AEP/Southwestern Electric Power Company Integrated Resource Plan Stakeholder Committee Report With Company Responses – November 2015

May 15, 2015

Meeting Held March 3, 2015
Texarkana, Arkansas

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I. Executive Summary

On March 3, 2015, AEP hosted an Integrated Resource Plan (IRP) Stakeholder Committee Meeting. The meeting was attended by retail and wholesale customers, and members of regional power providers, environmental groups, Southwest Power Pool, low-income advocates, and others. The meeting consisted of presentations by AEP on the objectives and goals of the Integrated Stakeholder Committee Meeting, Resource Planning Guidelines, and a description of the Draft IRP and IRP assumptions.

Prior to the beginning of the meeting, stakeholders were provided a draft copy of the Integrated Resource Planning Report, which will be filed with the Arkansas Public Service Company. This Stakeholder Committee Report represents discussions and recommendations regarding renewables, demand side management and energy efficiency, ratepayer impacts, environmental mandates, and supply resources.

II. IRP Presentation Attendees

The following were present during the AEP/Southwestern Electric Power Company IRP Stakeholder Meeting.

Name	Representing	Email
Tracy Altenbaumer	Domtar	tracy.altenbaumer@domtar.com
Clark Cotten	Arkansas Public Service Commission	clark_cotten@psc.state.ar.us
John DiDonato	NextEra Energy Resources, LLC	john.didonato@nexteraenergy.com
Juliano Freitas	Southwest Power Pool	jfreitas@spp.org
David Fincher	Hope Water & Light Commission	dfincher@hope-wl.com
Bob Grygotis	Domtar	bob.grygotis@domtar.com
Tammara Harrelson	Arkansas Department of Environmental Quality	Harrelson@adeq.state.ar.us
Glen Hooks	Sierra ClubArkansas	glen.hooks@sierraclub.org
Forest Kessinger	Arkansas Electric Cooperative Corp.	fkessinger@aecc.com
Lud Kozlowski	ACAAA	lkozlowski@acaaa.org
Gerry Larsen	Smith-Blair	Gerry.Larsen@smith-blair.com
Kenneth Leary	Cooper Tire	kfleary@coopertire.com
Mak Nagle	Apex Clean Energy, Inc.	mak.nagle@apexcleanenergy.com
Kevin Lemley	Attorney General	kevin.lemley@arkansasag.gov
Gary Moody	Audubon	gmoody@audubon.org

Wally Nixon	Arkansas Public Service Commission	WNixon@psc.state.ar.us
Nick Paxton	Smith-Blair	Nick.Paxton@smith-blair.com
Aaron Pupa	LS Power Development, LLC	apupa@lspower.com
Ken Smith	Arkansas Advanced Energy Foundation	ken@klsmithconsulting.com

III. Stakeholder Feedback

THE IRP DRAFT REPORT

It is suggested that a section be added to the report to address what SWEPCO sees as challenges or hurdles to achieving the preferred plan. For example, the IRP does not address possible electric transmission requirements associated with the addition of 1,700 MW of wind resources or concerns with competition for wind resources nationally; achieving 410 MW of incremental energy efficiency and the programs needed to promote this growth; and other items. This added section should also present the challenges or obstructions that AEP foresees that exist in either state or federal legislation or regulation to achieving its preferred plan. The presentation of this information would assist the reader to understand that based on the assumptions for the planning horizon, the preferred plan is the economic choice, but the plan may rely on extrinsic factors beyond AEP's control to achieve.

The Stakeholders did not see anything that reflects the percentage of capacity at which the assets are operated.

Company Response:

The Five Year Action Plan now includes potential challenges and obstructions that could occur during the implementation period.

The magnitudes of additional wind and energy efficiency (EE) were both reduced in the Preferred Portfolio versus the Draft Report. This was driven by updates to the: EE inputs, Wind capacity credit value, Load Forecast and Fundamental Commodity prices. Additional detail is included in the Final Report, as well as summarized in each section below.

Capacity factors are not explicitly reported, however actual generation by resource type can be found in Exhibit H: Modeled Scenario Results.

RENEWABLES

A stakeholder was impressed with incorporation of renewables into the plan. However, he did not have a sense as to what that is compared.

The inclusion of renewables provides a balanced generation portfolio.

A stakeholder asked what the possible for alternatives are if we do not get competitive prices for solar or wind. Also, where would SWEPCO go from there? Are they looking at life cycle costs? What is the fall back position?

A stakeholder suggested adding incremental steps between current the pie chart and projected pie chart for 2035. (e.g. add additional pie charts showing visual changes over five year periods).

Additional renewables are expected to be brought online post-2020/2021 – we would like to see it stepped up accordingly. A stakeholder questions the waiting until 2021 to add renewables until demand catches up. It is recommended that an explanation be given for waiting until 2021. It may be prudent to secure PPAs now for renewables (particularly wind) to take advantage of federal production tax credit (PTC) qualified pricing rather than wait until 2021 when PTC is expected to expire or phase out. SWEPCO can always lock in the most competitive price while pushing the start date of the PPA contracts two to three years from now. The developer can sell the power to third party or into SPP market.

A stakeholder suggests an analysis to show an early acquisition of wind resources (economic analysis) to displace thermal.

Current PTC guidance would allow wind resources to be acquired by 2016 which will allow the Federal PTC of 2.3 cents per Kilowatt hour. (Benefits)

Regarding capacity value, an explanation of how they arrived at the 10% for their capacity outreach should be given. Is 10% the right number? Should it be 12.5%? Should it be 8%?

Company Response:

The Five Year Action Plan describes the Company's potential next steps regarding the acquisition of renewable resources. The IRP process considers all resource costs over the life of each resource alternative that is included in the model. Figures 41 (p. 124) and 42 (p. 125) provide the annual portfolio changes. Securing renewable resources were accelerated to potentially include 200MW of wind and 50MW of solar to be available by 2017, taking advantage of existing tax benefits.

The capacity value of Wind resources was updated to reflect the expected performance of each resource modeled. As discussed in Section 4.5.5.2 of the report, wind resource Tranche A's load shape supports a 20% capacity value, Tranche B's load shape supports a 10% capacity value and Tranche C's load shape supports a 5% capacity value, based on SPP planning criteria.

Levelized Cost of Electricity for Solar Resources

A stakeholder suggested that SWEPCO has done an outstanding job of addressing renewable resources in its draft IRP. However, these technologies are evolving quickly, particularly utility scale solar, and it is easy to inadvertently use outdated information. That may be the case with the Levelized Cost of Electricity (LCOE) for utility scale solar. The current draft IRP assumes LCOE for utility scale solar of between $120/MWh and $140/MWh, depending on whether you assume a future federal investment tax credit (ITC) for solar (and at what rate – i.e., 30%, 10% or zero). Currently, in Texas, utility scale solar PPAs are being signed for $55/MWh levelized for 20 years. It is unclear how to convert this to LCOE for a rate-based asset, but it seems to be significantly lower than what has been modeled. This price appears more indicative of ERCOT pricing; therefore, companies in the western area of the Southwest Power Pool grid would likely obtain more competitive pricing. If the LOCE for utility scale solar is remodeled and is, in fact, lower, then perhaps the model would conclude that more solar should be built, less of something else (probably wind) and the overall cost of the preferred portfolio may be lowered.

Company Response:

The Company maintained its estimate for the installed cost of solar for modeling purposes. The Five Year Action Plan describes the Company's next steps regarding the potential acquisition of renewable resources. Should the timeline provide sufficient opportunity for the Company to issue an RFP for renewable resources, proposals are expected to address the pricing issues mentioned above by the Stakeholders.

Timing of Purchased Power Agreements for Wind

A stakeholder suggested that SWEPCO has done an outstanding job of explaining the timing of its capacity needs. However, as it relates to the timing of procuring wind, it would be beneficial to see what the overall cost of the preferred portfolio would be if SWEPCO purchased wind before the federal production tax credit (PTC) expires, instead of after. The Present Value of the PTC (pre-tax) over 25 years to a developer is approximately $23.50/MWH. It may be more economical to purchase wind in 2016 with this $23.50/MWh incentive and sell it back to the market until 2021 than wait until 2021 and lose the $23.50/MWh incentive. The model should be able to tell us. As an alternative, maybe a developer would sign a PPA that begins in 2021 now and build before 2016 to claim the PTC. The benefit this approach is that it would likely lower the cost of the preferred portfolio.

Company Response:

Based on the assumptions included in the IRP report, the Company's Five Year Action Plan addresses this concern by, to the extent possible, accelerating 200MW of wind and 50MW of solar resources to take advantage of the current tax incentives associated with renewable resources.

Too Much Dependency on Renewables

It appears the leverage of renewables does not feasibly meet demand at cost competitive levels. Short-term loss of demand in 2017 & 2018 – how does that impact cost over the short term? Does it impact rates from fewer base customers?

Rate increases will hinder any future industrial and manufacturing competitiveness. How do our proposed rate increases compare to other sections of the country, region, state? The benefit of addressing this is to ensure stabilized rates in order to be competitive.

Company Response:

The Company's Preferred Portfolio will diversify the generation portfolio over the planning period which will assist the Company in providing stable rates over the planning period. Additionally, the plan may assist the Company in meeting future compliance requirements associated with the Clean Power Plan.

DEMAND SIDE MANAGEMENT AND ENERGY EFFICIENCY

Demand side management (DSM) and energy efficiency (EE) provides a value to the ratepayer, a balanced portfolio, and reduced risk.

SWEPCO did a good job of hitting energy efficiency savings. When you throw in the Volt var with the demand response you are looking at 410 megawatts of savings there. Another Arkansas electric utility target was 700 Megawatts over a 10-year period of time during their last IRP. On the Energy Efficiency (EE) side, it's an aggressive target.

An Arkansas Energy Efficiency Potential Study is being developed which will provide needed information regarding Arkansas-specific market conditions prior to the development of energy efficiency goals and targets by the Arkansas Public Service Commission. It is recommended that a summary of this Potential Study be incorporated into the IRP and the resulting Potential Study data should be incorporated into AEP's level of what needs to be done in terms of meeting EE savings.

IRPs specifically are important when looking at power purchase agreements, energy efficiency and see if what they do is consistent or different from the IRP that was filed.

Under the Volt Var piece with EE, (table 4-5 on page 83), it is suggested that a column be added for geographic region besides number of circuits. It would helpful to have that breakdown to better understand things.

SWEPCO is encouraged to seek out Combined Heat and Power (CHP) candidates over to planning.

Company Response:

The Company has included a summary of the status of the Arkansas Potential Study within Section 3.5.3 of the IRP report. Additionally, the Volt VAR Table 11 (p. 89), in Section 4.4.4.2 was updated to show the impacted circuits by state. The report also includes the Company's discussion on CHP, within Section 4.5.6.

RATEPAYER IMPACTS

There are concerns for all consumer categories (response to low and moderate income comment) and the economic result higher rates might bring.

The short-term loss of two large customers does not reflect:

1) Plan to remove high operating cost units
2) Impact to remaining customer base

What are the options to reduce costs to lessen the impact of price increases going forward? Is there a short-term plan to address drop in demand with higher cost power being mothballed? The IRP should reflect the impacts of decisions outside the region. For example:

Solar – Demand for units to drive cost up and availability down
Wind – Demand for units to drive cost up and availability down

This would give a more balanced view of the likely outcome that reflects markets outside the region, but adjoining or relevant asset comparisons.

The resources SWEPCO uses for its plan need to be efficient and cost-effective so that the rate impact from the plan does not cause a heavy burden of low to moderate income SWEPCO customers.

Company Response:

The two large customers that are referred to also provide generation to meet the majority of their load requirements, resulting in a moderate net change in SWEPCO's capacity position. SWEPCO has included staggered retirements of its older less efficient gas-steam units (Section 3, Table 2 (p. 41)). The Company's Preferred Portfolio was developed to manage future risk and provide a cost-effective path forward.

ENVIRONMENTAL MANDATES

Environmental mandates are in process or in effect. Another Arkansas electric utility stressed this impact on their system. Does SWEPCO have that impact laid out like the other utility? That could be helpful. Another stakeholder was satisfied that it is addressed.

It is suggested that AEP be aware of the regulations regarding 111.d and addressing them in order to keep resources adequate, while costs to customers low. The possible impact of EPA Rule 111.d. and the uncertainties as to what the fuel mix may result when these are finally finalized is important, particularly the economic and environmental impact it may have on U.S. energy supply and related costs in energy bills and how they might impact low to moderate income. The IRP addresses this as much as is able on what is known; therefore, no changes are recommended at this time. The final regulations will drive consistent adjustments and trying to plan around that can be complicated. Making sure the resources SWEPCO uses are the most efficient and cost-effective so that they won't impact customer rates to where low to moderate income rate payers are unreasonably burdened.

Addressing the impacts of Rule 111.d places SWEPCO in a better position in responding to the development of state plans.

Company Response:

The IRP report addresses these concerns within the Executive Summary, Section 3.4 and Section 6.

SUPPLY

It is suggested that a criterion for a siting plan or a preferred siting plan be integrated as part of the IRP. Among those criteria would be available transmission to deliver the resources.

There are concerns for natural gas delivery. If we don't have gas here, will the plan be feasible? Pressures are being developed on natural gas. Can supply keep up with that?

Company Response:

The Company agrees that the available transmission capacity related to any generation resource can impact that resource's effectiveness. This analysis is considered in the implementation phase when specific resource locations have been determined. The IRP does not identify specific resource locations, only the types of resources that provide the best solution for the Company.

When the Company analyzes RFP responses for proposed resource additions many factors will be considered in the analyses including for example: siting issues, fuel supply, technology reliability/performance and transmission interconnection issues, etc.

IV. CONCLUSION

The stakeholders wish to thank AEP/SWEPCO for the opportunity to meet with the company to discuss its generation and transmission needs and its opportunities through an integrated resource planning process. We believe the company generally has been on the right track to diversify its generation portfolio by modernizing the base load generation, by shutting down Welsh 2 in 2016, and by incorporating more renewable energy. The stakeholders endorse the company's continued progress and improvements in energy efficiency programs even in light of the restrictions on commercial and industrial programs that the Arkansas Legislature has imposed. We believe SWEPCO's EE programs are exceptional working models of how utilities should operate EE programs.

We caution AEP/SWEPCO regarding future investments to Welsh Units 1 and 3 in light of MATS, regional haze rules, and pending carbon emission reductions. The stakeholders are wary of environmental retrofits of existing fossil fuel plants that could lead to significant rate increases. In considering the future of these plants, we call attention to generation options including natural gas, wind, and solar. The Arkansas Legislature recently passed House Bill 1633 that allows electric utilities to enter into long-term "power purchase agreements and to recover an additional sum as determined by the public service commission…. a commensurate return on the power purchase agreement as would be allowed for an equivalent investment in a power plant….an equitable sharing of any savings between the utility and the retail customers of the utility….."

Elevating the status of PPAs for generation, current abundance of natural gas, declining costs of wind and solar, and improvements in demand side management programs offer generation and management tools not readily available in past years. These concluding statements bring the stakeholders to perhaps their most important recommendation summarized on pages four and five. We encourage AEP/SWEPCO to take advantage of Renewable Energy Production Tax Credits qualified pricing sooner than to wait until 2021 to bring on additional renewable energy. The Renewable Energy PTC is set to expire at the end of 2016. We believe the company now could lock into competitive prices while extending the start of PPA contracts to a later date. We applaud the company's inclusion of a distributed generation target as part of its draft preferred plan. We encourage AEP/SWEPCO to work with its customers, regional advanced energy associations, and state public service commissions to work through any barriers that currently prevent or impede individuals and companies from generating more of their own energy.

A second important recommendation is for AEP/SWEPCO to include the results of the Arkansas DSM and EE potential study into the company's IRP. How will the study impact the company's target of 410 megawatts over the 20-year horizon? What would be the rate impact in the preferred plan?

The stakeholders appreciate AEP/SWEPCO's consideration of the pending carbon emission reduction rule under Section 111(d) of the Clean Air Act. The final rule is due in mid-summer 2015. After the rule is released, we recommend that the company conduct a new analysis of how close the company's preferred plan achieve its share of state carbon reduction targets and an analysis of cost-effective options for doing so.

Finally, the placement of generation and transmission facilities always is controversial be it transmission lines across the Ozarks or new generation. So a final recommendation is for AEP/SWEPCO to include an informed discussion about the transmission of electricity to the SPP or a natural gas line to a generation plant as part of a final IRP.

Company Response:

The Company would like to thank all of the Stakeholders for both participating in the Stakeholder meeting held in Texarkana, Arkansas on March 3, 2015 and for developing very constructive comments and feedback on the Company's DRAFT IRP.