

**U.S. Department of Energy Quadrennial Energy Review – Second Installment
Transmission Development with an Evolving Generation Mix
Public Meeting, May 6, 2016 – Des Moines, Iowa**

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Good afternoon, I am Carl Huslig, senior vice president of business development at GridLiance. Thank you for the opportunity to be here today to discuss some of the challenges and opportunities for future transmission development in the Midcontinent Independent System Operator (MISO) and Southwest Power Pool (SPP) regions.

My comments will be from the perspective of the unique role GridLiance is designed to play in the market. Specifically, GridLiance is the nation's first competitive transmission company (Transco) singularly focused on answering the unmet transmission needs of U.S. municipal, cooperative, and joint action agency utilities (Public Power). Formed in 2014 and backed by the Blackstone Group, GridLiance aims to partner with Public Power to develop, construct, acquire, co-own, and operate new or upgraded transmission systems that will help deliver lower-cost and more reliable transmission service to their customers, while simultaneously increasing their access to previously inaccessible clean generation. By pursuing long-term co-development agreements with prospective Public Power partners, GridLiance enables these entities to jointly invest in new previously inaccessible transmission projects in MISO and SPP that will deliver a range of significant economic and operational benefits for their customers. For example, under three such agreements we have signed with the Missouri Joint Municipal Electric Utility Commission, the Oklahoma Municipal Power Authority, and Tri-County Electric Cooperative, GridLiance is working with their member utilities to jointly pursue both traditional and competitive investment opportunities in the two regions and at their adjoining seams.

While GridLiance considers itself part of the solution, the obstacles facing Public Power and competitive transmission development are real. In short, too many Public Power entities lack meaningful opportunities to invest in new or upgraded transmission facilities and integrate them into markets operated by Regional Transmission Organizations (RTOs) like MISO and SPP. Likewise, despite early progress, the Federal Energy Regulatory Commission (FERC)'s policy of promoting competitive transmission development has not been implemented in a way that consistently captures optimum value for RTO ratepayers. Finally, recent progress at FERC notwithstanding, beneficial interregional transmission projects continue to be unreasonably delayed or denied approval by misaligned regional planning criteria and modeling practices, denying customers the benefits of such projects. As a result, RTO planning and cost allocation policies do not adequately support the development of the modern transmission grid needed to support a more diverse energy landscape. As detailed below, DOE and FERC should address these challenges by jointly endorsing RTO rate, competition, and seams policy reforms so that the benefits of regional and interregional transmission, and the benefits of transmission competition generally, can accrue to all customers in MISO and SPP as well as their neighboring regions.

Public Power's Transmission Investment Challenge

At the outset, I think it is important to understand the general nature of Public Power transmission investment. There are a number of large, highly sophisticated Public Power utilities in the MISO and SPP regions, primarily Generation and Transmission cooperatives, which have been successful in addressing the transmission needs of their customers and providing them with access to diverse generation resources. Many have made substantial investments in transmission infrastructure. However, as a general matter, there presently exists a critical need for additional investment in Public Power transmission systems (particularly municipals) and broader Public Power engagement in regional transmission planning and development. Through its discussions with potential partners in the MISO and SPP regions (most Public Power entities have not joined RTOs), GridLiance has found that the Public Power utilities have significant unmet transmission needs and face many practical obstacles to greater participation in transmission planning and construction particularly at the RTO level. Critically, not only are new transmission needs going unmet, but many existing Public Power systems in the MISO footprint are aging faster than they are replaced. Nationally, this situation must be reversed if the broad benefits envisioned by the Administration's Clean Power Plan are to be attained by all consumers, Public Power and investor-owned utility (IOU) customers alike.

The lagging investment in municipal systems is due, in large part, to several factors. As an initial matter, underdevelopment of the transmission facilities serving Public Power is a product of historical supply arrangements that predate introduction of competition to the transmission industry and commonly left wholesale municipal customers captive to a single IOU provider. Further, their connections to their incumbent IOU supplier are often by single radial lines and/or low voltage feeds. The starting point for many municipalities, therefore, are transmission systems that leave their loads without access to diverse generation options, captive to the incumbent utility in whose territory the single connection exists, and exposed to congestion and reliability issues.

Further, the ability of Public Power utilities to improve upon such arrangements is limited. As discussed further below, historically it has been very difficult, if not impossible, for transmission-dependent Public Power utilities to join RTOs and participate in the RTO transmission planning process. The resource commitment to meaningfully participate in an RTO along with existing cost allocation rules inhibit many Public Power entities from joining and receiving the attendant membership benefits. As a result, their systems are excluded from RTO planning models. This causes a material disparity at the RTOs between how transmission is planned for Public Power versus the customers of member IOUs. For example, North American Electric Reliability Corporation (NERC) rules allow the RTOs to treat a radial feed to a municipality as a single meter despite the fact that thousands of customers may be served by the feed. In contrast, the RTO planning process "sees" every end user retail customer of an IOU as the single meter it is. Thus, the RTO planning process typically does not adequately reflect Public Power's needs and interests, and Public Power has traditionally had limited, if any, opportunities to invest in the transmission expansion plans of RTOs. While some projects involving Public Power like the CapX 2020 consortium have proven successful, they have proven to be sporadic examples of success in the face of systemic challenges.

The ability of many Public Power utilities to address their transmission needs outside of an RTO are, furthermore, unrealistic. First, the RTO transmission investment opportunities that spread the regional grid improvement costs to other RTO member beneficiaries simply are not present for municipalities operating outside an RTO. Second, a competition for capital at these municipalities often means Public Power must devote resources to addressing municipal issues other than transmission, or to addressing other pieces of their electric utility system. This means that, as a practical matter, Public Power often has to look to a third party for transmission planning and investment. Unfortunately, local and state transmission developer restrictions like rights of first refusal (ROFR) to construct often dictate that the only third party to whom Public Power can look is the incumbent to whom the Public Power entity is already captive and which, moreover, generally has competing interests. For example, the incumbent utility may benefit from keeping the transmission system “as is” or less efficiently networked in order to push its own generation to the captive municipality or attract new industrial customers to its own service territory rather than the near-by municipality’s. The result is a lack of competitive influence on the incumbent’s market power, and costly/inefficient solutions that favor the incumbent’s desires and push costs to the municipalities. As such, notwithstanding FERC’s efforts to introduce competition into the transmission industry, state and local ROFR requirements continue to frustrate efforts by Public Power to attract the third-party capital necessary to bolster their systems and many of the historical radial line and low voltage Public Power connections remain in place.

For transmission-dependent Public Power utilities lacking realistic opportunities to develop significant new transmission facilities, the adverse consequences are often quite significant. First and foremost, the radial, low voltage connections subject them to material reliability and congestion issues, constraining their ability to attract new industry and businesses to grow their local economies. Second, these captive entities are allocated costs when the RTO and incumbents to whom they are connected plan and construct new transmission to network the incumbents’ loads to meet NERC reliability standards. Yet, because the RTO sees whole municipal systems as a single meter, the same reliability upgrades are not installed to their benefit. Third, the incumbents to whom these Public Power entities are connected attain financial returns in exchange for their ownership of RTO-controlled new transmission lines, which offset the energy costs of their customers. Public Power utilities lack the wholesale transmission revenues incumbents receive from such lines to mitigate their costs, causing higher utility bills for their customers and even less capital at hand for future investment. Finally, and more specific to the purpose of the DOE’s Public Meeting, because such Public Power entities by necessity must take the generation source available locally through their low voltage radial connections, their ability to access new and clean generation resources for their customers will be limited accordingly.

Public Power’s RTO Integration Challenge

It is important to acknowledge the recent progress made integrating Public Power into MISO and SPP and the underlying factors for that success. In 2007, there were only four municipal transmission owners in MISO, now there are 29. In a similar timeframe, the number of transmission-owning municipals filing their own transmission cost template in SPP climbed from one to ten. However, there are over 2,000 municipal utility systems across the nation. So, while municipal RTO participation has risen, by far the vast majority of municipal utilities are not RTO members.

There are some basic reasons that most municipalities remain outside of the RTO system. Public Power entities are not subject to the FERC's oversight and RTO participation is voluntary. RTO membership, however, is not a neutral proposition. A Public Power entity that elects to join an RTO subjects itself to FERC's rate-making authority and gives up a degree of self-control. As such, for a Public Power entity to join an RTO, the benefits must clearly outweigh the costs.

One of the reasons transmission-owning municipals are increasingly joining RTOs is the reasonable returns FERC has allowed them to achieve on existing and new transmission investment. FERC policies such as offering Public Power hypothetical capital structures and the same return on equity as IOUs have been essential. A rate structure that reflects a Public Power entity's actual cost of capital, which tend toward 100% low cost debt, results in rates where Public Power utilities simply recover their costs and earn zero return. As such, FERC's recent policies to adopt hypothetical capital structures that incorporate IOU equity returns need to be maintained in order to continue to encourage RTO participation and investment, including joint investment with IOUs and Transcos. There is a danger that these policies, which have been successful to date, could be diluted and scaled back, thus losing the momentum that has been obtained to date and perhaps stalling further integration.

Importantly, even with such rate incentives, immense obstacles to RTO participation remain especially for smaller Public Power systems which are, by far, the majority. Public Power utilities typically lack sufficient resources and staffing to participate in the RTO planning process and construct their own transmission facilities. It takes in the range of four full-time employees at an annual cost of approximately \$500,000 to meaningfully engage in an RTO. The rate treatment and other RTO benefits must outweigh these direct costs to participation. Additionally, RTO cost allocation rules discourage Public Power utilities operating outside an RTO from performing the same type of reliability upgrades that are routinely performed on incumbents' systems, including as a result of NERC reliability standards. When incumbents upgrade low voltage lines or loop their existing radial transmission assets, the costs of such investments are borne not only by the incumbents' customers, but also by the customers of municipal systems that are served by feeds out of the incumbents' zones. When the municipals attempt to perform the same type of upgrades and integrate them under the RTO structure, RTO cost allocation rules generally assign any rate increases associated with these types of new investments across small, local zones. As a result, a municipal's efforts can be met with strong resistance from the incumbent whose customers will share in the rate impact. The expansion and merger of local zones into larger pools is essential to ensuring that costs are spread across a sufficient load base to support the appropriate level of local reliability upgrades that so many Public Power utilities desperately need.

Solving Public Power's Unique Transmission Challenges

Expanding investment and integration opportunities for Public Power utilities is fundamental to ensuring that their customers are not left behind and that all end users have the transmission they need to access a desirable mix of generation. Some of the obstacles to integrating additional Public Power systems into MISO and SPP, such as attaining the resources required to materially participate in RTO transmission planning and accessing sufficient capital to invest in new transmission, can be resolved through innovative partnership and joint ownership models like

GridLiance offers Public Power utilities. FERC has, indeed, historically encouraged joint ownership arrangements and recognized the critical public policy benefits attendant to such projects. DOE can echo this support, and encourage FERC to continue advancing the policies, namely rate incentives and expanded RTO zones, necessary to advance Public Power's integration into the RTOs and provide Public Power transmission investment opportunities commensurate with IOUs. In so doing, DOE would advance its own goal of providing all end users with the opportunity to access a mix of diverse, next generation energy resources.

Other Necessary Transmission Policy Reforms

Apart from the policies described above that DOE can support to spread the benefits of renewable power generation to Public Power consumers, there are two ways the agency could have a big impact on getting necessary transmission built in the most cost-effective way. First, DOE could encourage FERC's adoption of more rigorous rules governing how qualified entities are selected to build competitive transmission projects. Second, DOE could support efforts to promote interregional RTO transmission planning reforms.

Initially, FERC's policy of promoting competitive transmission development is sound and has the potential to provide consumers with tremendous benefits. It is, however, off to a slow start with the RTOs to date having identified only a very small number of projects for competitive bid. The breadth of projects identified for competitive development simply have to increase or the important goals of FERC's competitive reforms in Order No. 1000, namely that the cost savings from competition are captured by RTO ratepayers, will have no chance of materializing. That being said, we have enough results to show how the rules that govern the selection of qualified entities to build competitive projects need modification. Specifically, competitive bidding to date gives us important lessons learned and clear ways we need to improve the process. The best news is that competition is driving innovation and saving customers money. In the California ISO (CAISO), PJM, and SPP, winning projects will be built for far less than the assumed planning cost. CAISO and PJM have both selected non-incumbents who included cost caps in their successful bids, protecting ratepayers from risks much like we saw for competitive generation. In SPP's first solicitation, competition drove down the incumbent's winning bid to about half of what SPP originally projected.

At the same time, however, the existing rules allow the RTOs or their designated agents too much arbitrary discretion to disregard qualified bids and select higher cost options without justifying what the increased costs buy ratepayers. For example, in the recent SPP competitive solicitation, the selected bid was not the lowest proposal submitted. Three other proposals (by bidders the RTO itself deemed fully qualified to construct and operate the transmission line) would have capped construction costs at over 30% below the winning bid estimate. Moreover, it bears emphasis that the selected winner merely submitted a cost estimate; it did not commit to a cap on capital expenditures. This leaves ratepayers at risk of cost-overruns well beyond the winner's estimate. The actual costs borne by ratepayers may increase to and even exceed SPP's original estimate of twice the winning bid. The ratepayers may ultimately receive zero cost savings. SPP's scoring methodology allowed this outcome as its designated agents had discretion to consider matters outside of the solicitation, and the bidders discovered what criteria the RTO used to score the bids only later at the time of the winner's selection.

The result of the initial SPP competitive solicitation process shows two things. First, it is important to ratepayers that RTO scoring recognize the value of fixed cost bids from fully qualified companies. RTOs should be required to explain, at a minimum, what benefits ratepayers get for the additional expense that the winner bidder will be allowed to incur and pass through. Second, it is vital that the scoring methodology be well-defined and made known in advance and that all parties, the RTO and its designated agent included, abide by the stated method. Competitors simply won't continue to play if the rules are not known in advance of bidding and applied fairly to all respondents. SPP's Board has already begun to explore how to improve its competitive process. We believe it is time for FERC to give stronger guidance to RTOs on adopting the best practices already being identified so that the substantial benefits of competition – innovation and cost savings – can be captured now, not years from now. We would urge DOE to support this effort.

Another way DOE could help is with issuing policy guidance promoting interregional planning best practices. FERC's seams policies must be strengthened to stop the delay or outright blocking of important interregional projects that will make multiple markets more efficient. Unnecessary barriers like voltage and cost thresholds are stopping projects with proven market efficiency. FERC recently ordered MISO to lower its 345 kV voltage threshold for MISO-PJM interregional economic projects to 100 kV, and to remove its \$5m cost threshold. This ruling needs to be expanded to all RTO seams, including SPP-MISO. Additionally, project benefit calculations should be expanded to include the full range of benefits provided by interregional projects. Again, the key here is for DOE to weigh in with FERC in support of seams policy reforms.

QER Recommendations

Gridliance is encouraged by the QER's suggestion that DOE conduct a "national review of transmission plans and assess barriers to their implementation." The Administration has embarked on an important effort to transition our economy from reliance on last generation fossil fuels to long-term sustainable clean energy resources. New transmission investment and infrastructure can play a critical role in ensuring the success of such a policy. However, if federal policy-makers focus such efforts solely on the portion of the US electric market that is served currently through the RTOs, a material portion of end user consumers – those served by the many small Public Power systems that sit outside of the RTOs – will be left behind and never see these benefits. More importantly, the benefit to the US overall from the Clean Power Plan and similar policy initiatives will be minimized because the breadth of opportunities provided would be limited.

The solution is for federal policy-makers like DOE and FERC to promote policies expanding opportunities for Public Power utilities to upgrade their own systems as well as invest in other revenue-producing, regionally-funded transmission projects. Toward that end, we would urge DOE to work with FERC to improve the regulatory environment for Public Power's investment in transmission by endorsing supportive ratemaking policies to be applied to appropriate projects. RTO rate design modifications also will be needed to encourage Public Power utilities operating outside an RTO to upgrade their low voltage networks or loop their existing radial transmission assets and integrate them under the RTO structure. Allowing the spreading of the costs of such investments more broadly across an RTO and/or consolidating existing local RTO zones so the

costs are spread over larger customer bases would mitigate the rate impact problem described above impeding Public Power from upgrading their systems and integrating them in an RTO. DOE should also assess the magnitude nationally of Public Power's unmet transmission needs and the practical impediments to their greater engagement in transmission planning and construction. DOE is ideally suited to do so, and by formally recognizing the important role Public Power joint ownership can play in meeting our nation's transmission challenges and encouraging innovative Private-Public Power transmission financing arrangements, DOE would bring these issues the national priority attention they deserve.

Finally, GridLiance further echoes the call by WIRES in its March 4, 2016 QER comments. DOE should begin its review by analyzing whether the Order No. 1000 regional planning processes complement each other and advance interregional project development. Having DOE issue policy guidance in this area would advance the public interest in having more efficient or cost effective projects move forward.