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Subject: SERP Funding

Dear Craig:

This report documents the results of the SERP funding analysis.

Background on SERP

Liberty Utilities sponsors The Empire District Electric Company Supplemental Executive Retirement Plan (SERP), which was established to provide each participant in the plan with the benefits the participant would have received under The Empire District Electric Company Employees' Retirement Plan except for the limitations on compensation and benefits imposed under Sections 401(a)(17) and 415(b) of the Internal Revenue Code. Each former officer of The Empire District Electric Company whose accrued benefit under The Empire District Electric Company Employees' Retirement Plan was reduced by either the limitation on compensation imposed by Section 401(a)(17) of the Code or by the benefits limitations imposed by Section 415(b) of the Code was a participant in the plan.

The SERP Restoration plan was established and maintained as an "unfunded" plan. This is consistent with market practice.

Modeling Assumptions

Several assumptions must be made to perform the modeling as to whether a SERP funded via a Rabbi Trust is less expensive to ratepayers than benefits paid from Liberty's general funds for the life of the plan. The assumptions and the rationale for their selection are listed below:

- **Asset Return:** Asset returns of 5.45%, 7.45% and 3.45% have been utilized in the modeling. The 5.45% return is the anticipated tax adjusted rate of return for a portfolio similar to that used for Liberty's traditional pension plans as calculated by the investment adviser, CBIZ. The 7.45% and 3.45% returns are intended to show ranges around the expected return. Note that while one-year returns may be considerably higher or lower than this, the compound return over the plan's long time horizon would moderate to a smaller range around the expected return. In addition, payouts in the first ten years are relatively high, so we expect the plan would need to be as conservatively or more conservatively invested than the current traditional plans.

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- **Cost of Capital (Discount Rate):** Cashflows are discounted at Liberty's Weighted Cost of Capital of 7.52%, with the exception of the first year's cashflow which is discounted at a proxy for short-term debt costs, assumed to be the 1-year Treasury rate of 2.37% as of May 7, 2019.
- **Mortality:** RP-2014 mortality table for employees and healthy annuitants with fully generational projection using scale MP-2018 modified to reflect Social Security Administration's ultimate improvement rates in their 2018 report, which is used in Liberty Utilities' GAAP Accounting and SEC 10-K reporting. This is a typical assumption for mortality used by many companies and reflects the most recently available data. The mortality is applied individually to each participant in the SERP plan.
- **Retirement Age:** Age 55 is the assumed retirement age for those participants who are not yet retired.
- **Assumed set up costs for Rabbi Trust**: $30,000 for drafting of Rabbi Trust document, modifying plan documents and reporting documentation, and setup of Trust and Custody services.
- **Annual Trustee Costs for Rabbi Trust**: $10,000 annual fee, per Benefit Trust Company
- **Contribution Allocation Methodology:** Assume Liberty either fully funds the trust up-front, or makes level contributions over the next 5 or 10 years.
- **Rate Reimbursement:** Legacy Empire cost for SERP benefits is recovered in rates as the cash payments are made. We assume if the benefits were funded in advance, rate recovery would be made at the time of the cash contribution to the trust. We expect this treatment would need to be clarified and approved with the Commission in combination with the approval of the prefunding of the SERP, if this analysis were to show pre-funding is more favorable to ratepayers.
- **Reimbursement Timing:** All scenarios assume new rate cases will be effective in 2019, 2021, 2023 and every four years thereafter in compliance with the FAC rule. This is based on Liberty's future expectations. A regulatory lag is also assumed, meaning that in the year a rate case is effective, it is assumed that the actual benefit payments from the prior year will be reimbursed beginning on 1/1 of the rate case year.
- **Tracker:** Some scenarios illustrate the impact if a tracker is added to the regulatory stipulation, whereby the difference between the actual benefits paid and the amounts reimbursed by the ratepayers over the prior rate case is amortized over five years beginning with the next case.

Results

In the cases modeled, the cost to ratepayers of reimbursing benefits as they are paid (a "Pay-as-You-Go" basis) was lower than the cost of pre-funding.

Comparing the present value (discounted at the cost of capital) of the current reimbursement to the discounted reimbursements of funding a Rabbi Trust with expenses yields the following results:

Present Value of Additional (Cost) Savings to Fund Rabbi Trust (in US $millions)			
	Trust Return		
	5.45%	3.45%	7.45%
Single Up-Front Contribution	(2.7)	(5.9)	(0.4)
Level Contribution Over 5 Years	(2.2)	(4.9)	(0.4)
Level Contribution Over 10 Years	(1.8)	(3.7)	(0.4)
Tracker w/ Single Up-Front Contribution*	(2.5)		
Tracker w/ Level Contribution Over 5 Years	(2.1)		
Tracker w/ Level Contribution Over 10 Years	(1.6)		

*Tracker results under a 3.45% and 7.45% asset return would similarly be slightly lower than the corresponding results without a tracker.

Additionally, the break-even cost of capital was modeled, where the break-even cost of capital is the return on funds if used elsewhere that would make the ratepayer indifferent between the two approaches. For example, a ratepayer would be indifferent if they could earn 5.29% if they did not fund the contribution up-front, and would be in favor of funding the SERP up-front if they could only earn less than 5.29% elsewhere.

Break-even Cost of Capital	5.45% Trust Return
Single Up-Front Contribution	5.29%
Level Contribution Over 5 Years	5.26%
Level Contribution Over 10 Years	5.21%

Sincerely,

Michael K Mace

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