

Entergy Arkansas, LLC 425 West Capitol Ave Little Rock, AR 72201 Tel 501.377.4000

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Via Electronic Mail

Dear Stakeholder Committee,

On September 30, 2020, Entergy Arkansas, LLC ("EAL") received three letters from various stakeholders in connection with EAL's 2021 Integrated Resource Plan ("IRP") development. This letter provides EAL's initial response to the feedback from stakeholders provided therein. EAL looks forward to continuing to engage the Stakeholder Committee throughout the development of its 2021 IRP and sharing with the committee non-confidential information as it becomes available over the next several months.

SECTION I. INTRODUCTION

As outlined in section 4.8 of the Resource Planning Guidelines (APSC Docket No. 06-028-U, Order No. 6), the Stakeholder Committee to be formed should include representatives of retail and wholesale customers, independent power suppliers, marketers, and other interested entities in EAL's service area. The Stakeholder Committee also develops their own procedures, with the role of that committee described in that section as "review utility objectives, assumptions, and estimated needs early in the planning cycle." EAL requests that once the Stakeholder Committee as described above is formed, that EAL be notified of the primary point of contact selected for the Stakeholder Committee. This will further ensure, consistent with the Resource Planning Guidelines, that stakeholder feedback, responses, and schedules for future meetings can be exchanged efficiently and effectively with EAL.

SECTION II. MODELING REQUESTS

The above referenced letters request a number of different scenarios to be modeled by EAL, as well as several other specific actions be taken. While EAL would always prefer to integrate such requests into its analysis, it is neither practical nor feasible for all of the requested modeling scenarios and other actions to be performed. In this respect, it is important to recognize, as the Commission stated in Order No. 6 in Docket No. 06-028-U, "that the plan should be submitted for informational purposes" and that any specific actions by the utility will require separate approval from the APSC.

To this point, however, as part of its 2021 IRP modeling, EAL will include portfolio scenarios that assume deactivation dates that are earlier than EAL's current planning assumption for its White Bluff and Independence generating units. The IRP Report will include an assessment of the impacts of those earlier

dates on total supply costs compared to alternative portfolios, as well as the viability of earlier deactivations. EAL will develop these earlier deactivation dates consistent with its planning principles and manually developed portfolios for evaluation in the IRP.

Similar to the process utilized in prior RFPs, four futures are being developed for EAL's 2021 IRP. These futures represent different combinations of many variables that could plausibly coexist within the context of different scenarios. These multifaceted futures will be evaluated to produce a range of potential outcomes:

- 1. **Progression Towards Resource Mix (Reference)** input assumptions align with the Company's reference case and are intended to represent a mid-point in the range of uncertainty
- 2. Recent Environment Persists (Gas Centric) an economic outlook similar to recent years persists, where low natural gas prices and a lack of implementation of strong mandates or policies that drive CO₂ reduction both continue
- Decentralized Focus (DSM & Renewables) primary drivers of this future are related to the changing social and political views on new generation; reflects a combination of policy and consumer/business trends leading to more EE, renewables, and DSM, but without very strong mandates on CO₂
- 4. Economic Growth with an Emphasis on Renewables (Growth & Renewables) Strong political mandates on CO₂ are enforced, resulting in high CO₂ prices, accelerating the energy transition away from conventional generation; utilities have imposed climate goals leading to centralized utility-scale renewable growth

The 2021 IRP futures are conceptually aligned with the MISO Transmission Expansion Plan 21 ("MTEP21") futures.

Objective: The objective of EAL's Futures and MTEP21 Futures is aligned.

"MTEP Futures are designed to accommodate uncertainty by bookending a wide range of potential scenarios" - MISO Futures Strawman Proposal

Evaluation Period: Both MTEP21 and EAL Futures will span a 20-year evaluation period.

Peak and Energy Load Growth: Similar to MTEP21 Futures, different load forecasts are produced for each EAL Future. This is achieved for EAL by increasing/decreasing or adding/removing volumetric levers.

Natural Gas Price Forecast: MTEP21 Futures will use gas price assumptions resulting from gas burn output from each individual Future after capacity expansion is complete using GPCM. While EAL will also assume varying levels of gas prices in the four Futures, the long-term point of view regarding future natural gas prices is based on a consensus average of several expert, independent third-party consultant forecasts.

Demand-Side Management: MISO commissioned a third party (AEG) to determine potential demand response, energy efficiency, and distributed generation under each MTEP scenario. Similarly, EAL commissioned ICF to perform demand response and distributed energy resource potential studies at varying levels to be used in its four Futures.

Technology Costs: MTEP21 relies on third-party industry consultants (NREL ATB 2020 data) for its capital cost inputs. Similarly, EAL relies on several third-party consultants to provide unbiased, updated indicative pricing. EAL also validates these pricing assumptions against actual projects in the market for use in its IRP modeling.

Retirement Assumptions: Similar to MTEP21 Futures, age-based retirement assumptions will vary in the EAL Futures for coal and gas units in the market, however the EAL Futures will align with the Company's point of view for Entergy-owned units.

Carbon Emissions: MTEP21 Futures were developed with three different levels of carbon reduction limits over the study period. EAL's Futures contemplate three carbon emission scenarios, however rather than defined emissions limits, each scenario will assume a carbon price that drives economic market resource additions and dispatch.

Lastly, Memphis Light, Gas & Water's ("MLGW") interest in potentially leaving TVA to join MISO could materialize. We are actively monitoring their IRP and any requests for proposals that may be issued in the near term.

SECTION III. ALL-SOURCE RFP

EAL's long-term and near-term planning cycles have distinct objectives but are complementary processes. The IRP is part of the long-term planning cycle and has the objective of evaluating a wide range of uncertainty over a long period of time. As a result of prior EAL IRPs, IRP modeling indicated that renewables and gas-fired capacity will be economic additions to EAL's future portfolio. That is where the long-term planning cycle (the purpose of which the Commission has stated to be "for information purposes") informs the near-term planning cycle, i.e. leading to the issuance of a request for proposals ("RFP") for capacity (the outcomes of which represent the specific actions to be reviewed by the Commission). In response to IRP results, EAL has issued and completed four RFPs, the results of which are summarized in the table below. Each of those RFPs have been successful and resulted in completed transactions for either power purchase agreements ("PPA"), build-own-transfer ("BOT") agreements, or acquisitions.

Year Issued	Eligible Technologies	Selection(s)		
2014	CT, CCGT, solid fuel w/ environmental	Stuttgart Solar PPA,		
	controls PPA, tolling agreement and	Union Power Station #2		
	acquisitions;	acquisition		
	Biomass, run-of-river hydro, solar PV, wind			
	PPA			
2016	Biomass, run-of-river hydro, solar PV, wind	Chicot Solar PPA		
	PPA;			
	Solar PV BOT			
2017	Solar PV, Storage BOT	Searcy Solar BOT		
2019	Solar PV, Storage BOT	Walnut Bend Solar BOT		

EAL believes that the results of an "all-source RFP," as requested Sierra Club, are not needed as an input to the IRP. As noted in the prior section, EAL's technology cost and performance assumptions are based

upon unbiased, updated indicative pricing provided by third-party consultants. Also, the Company's nearterm planning activity complements the IRP analysis by providing data points for EAL to validate these pricing assumptions, rather than conducting RFPs for use in its IRP modeling. Pricing for future incremental resources should be generically derived and not specific to a particular physical site, transaction type, or other cost uncertainties that may not be indicative of other current and/or future/long-term opportunities. Also, EAL's best practices for RFPs include significant time and contemplation in the planning and development stage, as well as independent monitoring and detailed analysis of proposals, all of which are infeasible due to IRP schedule risk and increased IRP costs.

SECTION IV. ENVIRONMENTAL

Public Health Impacts and Environmental Justice Considerations

In comments (dated September 30, 2020) submitted to EAL regarding its 2021 IRP Process, Sierra Club requested that EAL "evaluate and consider the public health impacts of the various portfolios that it considers in this IRP" by analyzing the comparative health impacts of each portfolio considered. Sierra Club also suggested that EAL specifically consider any environmental justice ("EJ") impacts by utilizing the EPA's EJSCREEN tool.

In response to this request, EAL would like to outline measures the Company has taken and plans to take to address potential public health impacts and EJ considerations in operations throughout the company, including in the IRP process.

Net-Zero Carbon Emissions by 2050; Retirement of Coal-Powered Capacity by 2030

On September 24, 2020, Entergy announced a commitment to achieve net-zero carbon emissions by 2050 by enhancing portfolio transformation with emerging technology options, enhancing natural systems like forests and wetlands that absorb carbon, and electrifying other sectors. Additionally, Entergy committed to retire all coal-powered capacity by 2030.



Transforming Our Generation Portfolio

Building on the Company's longtime legacy of environmental stewardship, Entergy is enhancing its climate action strategy with a longer-term commitment: Entergy will work over the next three decades to reduce carbon emissions from our operations to net-zero by 2050. Entergy has stated it intends to accomplish this by working with our regulators and other stakeholders to balance reliability, affordability and sustainability. The illustrative transition scenario shown above is just one path to meet those goals and commitments. Entergy is taking action now toward a carbon-free future and expects to achieve this net-zero 2050 commitment by:

- Enhancing our transformation strategy with emerging technology options
- Working with customers, key suppliers and partners to advance new technologies necessary to reduce emissions
- Continuing to engage with partners and gain experience on enhancing natural systems like forests and wetlands that absorb carbon
- Partnering with customers to electrify other sectors like transportation and industry for net emission reductions and community benefits

Entergy's Path to Net-Zero

Strategic actions we are taking today and will continue:

- Retiring all coal-powered plants
- Replacing older, less efficient gas units with modern, efficient ones
- Adding renewable energy resources and storage
- Investing in our nuclear units
- Enhancing energy efficiency and demand side management offerings
- Exploring distributed generation opportunities

Opportunities and technological advances include:

• Exploring alternative fuels, like renewable natural gas and hydrogen

- Partnering on the advancement of hydrogen infrastructure
- Supplementing modern gas assets with carbon capture and sequestration technologies
- Exploring supplemental license renewal of existing nuclear units
- Incorporating advanced nuclear
- Monitoring technology developments and potentially integrating as they are developed

Assessment of Public Health Impacts and EJ Considerations

Entergy is mindful that public health impacts and EJ concerns are important considerations in the daily operation of the company. Entergy respects the human rights of all individuals and defines human rights as those inherent to everyone, regardless of race, sex, nationality, ethnicity, language, religion or other status. Everyone is entitled to these rights without discrimination and Entergy is committed to the advancement and protection of human rights in all our operations.

Entergy strives to minimize any potential adverse effects of our activities on the local communities we serve, including the communities of our low-income customers. We consider environmental justice impacts in our policies, including climate change policies, to minimize adverse environmental effects and to sustain our communities. We maintain open communication and seek opportunities to partner with our stakeholders on environmental justice concerns.

Entergy aspires to be an industry leader in protecting our environment. Environmental laws, regulations and orders affect many areas of Entergy's business, including restrictions on hazardous and toxic materials, air and water emissions, and waste disposal. Entergy is committed to meeting or surpassing compliance with environmental and all applicable regulatory requirements and enhancing the communities we serve.

To that end, the following provides several examples of measures that Entergy has taken regarding potential public health impacts and EJ considerations. In developing new generation, EAL identifies candidate sites and then conducts an evaluation of environmental factors and land use considerations for each site and its surroundings. This evaluation considers the presence of wetland areas, existing water quality in nearby water bodies, the potential presence of threatened or endangered species, and ambient air quality. Many of these factors are similar to the environmental indicators considered by the EPA's EJSCREEN tool. In addition, EAL conducts environmental due diligence reviews to identify any existing environmental conditions at or near a proposed site for generation development.

Entergy employed EPA EJSCREEN environmental and justice mapping tool to evaluate the proposed Searcy Solar and Walnut Bend Solar projects to evaluate potential environmental justice issues that may warrant additional consideration and to inform our outreach and engagement practices. Below are the results for within a 1 mile and 10-mile radius.

Project	Minority Population			Low Income Population			Demographic Index		
	1-Mile	10-Mile	State Average	1-Mile	10-Mile	State Average	1-Mile	10-Mile	State Average
Searcy Solar	37%	14%	27%	58%	43%	41%	48%	30%	34%
Walnut Bend	38%	44%		40%	46%		45%	39%	

The EPA EJSCREEN results indicate that the project sites are within an area with a demographic index (average of low-income and minority population percentages) of 30% and 39% for a 10-mile radius, which are slightly below and above the state demographic index average of 34%. For a 1-mile radius, the project sites are within an area with a demographic index of 48% and 45% which are both above the state average but not significantly. Therefore, the projects are not expected to disproportionately affect minority or low-income populations.

Entergy continues to review and analyze best practices related to potential public health impacts and EJ considerations, including the use of EJSCREEN and other beneficial tools, in planning for the future. With Entergy's commitment to achieve net-zero carbon emissions by 2050, to retire all coal-powered capacity by 2030, and to conduct due diligence in its operations, it is apparent that Entergy is striving not only to improve the environment but also to improve the communities we serve by reducing potential public health impacts.

SECTION V. CONCLUSION

EAL believes that the commentary herein addresses the Stakeholder Committee's feedback with respect to its various modeling requests, conducting an all-source RFP, and environmental and economic justice concerns. The Company appreciates both the efforts and the feedback of the Stakeholder Committee and looks forward to engaging further as EAL's IRP process continues in 2021, which will continue with the scheduled data posting in January. If the Committee has further questions or feedback, please continue to use the IRP Inbox at <u>EALIRP@entergy.com</u> for communications.