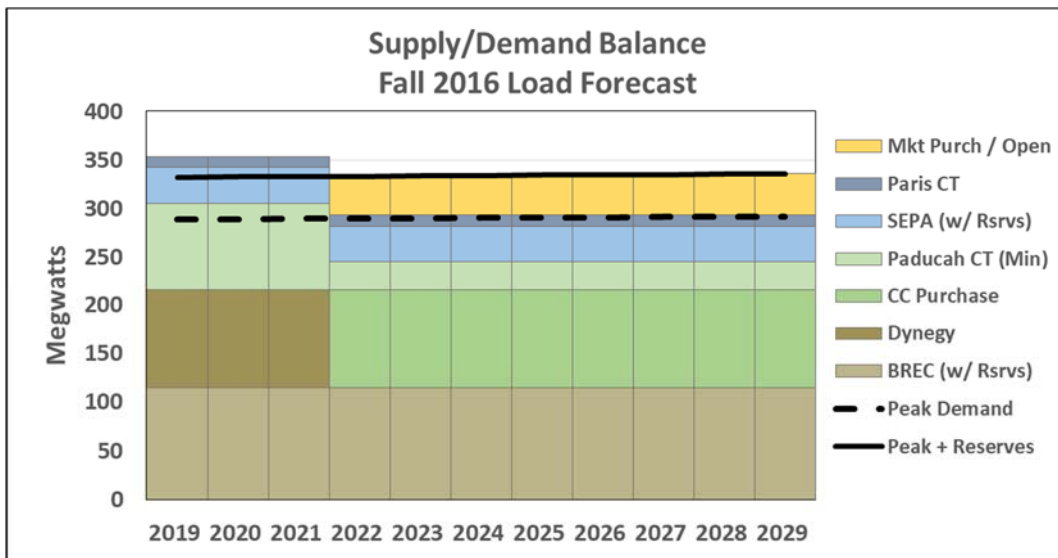


Figure 4 - KyMEA's Portfolio -- Assuming NGCC PPA Completed in 2017

Figure 4 above shows that the portfolio includes significant open positions taking into account KyMEA's plans to enter into a PPA for approximately 100 MW of capacity from a natural gas combined cycle resource ("NGCC") later this year through the ongoing procurement process according to KyMEA's April 2017 RFP 2017-2.

KyMEA is also actively considering solar and wind resources through its April 2017 RFP 2017-1, which may impact by a small amount the resource capacity purchased and the open position planned for the post June 2022 period.

KyMEA has avoided strategies that would make the Members' future power supply costs dependent on large purchases of capacity and energy under very short term bilateral contracts or from organized markets. The future prices for those short term sources of supply are very uncertain. Today's market prices for capacity in MISO and PJM are relatively attractive, but are forecasted by multiple sources to increase significantly during the 2020s. Today's prices for market energy are attractive because natural gas and coal commodity prices are soft and the MISO market is still somewhat long on base load resources. KyMEA is positioned for its costs of energy to also benefit if fuel natural gas and coal commodity prices remain very soft, without being exposed to the dramatic upward swings that can occur in the MISO market.

KU's costs are not significantly dependent on short-term market purchases or sales. During the 2020s, almost all of KU's cost of service is expected and projected to be driven by the cost of owning, operating and maintaining its fleet of coal and natural gas-fueled owned resources. If KyMEA planned to use large amounts of short-term purchases as part of its portfolio, KyMEA would expose itself to an increase in costs and reduced competitive position in the event that market prices move higher into the 2020s. In fact, most projections of MISO market prices currently forecast much higher capacity and energy prices in MISO than is now the case. In addition, the proposals based on MISO market prices received by KyMEA in response to its RFPs have reflected the expectations that prices in MISO would increase.

As explained above, specifying any particular mix of the various strategies for obtaining power supply resources for KyMEA's AR Portfolio in the AR Contract would not be in the interest of FPB and the other KyMEA Members. Decisions of that nature are best made by KyMEA's Board, from time to time, considering analyses of proposals, market conditions and trends, and in accordance with power supply planning objectives established by the KyMEA Board as conditions and KyMEA's portfolio change. Each KyMEA Member's governing board appoints, and provides guidance to, a director to represent that Member on KyMEA's Board. That system will be most effective in ensuring KyMEA's portfolio continues to represent the best interests of all KyMEA Members.

20. Investigate modifying the Interlocal Agreement to require that key Agency decisions require sign off in writing from all or a majority of Members.

The Interlocal Agreement includes the governance provisions described earlier. Key Agency decisions require supporting votes from a majority of the Members and are subject to rescission through the exercise by Members of their rights to call for a Weighted Vote. KyMEA

Directors are members of the governing board or senior management of the Members. If a KyMEA Director determined that he or she needs guidance from the local governing body of the Member, that Director has the prerogative to request a delay of a KyMEA decision. KyMEA Directors are authorized by their appointing governing bodies to act on behalf of the Member they represent and are accountable to their governing bodies for their actions. However, if this recommendation is intended to require each KyMEA Director to obtain written sign-off from its local governing body before being able to vote on important decisions that would be contrary to the interests of FPB and the other Members in having the Agency be able to operate in a timely and efficient manner. Because of the diverse membership of KyMEA, consisting of Utility Commissions, City Councils and Electric Plant Boards, which may be large entities or small entities, a requirement that Members' governing bodies provide written sign-off may delay implementation or approval of a KyMEA Board action by two months or longer. Such delay could prove disastrous if, for example, an emergency power supply arrangement needed to be negotiated or purchased. Requiring such action by the governing bodies of Members would create unnecessary bureaucracy and would severely hamstring the Agency's ability to do business in an efficient and cost-effective manner.

21. Request the Auditor of Public Accounts to perform a financial and compliance audit for years ending June 30, 2015, June 30 2016 and June 30, 2017.

KyMEA is a start-up operation and is soliciting proposals from independent Certified Public Accountants to prepare its initial audit. Initially accounting and financial reporting services were provided by Owensboro Municipal Utilities. They have recently been transferred to KyMEA's interim Chief Financial Officer. KyMEA's fiscal year ends on June 30. While the Auditor of Public Accounts is of course entitled to exercise its authority in accordance with law, we are aware of no reason for KyMEA to voluntarily subject itself to the time and expense that would be involved in an unnecessary additional audit by the Auditor of Public Accounts.

22. Request KYMEA to provide to members a work plan and timeline since the creation thru 2019.

An overall implementation plan and schedule has been in place since summer of 2014 and has been updated and expanded from time to time as decisions have been made and additional implementation activities identified. The current schedule approved by the KyMEA Board in fall 2016 is attached. Certain activities have been added and rescheduled as various needs have arisen and decisions made. An updated schedule will be reviewed by the Board this fall.

23. Request KYMEA provide the job description for the CEO and CFO positions and the salary schedule to members prior to hiring.

KyMEA has contracted with the firm of MyCoff Fry & Prouse LLC to conduct a national search for qualified candidates for the position President and Chief Executive Officer. Copies of

the presentation materials are included with this response.

24. Request KYMEA not to include employees in CERS.

KyMEA is reviewing its legal options in providing retirement benefits to its employees. As a public governmental entity, KyMEA may be required to participate in CERS. All KyMEA Members have an interest in seeing to it that the retirement benefits of KyMEA employees are appropriate and reasonable.

25. Request KYMEA locate its headquarters in Frankfort to avoid paying rent, FPB offers free space.

A number of Members have offered to provide KyMEA with office space. A review of the office and meeting space needs of KyMEA will be undertaken by the President and CEO after he or she is hired.

26. Request KYMEA to review excess capacity PPA agreements and take direct action to assure that member savings will not be significantly offset by capacity agreements.

At pages 9-11 of the E3 Report, an analysis is presented asserting KyMEA could have saved approximately \$4 million annually in the period 2019-2022 by adjusting purchases under the BREC, IPMC (which E3 refers to as Joppa) and Paducah PPAs downward by a total of 41 MW⁶. E3 indicates that KyMEA should have done so to better match KyMEA's resources to a projection of KyMEA's 2019 capacity requirements prepared by E3.

By not making adjustments downward to the amounts purchased, E3 concluded that KyMEA is projected to have procured 41 MW more capacity than needed to serve its Members' load reliably. E3 also stated that "it is possible that KyMEA can resell over-supplied capacity to other entities. If these resales occurred they could help reimburse Members for the lost savings opportunities. At current MISO market capacity prices, these sales would not be economic."

As explained in more detail below, the KyMEA Board anticipates marketing any capacity that proves to be surplus in the June 2019 – May 2022 period. KyMEA plans to make short term sales and purchases of capacity and energy as a normal course of business and plans to begin making other preparations for the sale of capacity and energy into the market as may be beneficial to the AR Members. Accordingly, KyMEA is already proceeding in a manner that is consistent with this E3 recommendation.

⁶ E3 also included a second analysis based on a reduction of 65 MW that did not account for KyMEA's need to purchase capacity to meet reserve requirements. However, at page 9 of the E3 Report, E3 opines that it is "prudent for utilities to plan for load plus a reserve margin" Accordingly, we have not addressed the second analysis because it is not consistent with the need for KyMEA to plan to meet reserve requirements.

KyMEA believes the estimate of \$4 million per year of exposure in E3's Report significantly overstates the issue.

KyMEA's exposure to the need to recover capacity costs was estimated as of January 2017 to be approximately 25% of the amount E3 projects for a 41 MW sale of surplus capacity. We anticipate E3 may not have considered the margin KyMEA would make on energy that would be sold with the capacity. Also, KyMEA's latest load forecast projects the potential level of surplus capacity to be approximately 50% of the amount estimated in the E3 Report.

Having a capacity surplus for certain periods of time is not unusual if a utility is planning to reliably serve the loads for which it is responsible. KyMEA is well positioned to make sales of surplus capacity and energy in the event it's appropriate for KyMEA to do so to optimize the financial performance of KyMEA's power supply portfolio.

E3's estimate of Overstates the Issue

In January 2017, KyMEA reviewed its forecasted 2019-2029 capacity requirements based on updated AR Member demand forecasts prepared in fall 2016. That KyMEA review indicated in part that KyMEA would be projected under the fall 2016 forecast to have approximately 20 MW⁷ of surplus capacity during the period from June 2019 through May 2022. Further forecast and other changes could cause the AR Members' loads to be higher or lower than the latest forecasts. Therefore, the amount of "surplus" could increase, decrease, be eliminated or even become a deficit in capacity as the future unfolds.

In evaluating the January 2017 assessment of a potential sale of 20 MWs of capacity and energy from the IPMC resource, nFront Consulting projected revenues from energy sales⁸ alone would cover \$16 million of the \$17.5 million total costs of 20 MWs of the IPMC purchase (cumulatively over the 3-year period June 2019 through May 2022). This energy revenue estimate would leave a need for only \$1.5 million from capacity sales to cover all of the costs of 20 MW of the IPMC purchase over the 3 year period. Accordingly, KyMEA would only be exposed to the need to recover \$500,000 each year of capacity costs through a 20 MW sale to a 3rd party. Therefore, the breakeven capacity charge that KyMEA would need to cover all costs of the 20 MW sale would be \$500,000/20,000 kW, or approximately 25 \$/kW-yr. which is not a very high price for capacity compared to projections for the 2019-2022 time frame.

⁷ We cannot speak with certainty as to the reasons E3 projects lower loads than now projected in KyMEA's latest demand forecast. E3 did not present the details of its forecast process. But, from the description in the E3 Report, potential differences could be related to: (a) apparent use by E3 of only one year of data for its load forecast; (b) differences caused by E3 using a full year of 2016 data and KyMEA's forecast considering only a partial year of 2016 data since it was prepared in the fall of 2016; (c) no mention by E3 of accounting for transmission system losses that add approximately 3%, or 8-9 MW, to the Member's metered billing loads when computing capacity requirements; or (d) differences caused by E3's use of a trending technique rather than population growth and other variable in the forecasting process.

⁸ The revenue potential was projected assuming the energy would be sold under a forward energy price contract applicable to MISO energy, at prices published for December 23, 2016 applicable to the 2019-2022 period. The average forward price for energy in the MISO market as of that date exceeded the projected cost of energy available to KyMEA under the IPMC PPA on a \$/MWh basis over the 3 year period by approximately 50%.

The \$500,000 per year capacity revenue needed for breakeven on a 20 MW sale would equate to approximately \$1 million per year for the 41 MW sale projected by E3, or approximately 25% of the \$4 million per year exposure estimated by E3.

We anticipate that E3 may not have considered the value of the energy that could be sold into the market from KyMEA's IPMC and BREC resources. In several places in E3's Report and in follow-up conversations with E3, E3 seems to separate the purchase of capacity from energy – as though the two transactions are distinct and unrelated. In organized markets, capacity and energy may be very different products and be auctioned separately, but under bi-lateral contracts, like the PPAs, the two products are most often linked into one transaction and the price paid for one impacts the price paid for the other.

Under each of KyMEA's PPAs, the payments for capacity and energy are two parts of an integrated transaction. KyMEA agreed to make higher capacity payments (reservation charges) to BREC and IPMC than to Paducah because, in exchange, KyMEA would receive the right to take energy at a much lower energy price over most hours of the year. The higher capacity payments in the BREC and IPMC PPAs are much like spending more for a higher efficiency machine expecting that the savings on operating costs will offset the higher fixed payment over time. In almost all hours of each year, the energy purchased from IPMC and BREC is projected to be "in the money", meaning energy could be purchased under those contracts by KyMEA and then sold into MISO at prices that are higher than the cost to KyMEA of that energy.

Capacity and Energy Surpluses will Normally Occur for Certain Periods

Fundamental tenets designed into the KyMEA power supply portfolio include the following.

1. KyMEA must provide a portfolio of resources that reliably meets the load serving obligations of its Members.
2. KyMEA must provide a portfolio of resources that economically meets the load serving obligations of its Members.
3. The initial power supply portfolio is designed to mitigate risk and, at least at the onset, take a conservative approach to the market opportunities that may be available.
4. The initial power supply portfolio is backed by physical resources and reserves and does not rely on the short term purchases in organized market capacity auctions to meet its capacity sufficiency requirements.

Unless an entity deliberately takes a short position (procures materially less than its capacity and reserve requirements), it is not uncommon for excess capacity situations to exist from time to time in a long-term power supply portfolio that is based on the fundamental tenets described above. Excess capacity situations can occur for a number of reasons.

1. Actual consumption of electric power can vary in relation to the load forecast that existed at the time the portfolio procurement decisions were made.
2. In a self-build situation, an entity is constrained by size ranges available, their associated pricing, and other attributes that make a particular selection desirable. Economies of scale, technology experience, fuel type, operating costs and physical considerations are examples of variables that must be considered. When selecting an option to meet the long term needs of an entity, the most economical choice will often be larger than the immediate needs, creating a short term excess capacity situation until the entity grows into the capacity procured.
3. Similar to a self-build situation, capacity procured through power purchase agreements (PPAs) is often more economically purchased in specific size blocks and term durations. Simply put, the larger the amount of capacity procured and the longer the term of the agreement, the more economically advantageous the pricing becomes. It is not uncommon for a series of small amounts of capacity procured under short term agreements to be more costly than fewer longer term agreements for higher amounts of capacity, even though the larger purchase creates a short term excess capacity situation.

Basically, KyMEA's portfolio design does not rely on market performance to achieve its financial performance. Rather, it is designed to capture market opportunities when they present themselves to reduce cost or create additional income through the optimization of the portfolio. The projected economic benefits to the Members communicated to date rely solely on delivery from KyMEA's own resources and does not include benefits to KyMEA of market opportunities. In actual operation, interaction with the market will work to further improve the economic benefits currently projected.

The power supply portfolio has been designed from the beginning with features to optimize the use of the portfolio resources that may at any time be in excess of the immediate needs of the Members. These features include;

1. Full remarketing capability for both capacity and energy;
2. Staggered terms of agreements that allow KyMEA to make adjustments to the amount of capacity it retains in its portfolio over time;
3. No must take requirements on energy;
4. Significant scheduling flexibility designed to allow KyMEA to:
 - a. Save money by purchasing power in any given hour from the market when available for less than its contract prices;
 - b. Sell excess energy available when the market is higher than contract prices and utilize the profit to offset the overall cost of power supply; and

5. Make these purchases and sales when the market presents the opportunity and entirely at KyMEA's discretion

This portfolio design and operating structure is in place to allow KyMEA to manage any excess capacity and energy to its economic benefit. Although the recommendation to *“take direct action to assure that member savings will not be significantly offset by capacity agreements”* implies some immediacy to the situation, it is an action that will happen both in planning and operating functions on a routine basis as a normal part of portfolio management.

To take direct action now relative to a capacity sale is likely to be premature for the following reasons;

1. The markets present no immediate opportunity that would warrant quick action to put a transaction in place. In fact, both the capacity and energy markets show trends of increasing pricing between now and when the agreements actually go into effect. These forecasted increases will present better opportunities to maximize the value of any transaction when compared to what may currently be available.
2. The amounts of excess capacity, if any, and therefore the amount of any capacity sale that would be appropriate can be more accurately assessed as more data becomes available.
3. Within the next year, KyMEA is scheduled to have both its staffing and its third party resources in place. As the role of these individuals and entities is to routinely perform the functions requested in the E3 recommendation, allowing time to put these resources in place will assure an orderly process and ultimately the better optimization of any excess resources that may be available.
4. Updated load and market forecasts should be available or can be performed with sufficient time to implement any mitigation measures deemed appropriate prior to the start date of the agreements. With timely forecasts and the long-term operating structure in place, the KyMEA staff and third party resources can more effectively and economically manage this ongoing function.

As mentioned generally above, KyMEA has ensured that terms of the PPAs would not limit, and instead would facilitate, the sale of capacity and energy by KyMEA to 3rd parties (parties other than the AR Members) should KyMEA find it beneficial to do so. The provisions of the PPA's that facilitate sales to 3rd parties, and allow KyMEA to make sales without incurring additional transmission costs, are as follows.

1. Capacity and energy purchased under the IPMC PPA can be delivered either to the LGE/KU transmission system or the MISO system. This unique feature expands the potential market for sales by KyMEA from that resource.
2. Capacity and energy purchased from BREC is delivered into MISO. KyMEA

would “receive” the energy scheduled from BREC by having MISO deliver energy on KyMEA’s behalf to the LGE/KU interface. As a result, accomplishing an energy sale from BREC at the MISO market energy price is as straightforward as scheduling less energy to be delivered by MISO for KyMEA at the MISO to LGE/KU interface.

3. The BREC, IPMC, and Paducah PPAs include flexible scheduling rights for KyMEA. These flexible rights will increase the ability of KyMEA to maximize revenue achieved from energy sales to 3rd parties.

As explained in detail above, the KyMEA Board anticipates that arrangements for short-term sales (and purchases) of capacity and energy would be made as a normal part of KyMEA’s implementation activities. Accordingly, KyMEA is proceeding in a manner that is consistent with this E3 recommendation.

The energy available to KyMEA under the IPMC and BREC PPA’s is priced in a manner that in most hours of the year, KyMEA would be able to sell the energy at prices that provide a significant margin to KyMEA above the cost of the energy under the PPA. If it is not economical to use the energy for the Members’ loads or sell the energy into the market, KyMEA has no obligation to take the energy.

Accordingly, if KyMEA’s loads do prove to be lower than originally forecast at the time the PPAs were entered, more energy will be available to economically sell into the MISO market. If KyMEA determines that capacity also is available to be sold, KyMEA may also enter into short term sales of capacity to further optimize the financial performance of its power supply portfolio.

27. *Request KYMEA to review BREC PPA rates to assure it is in the best interest of FPB and other members.*

The BREC PPA derived from a proposal made by BREC to sell capacity and energy to KyMEA in response to a KyMEA’s Request for Proposals titled “KyMEA Power Supply Procurement RFP# 2015-1” dated September 2015 (“September 2015 RFP”). Several proposals were received under which KyMEA could purchase 100 MWs of capacity and energy suitable for use in meeting the base load⁹ requirements of KyMEA’s AR Members’ load over the 10 year period from June 2019 through May 2029.

The graph below shows the comparison of levelized costs over the 10 year period for each of the proposals received. The least-cost green bar to the far left labeled “Coal Provider 1” represented the evaluated cost of the BREC proposal. KyMEA’s qualitative evaluation also fell in favor of the BREC proposal in comparison to other proposals that had similar projected costs.

⁹ The “base load requirement” is the amount of load KyMEA would need to serve in essentially all or the vast majority of the hours each year. In each hour of the year, the AR Member’s load (energy requirement) would be higher than the base load requirement. For most utilities in the eastern portion of the US, the level of the base load requirement is usually approximately 25% to 35% of the peak load for the year.

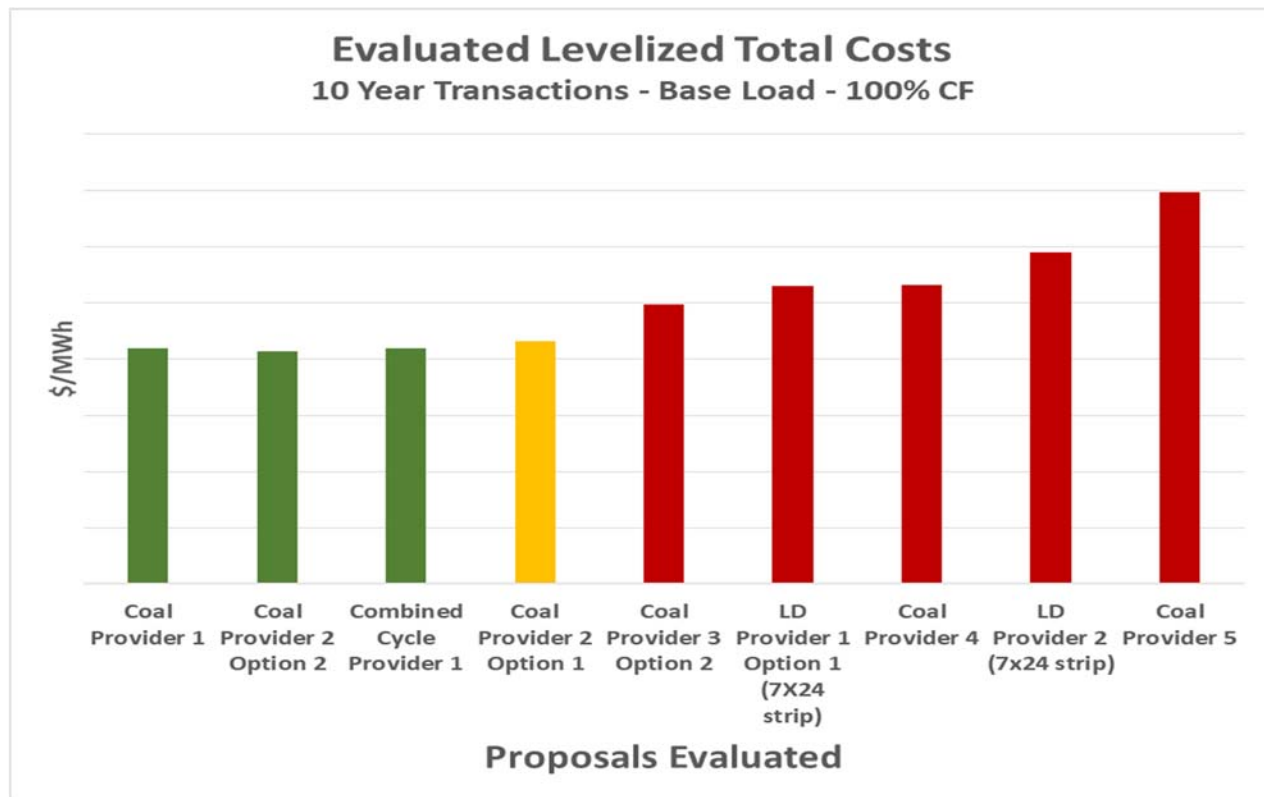


Figure 5- Comparison of Projected Levelized Costs of Base Load Proposals - KyMEA's Sept 2015 RFP

Notice on Figure 5 that the bar for Coal Provider 2 Option 2 was slightly lower than the BREC bar. In essence, KyMEA's qualitative assessment "tipped the scale" in favor of BREC over Coal Provider 2 for several reasons.

For instance, Coal Provider 2's proposal was less attractive than BREC's proposal in the following areas:

1. Plant is located in a different state, and therefore would be subject to different risks of Clean Power Plan implementation than BREC and KU, both of which operate resources located in Kentucky.
2. Much higher costs toward the end of the period;
3. No unilateral option for KyMEA to extend the purchase for another 10 years;
4. No options to adjust the amount of capacity in the first 10 years; and
5. Greater exposure to congestion and loss related uncertainties on the MISO system.

Notice the 3rd bar – Combined Cycle Provider 1 – on Figure 5. Figure 5 was almost exactly the same height as the BREC Bar. This relationship indicated it would make sense for KyMEA to include approximately the same amount of BREC coal and combined cycle capacity in its portfolio. By doing so, KyMEA could diversify key risks related to carbon legislation and fuel

commodity price changes.

Notice on Figure 5 that among the higher cost red bars are two bars labeled “LD Provider 1 (7x24 strip)” and “LD Provider 2 (7x24 strip).” Under these two proposals, the seller would commit to provide energy in every hour of every day (a 24x7 strip) at a certain level, such as 100 MWh each hour, at a specific energy price, which would be fixed over the term of the transaction on the day the PPA would be signed. If the seller failed to deliver, except for force majeure, the seller would pay a liquefied damage (hence, the LD label) equal to the difference between KyMEA’s actual cost of energy and the agreed upon price. Because these proposals did not include rights to capacity, KyMEA’s costs of obtaining capacity from other sources were added to the projected cost of the proposal. A breakeven analysis also demonstrated that the cost of capacity that KyMEA would need to incur for the cost of the proposed LD energy products to equal the projected cost under the BREC contract was rather low.

Comparing the height of the BREC bar to the LD Provider 1 and 2 bars showed that the projected cost power under the BREC PPA was lower than the market price expectations of LD Providers 1 and 2. This comparison and other analyses allowed KyMEA to conclude that the BREC proposal was more attractive than long term purchases based on MISO market price expectations and projections over the 10 years from 2019-2029.

The Evaluation of the Proposals Received in Response to the September 2015 RFP dated July 13, 2016 prepared by nFront Consulting LLC is a public document that provides more detail regarding KyMEA’s evaluations of the BREC proposal and other competing proposals.

The report concludes the BREC proposal was most advantageous to KyMEA over the 10 year period beginning June 2019 in comparison to competing proposals, based on the evaluation factors set forth in the RFP. Moreover, the report concluded the BREC resource would be more attractive as a part a portfolio that also would include a similar-sized purchase of capacity and energy from a combined cycle provider beginning June 2022, the short term purchase from IPMC as a bridge from June 2019 through May 2022 until the combined cycle resource could be made available, and the purchase from Paducah procured under a separate RFP dated April 2016.

In Figure 6 below, the least-cost left bar (green bar) represents the projected costs of the portfolio (labeled Portfolio A) described in the paragraph above on a levelized basis over the period from June 2019 through May 2029. The middle two bars represent two versions of a Portfolio B, which would not have included the BREC purchase, but instead would have been based on another coal resource.

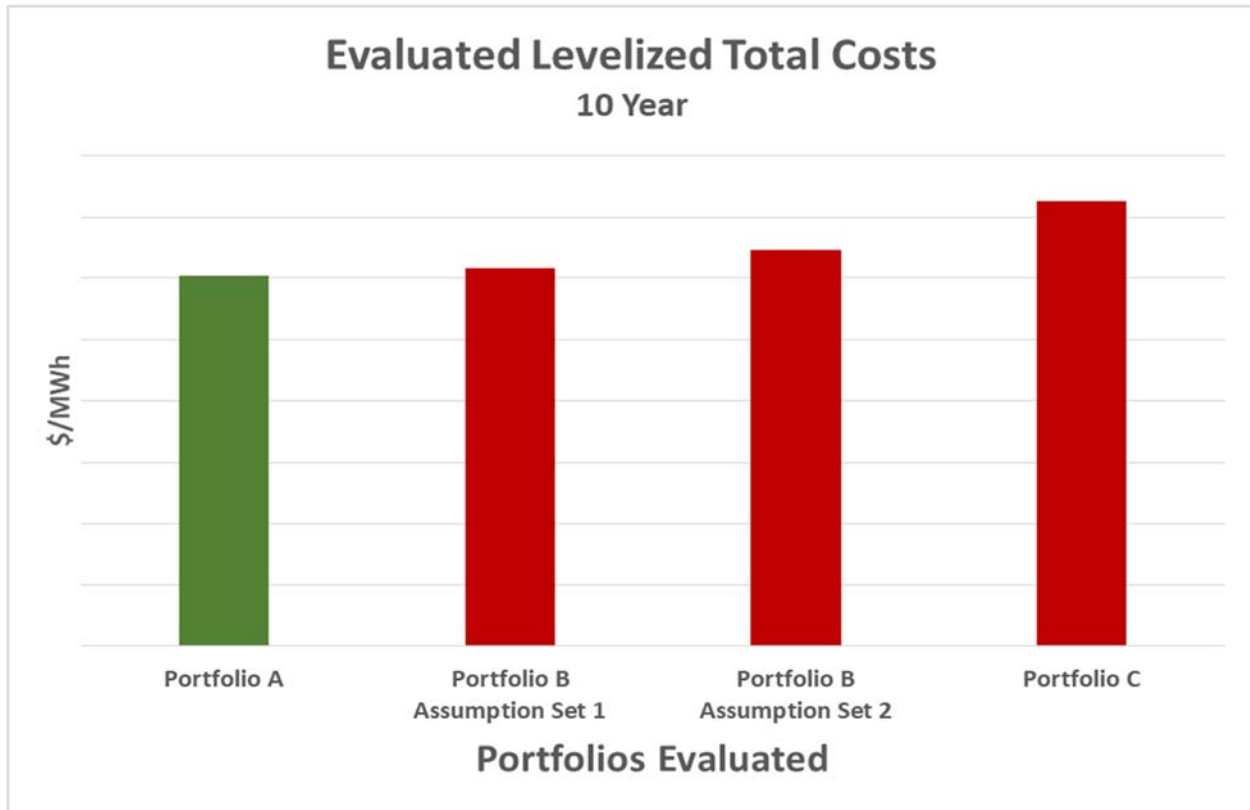


Figure 6 - Projected Levelized Costs of KyMEA Portfolio Options - June 2019 through May 2029

The red bar to the far right labeled Portfolio C represents a proposal to meet KyMEA's total energy requirements through a load following LD Energy only contract with a single supplier. The comparison of Portfolio C to the BREC based Portfolio A allowed KyMEA to conclude that the cost of Portfolio A, including the BREC proposal, was cost effective in comparison with the Portfolio C provider's assessment of future market price expectations.

In addition to having more favorable projected costs as shown on Figure 6, Portfolio A was determined to be most attractive relative to Portfolios B and C based on the assessment of risk and other qualitative factors. In particular, Portfolio C would have been based on a fixed energy price that could have caused KyMEA's costs to become non-competitive with KU under low fuel price scenarios. Portfolio C would have required KyMEA to take all of its supply, other than SEPA and the Paris diesel resource, from that single source and therefore would have offered less flexibility for Member or renewable resources. Portfolio C would have placed KyMEA in the position of having to reconstitute its full power supply program effective June 1, 2022 with no ability now to hedge against the risk that prices would be much higher in that time period.

Overall, the KyMEA Board provided the leadership as KyMEA has assembled a diverse, flexible portfolio of cost competitive resources. The BREC resource was demonstrated to offer competitive projected power costs throughout the 2020s in relation to other comparable resources as of the summer of 2016 through a competitive procurement process.

If natural gas prices during the 2020s prove to be lower than assumed last year, KyMEA plans to be in a position by executing a PPA with a natural gas fueled combined cycle owner this year to use the natural gas resource to serve its base load and use less energy from BREC. In that scenario, BREC may be a higher cost resource than the natural gas fueled resource.

However, if natural gas prices during the 2020s prove to be much higher than assumed last summer, BREC will be used as the base load resource and may be significantly lower in cost than the natural gas fueled resource. In that scenario, KyMEA will be thankful BREC is part of its portfolio to dampen the effect of high natural gas prices enough for KyMEA to remain competitive with KU, which is expected to have proportionately less exposure to natural gas prices increases than most utilities, including KyMEA.

The option, but not obligation, for KyMEA to extend the BREC PPA for another 10 years provides a hedge against a high market price scenario that may occur in that period. If the market is softer, KyMEA likely could procure another resource to replace the BREC contract under more attractive terms.

The risk to KyMEA of higher costs from carbon regulation with BREC in its portfolio is expected to be the same or less than KU's risk of being adversely impacted by carbon regulation.

BREC is fully compliant with all other existing environmental regulations. Because of the age and design of BREC main coal resource, the Wilson Plant, KyMEA's exposure to any other new coal plant related environmental regulations is expected to be the same or less than KU's.

The flexible scheduling terms in the BREC PPA will be valuable to KyMEA as KyMEA works to minimize its energy costs by making energy purchases from the MISO market and other sources when more economical energy is available. The same flexibility will be very valuable as KyMEA makes sales of energy to MISO and other parties when economic to do so. The projections provided to the KyMEA's Members of KyMEA's projected power supply costs during the 2020s do not yet factor in these potential benefits as a measure of conservatism. The flexible scheduling terms in the BREC and other KyMEA PPAs also will allow KyMEA to much more cost effectively incorporate must-take, as-available energy resources, like solar and wind renewables, into KyMEA's portfolio.

The cost of fuel is a significant component of the costs represented by the bars on Figure 5. Accordingly, the BREC resource at any time will be more or less costly than a natural gas resource depending on the then current levels and expectations regarding the relationship between natural gas and coal fuel commodity prices.

Overall, the BREC PPA is a very attractive component of KyMEA's resource portfolio. Whether it will be the lowest cost base load resource as compared to the natural gas-fueled resource KyMEA is working to add to the portfolio will depend on fuel commodity prices in the 2020s, over which KyMEA has very limited control.

28. *During OMU presentation at recent meeting, GM mentioned the voice of ratepayers being heard. Since FPB has historically held a public hearing on KU rate increases, KYMEA is requested to develop and submit to members a process to either create a consumer advisory committee or have consumers sit on its Board.*

KyMEA's ratepayers are its AR Members. The AR Members sit on the AR Project Committee, which is charged with setting and establishing the rate mechanism. In essence the "ratepayers" are determining the rate structure. As representatives of their individual utilities, the Members also reflect the shared interests of the ratepayers of their local utilities in achieving an economical and environmentally responsible power supply.

KyMEA All Requirements Rates will be basically "pass-through" rates adjusted to include any necessary reserves for operations and emergencies, as well as shared administrative costs. Once the AR Project Committee recommends the rate structure, the KyMEA Board is charged with the responsibility to review the adequacy of such rates to ensure that revenues generated under the AR Contracts will cover the costs of providing AR service. At the same time, KyMEA covenants in Section 6(a) of the AR Contract that its goal will be "to minimize the costs of reliably serving the All Requirements Members' collective requirements, to the extent feasible" Section 5(b) requires the KyMEA Board to establish rates "that will provide revenues which are sufficient, but only sufficient, to meet the anticipated Revenue Requirements of the Agency." These provisions provide protections for Members and their ratepayers.

29. *Request KYMEA define process where any new members offset formation cost incurred by original members or clearly document why it is in the best interest of all original members to waive these costs.*

KyMEA intends to determine assessments for formation costs for new members on a "case by case" basis as requests for membership arise. The same issue will need to be addressed if and when existing Members who are not already All Requirements Members request to become AR Members. In each instance, to the extent new members or new recipients of AR service are beneficiaries of certain costs incurred by the original members or participants, KyMEA agrees that an equitable allocation of those costs should be achieved.

30. *Request KYMEA to immediately review, clarify and simplify NDA requirements for all members including key staff and Board members to facilitate efficient and timely sharing of documents.*

In response to this suggestion from FPB, at its June 2017 Board meeting, KyMEA revised its Policy Relating to Confidential Information to provide a streamlined method for Member governing boards and representatives to receive confidential information provided to KyMEA. The revised Policy was provided to FPB on June 29, 2017, and a copy is included with this response.