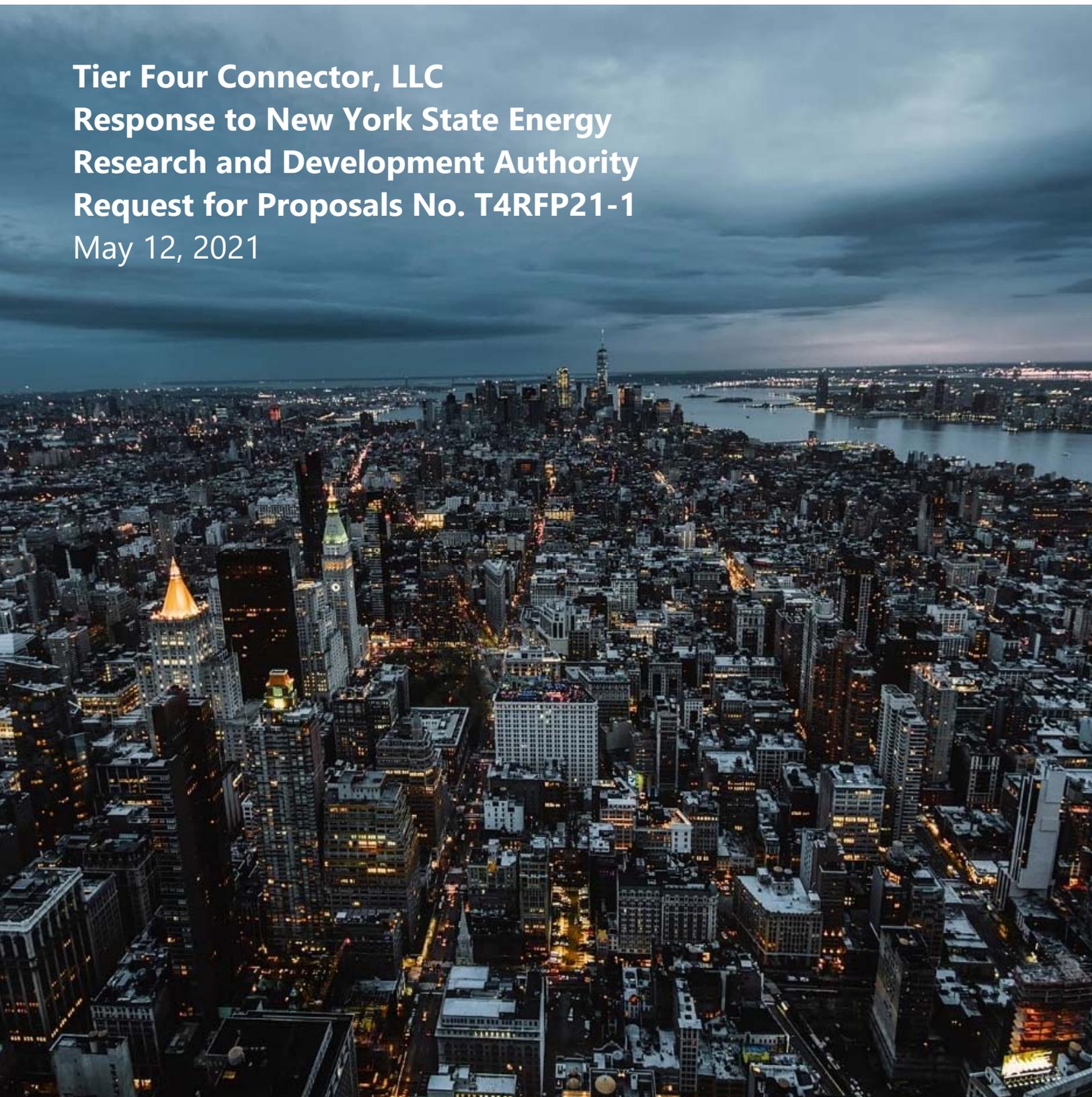


**Tier Four Connector, LLC  
Response to New York State Energy  
Research and Development Authority  
Request for Proposals No. T4RFP21-1  
May 12, 2021**



## Section 1 – Executive Summary

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Tier Four Connector, LLC (“T4C”), an LS Power company, is pleased to provide this proposal to NYSERDA for Tier 4 Renewable Energy Certificates (“RECs”) from eligible renewable resources located in New York State. T4C will deliver renewable energy to Zone J through a new transmission project

from the existing Bowline Substation in Rockland County, New York to the existing West 49<sup>th</sup> Street Substation in New York County, New York (the “T4C Project”). The T4C Project has been designed to achieve the goal of providing New York State with a least-cost, least-risk approach to meeting the defined need of delivering energy and RECs from eligible renewable energy from upstate to load in Zone J. Key benefits of the project include:

- Efficient use of existing system: the project is designed to integrate with and leverage New York’s existing AC transmission system that is already being funded by New York ratepayers and is currently being upgraded to facilitate increased ability to transfer renewable energy to downstate. T4C’s project utilizes the upgraded NYISO transmission system to deliver renewable energy to the withdrawal point and adds the missing link to facilitate incremental delivery into Zone J.
- Minimized impacts: environmental and community impacts are minimized by the project because it traverses the minimal distance necessary to utilize the existing transmission system while facilitating substantial transfers into Zone J.
- New York benefits: the T4C Project and the renewable resource portfolio will be located entirely within New York State providing substantial economic benefits to the State. In addition, production cost modeling demonstrates that the project will provide a more efficient system that will reduce Zone J energy pricing, reduce system CO2 emissions and reduce overall system production costs.

### Company

T4C is a wholly-owned indirect subsidiary of LS Power Associates, L.P. (“LS Power”). LS Power is the most successful competitive transmission provider in the United States and has delivered every one of its competitive transmission projects on schedule and within its cost commitments. The innovative and thoughtful project solution combined with the competitive transmission expertise of LS Power provides

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NYSERDA and New York State with value and benefits that cannot be matched by any other bidder.

LS Power has assigned experienced individuals to lead all aspects of the Project including design, permitting, procurement, construction, commissioning, and operations and maintenance. LS Power is highly experienced at implementing extra-high voltage ("EHV") transmission facilities and has recent experience in New York. Notably in New York, LS Power received a permit under Article VII in January 2021 in unprecedented time for a major project.

LS Power is highly experienced in raising capital for power infrastructure projects having raised over \$47 billion in the power industry including over \$2 billion for construction and operation of more than 700 miles of new EHV transmission facilities in the past 10 years.

## New Transmission Project

## Proposals

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### Resources

### Delivery Requirement

The T4C Project will deliver energy and Tier 4 RECs to Zone J at West 49th Street.

### Schedule

## **Section 2 - Impacts of COVID-19 on Proposer and Project Development**

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COVID-19 has not had a material negative impact on our operations or the process of developing the proposed Project.

### Section 3 - Proposer Experience

T4C is a wholly owned subsidiary of LS Power. LS Power is a privately held power generation and transmission company that owns and manages one of the largest and most diverse independent power generation and transmission portfolios in the United States. Its current portfolio includes over 16,000 MW of power generation and 600 miles of high-voltage transmission infrastructure. LS Power has been awarded seven new competitively solicited transmission projects (230, 345 and 500 kV) primarily under FERC Order 1000 totaling an estimated investment of over \$1.5 billion.

Figure 3.1 below provides an overview of LS Power’s projects across the United States. Additional information on LS Power can be found at [www.LSPower.com](http://www.LSPower.com).



Figure 3.1 - LS Power Footprint

The value provided by LS Power through competitive transmission solicitations has been recognized by a majority of Independent System Operators. LS Power was selected to implement competitive transmission projects in:

- PJM for its first competitive solicitation;
- MISO for its first competitive solicitation;
- NYISO for the largest competitive transmission project in the United States; and
- CAISO for three separate solicitations.

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This success demonstrates LS Power’s unique ability to successfully implement competitive projects while providing significant value to ratepayers. LS Power’s success related to competitively solicited transmission projects is further outlined in Table 3.1.

Project (LS Power Subsidiary)	Project Scope	Status	Selecting Entity	LS Power Advantage
Texas CREZ (Cross Texas Transmission, LLC)	~ 235 miles of new double circuit 345 kV transmission and related facilities in Texas	Operating since 2013	Public Utility Commission of Texas	<ul style="list-style-type: none"> <li>✓ Lowest installed cost per mile</li> <li>✓ Only entity to deliver the project consistent with the original budget</li> </ul>
One Nevada Transmission Line (Great Basin Transmission South, LLC)	~ 231 miles of new 500 kV transmission, ~ 8 miles of new 345 kV transmission and a new 500/345 kV substation in Nevada	Operating since 2014	Incumbent Transmission Owner	<ul style="list-style-type: none"> <li>✓ Worked with permitting agencies, regulators and stakeholders to advance development ahead of competing project</li> <li>✓ Designed to provide significant environmental mitigation benefits at a lower overall cost</li> </ul>
Limestone to Gibbons Creek (Cross Texas Transmission, LLC)	~ 67 miles of new double circuit 345 kV transmission in Texas	Operating since 2018	ERCOT	<ul style="list-style-type: none"> <li>✓ Commercial flexibility to partner with Garland Power &amp; Light</li> <li>✓ Significantly lower cost/mile than components of the larger project constructed by others</li> </ul>
Hope Creek to Silver Run (Silver Run Electric, LLC)	~ 5 miles of new 230 kV transmission (~ 3 mile submarine crossing of the Delaware River with 7 cables – 21 miles total submarine cable installation) and a new 230 kV substation	Operating since 2020	PJM	<ul style="list-style-type: none"> <li>✓ "greater cost certainty with fewer exclusions to its cost commitment"<sup>1</sup></li> <li>✓ "greater flexibility and can mitigate some of the permitting risk"<sup>4</sup></li> </ul>

<sup>1</sup> PJM Interconnection, L.L.C, Artificial Island Recommendation White Paper dated July 29, 2015

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Project (LS Power Subsidiary)	Project Scope	Status	Selecting Entity	LS Power Advantage
Duff to Coleman (Republic Transmission, LLC)	~ 31 miles of new 345 kV transmission in Indiana	Operating since 2020 (7 months ahead of need date)	MISO	<ul style="list-style-type: none"> <li>✓ "the highest degree of certainty and specificity, the lowest risk, and low cost"<sup>2</sup></li> <li>✓ "outstanding combination of high-quality design at competitive long-term costs "<sup>2</sup></li> </ul>
Harry Allen-Eldorado (DesertLink, LLC)	~ 60 miles of new 500 kV transmission in Nevada	Operating since 2020	California ISO	<ul style="list-style-type: none"> <li>✓ "reduced risk of schedule delays in completing the project"<sup>3</sup></li> <li>✓ "most robust cost cap and best mitigated risk of potential cost escalation"<sup>3</sup></li> </ul>
Marcy-New Scotland (LS Power Grid New York Corporation I)	~100 miles of new 345 kV double circuit transmission, 2 new GIS substations in New York	In Development	New York ISO	<ul style="list-style-type: none"> <li>✓ "the more efficient or cost-effective solution"<sup>4</sup></li> </ul>
Gates Dynamic Reactive Support (LS Power Grid California, LLC)	~850 MVAR STATCOM station and two new 500kV transmission lines in California	In Development	California ISO	<ul style="list-style-type: none"> <li>✓ "more robust capital/construction cost, return on equity, and equity percentage caps that should result in lower costs and present less risk"<sup>5</sup></li> </ul>
Round Mountain Reactive (LS Power Grid California, LLC)	~500 MVAR STATCOM station and a new 500 kV switchyard in California	In Development	California ISO	<ul style="list-style-type: none"> <li>✓ "proposed the strongest binding cost containment commitment proposal"<sup>6</sup></li> </ul>

Table 3.1 - LS Power Competitive Transmission Experience

<sup>2</sup> MISO Selection Report Duff-Coleman EHV 345 kV Competitive Transmission Project

<sup>3</sup> California ISO, Project Sponsor Selection Report dated January 11, 2016.

<sup>4</sup> AC Transmission Public Policy Transmission Plan dated April 8, 2019

<sup>5</sup> Gates 500 kV Dynamic Reactive Support Project Sponsor Selection Report dated January 17, 2020

<sup>6</sup> Round Mountain 500 kV Dynamic Reactive Support Project Sponsor Selection Report dated Feb. 28, 2020

### Corporate Organization Chart

Figure 3.2 provides a simplified organization chart identifying T4C's upstream ownership and key relationships.

*Figure 3.2 – Simplified Organization Chart*

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### Project Team

T4C has assembled a complete team of internal personnel supplemented with outside resources for execution of the T4C Project.

*Figure 3.3 – Project Implementation Organization Chart*

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LS Power is a proven innovator and will apply its past experience for the development of the T4C Project. Our willingness to continually approach a complex technical design with a fresh perspective is what sets LS Power apart as a successful innovator:

- The Silver Run Electric project between the Delmarva Peninsula and southern New Jersey included installation of seven (7) three-mile submarine cables (for a total of 21 miles of cable installation) at a depth as much as 70 feet beneath the surface of the Delaware River. This was accomplished using the first-ever application of vertical injector technology in the United States.
- The LS Power Grid California Gates project will represent the largest static synchronous compensator (STATCOM) installation in the United States and also one of the largest worldwide.
- For the 231 mile One Nevada Transmission Line (ON Line), LS Power incorporated a unique tower design that was lighter, required less expensive foundations, reduced ground disturbance, and decreased risks for threatened and endangered species compared to typical self-supporting lattice-style towers.
- The LS Power Grid New York proposal was selected for Segment A of the AC Transmission Public Policy Transmission Need in large part due to the unique approach of a double circuit design that delivered double the transfer capacity of single circuit proposals.

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### References

Below are the names and current addresses and telephone numbers for several references regarding past transmission projects developed by LS Power.

### Market Participant Information



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Contract Structures

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## Section 5- Delivery Plan

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The specific T4C Project elements of the project will include:

### NYISO Interface Capability

The Project includes new transmission which will deliver energy and Tier 4 RECs to Zone J at West 49<sup>th</sup> Street.

With the completion of the AC Transmission PPTN Upgrades in 2023, a significant amount of additional renewable power will be able to flow across the Central East and UPNY/SENY interfaces. However, the southern interfaces of Millwood South, and Sprainbrook/Dunwoodie South will constrain the flow of renewable energy to Zone J. The proposed project creates new capacity across these interfaces for delivery of renewable energy and RECs into Zone J. Figure 5.1 (Figure 46 from the NYISO 2020 Reliability Needs Assessment) identifies the topology for New York State beginning in 2024, after the AC Transmission PPTN Upgrades have been placed in service. Of the major north-south interfaces from Zones F to Zone J, Dunwoodie South is most limiting. Dunwoodie South & Y48/Y50 (Zone I to J/K) has a rating of 5,643 MW, which is approximately 1,500 MW less than the next lowest rated interface on the path from Zone F to Zone J. UPNY-SENY (from Zone F to Zone G) is rated at 7,150 MW, UPNY-ConEd (Zone G to Zone H) is rated at 7,375 MW, and Millwood South (Zone H to Zone I) is rated at 8,450 MW. The most efficient upgrade is one that best matches the Dunwoodie South capacity to the capacity of the upstream paths.

Figure 46: 2020 RNA Topology Years 4-10 (2024 -2030)

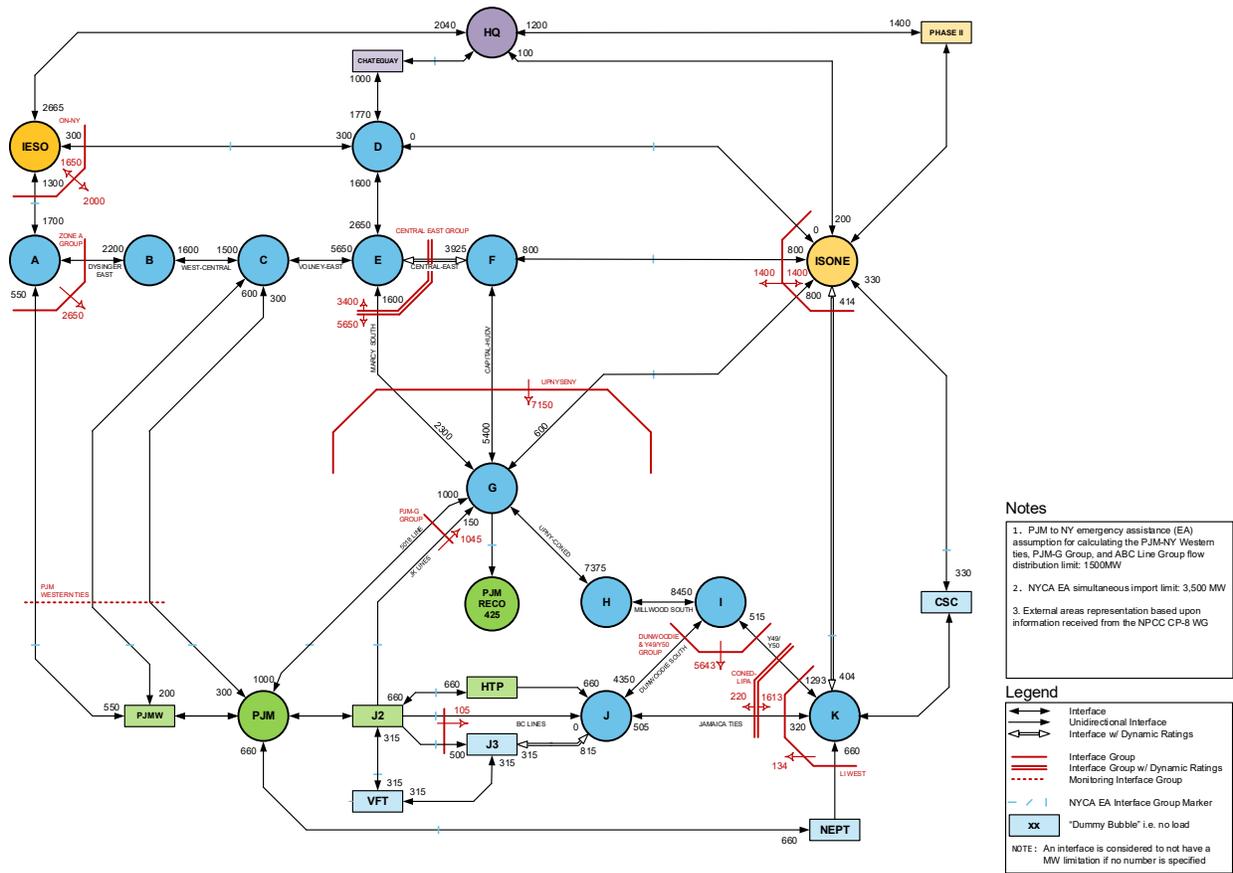


Figure 5.1 – New York State Topology, 2024-2030





### **T4C Project Route and Landowners**

Attachment 5.1 provides the route for the T4C Project.

**Other Required Delivery Information**

A summary of the T4C Project is provided in the following table. T4C will have exclusive firm rights to the entire capability of the T4C Project and this proposal is not conditional upon acceptance by NYSERDA of any other Proposal(s).

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Facility name	T4C Project
Developer	LS Power
Withdrawal Point and Delivery Point	The Withdrawal Point is the Bowline 345 kV bus, and the Delivery Point is the West 49 <sup>th</sup> Street 345 kV bus
Development stage	Preliminary routing and engineering are complete

## **Section 6 - Baseline Verification Plan**

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All Resources will be newly constructed renewable resources and therefore the baseline generation prior to October 2020 is zero. T4C consents to the use of any tracking system and/or auditing regime that may be necessary to verify continued compliance with the delivery and additionality requirements throughout the Contract Delivery Term.

## **Section 7 - Interconnection Plan**

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## Section 8 - Energy Resource Assessment

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### Changes to Expected Deliveries

T4C plans to manage expected monthly deliveries over the Contract Delivery Term to be within the contract requirements. The primary risks to the expected monthly deliveries include:

Weather: is the most significant risk to monthly deliveries; however, the risk of significant variances is significantly reduced over a diverse portfolio of resources when compared to a single resource;

Outages: maintenance schedules are not expected to significantly impact monthly deliveries because T4C will coordinate maintenance schedules with generation owners across the portfolio to ensure that one month is not overly burdened; and

Degradation: degradation may impact individual resources over time, but it will not impact

## TIER FOUR CONNECTOR

the Tier 4 RECs delivered; if degradation begins to effect REC production over time, T4C plans to add resources to the portfolio to ensure that the delivery requirements of the NYSERDA contract are met without any reduction over the delivery term.

## Resource Curtailment

## **Section 9 - Energy Storage Operation Plan**

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## **Section 10 - Business Entity and Financing Plan**

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T4C is a wholly-owned indirect subsidiary of LS Power Associates, L.P. (“LS Power”) which is managed by LS Power Development, LLC, its general partner, as identified in Figure 3.2. T4C will utilize the financial resources and expertise of LS Power to fund the Project during both construction and operations.

LS Power is the most successful company in the United States competitive transmission industry with seven project awards totaling over \$1.5 billion in investment across five of the seven RTO/ISOs. These successes include:

- Selection as a new entrant to build a portion of the CREZ transmission plan in ERCOT;
- Winning the first competitive solicitation in PJM;
- Winning the first competitive solicitation in MISO;
- Winning the most competitive solicitations in CAISO; and
- Winning the largest competitive transmission award in the country in NYISO.

All of LS Power’s competitive transmission projects have been on or ahead of schedule at costs below its commitments – most of which have included binding construction cost caps. The 600+ miles of EHV transmission on new right-of-way completed by LS Power over the past 10 years is amongst the most of any utility in the United States.

The large-scale transmission projects being implemented by LS Power are complex with diverse technical requirements, environmental considerations, and real estate constraints. This includes meeting varying design standards for five RTO/ISOs and more than a dozen interconnecting utilities on first-in-kind projects such as a submarine cable crossing of the Delaware River (7 cables x 3 miles) at a channel depth of 25’ with an in-river transition structure and the largest static synchronous compensator (STATCOM) installation in the United States. LS Power has completed projects crossing multiple state jurisdictions with federal oversight, completed full environmental impact statements, and managed specialized conditions for numerous threatened and endangered species. This has been accomplished on federal lands, ecologically sensitive state lands, and private property including property owned for nuclear generation and in states that do not provide eminent domain for utilities. LS Power’s executive and management staff have been with the company during implementation for all of its large-scale transmission projects as described in Section 3 with individual resumes included in Attachment 3.1. The project management approach used by LS Power, as detailed in Section 3, is built around strong communications and focused on managing risks, schedule, and cost while maintaining high quality and safety. The team in place combined with the project management approach has resulted in LS Power being a low-cost provider of large-scale transmission projects.

LS Power has consistently implemented large-scale transmission projects at a cost lower than other utilities. In Texas, LS Power constructed its transmission facilities at the lowest cost of all comparable facilities and, for the \$6.9 billion CREZ transmission expansion, was the only company able to place its facilities in service at a cost below ERCOT’s original cost estimate. The 345 kV transmission facilities constructed by LS Power have been 17% to 58% lower cost than other utilities constructing

similar facilities in the same region during the same timeframe as shown in Figure 10.1.

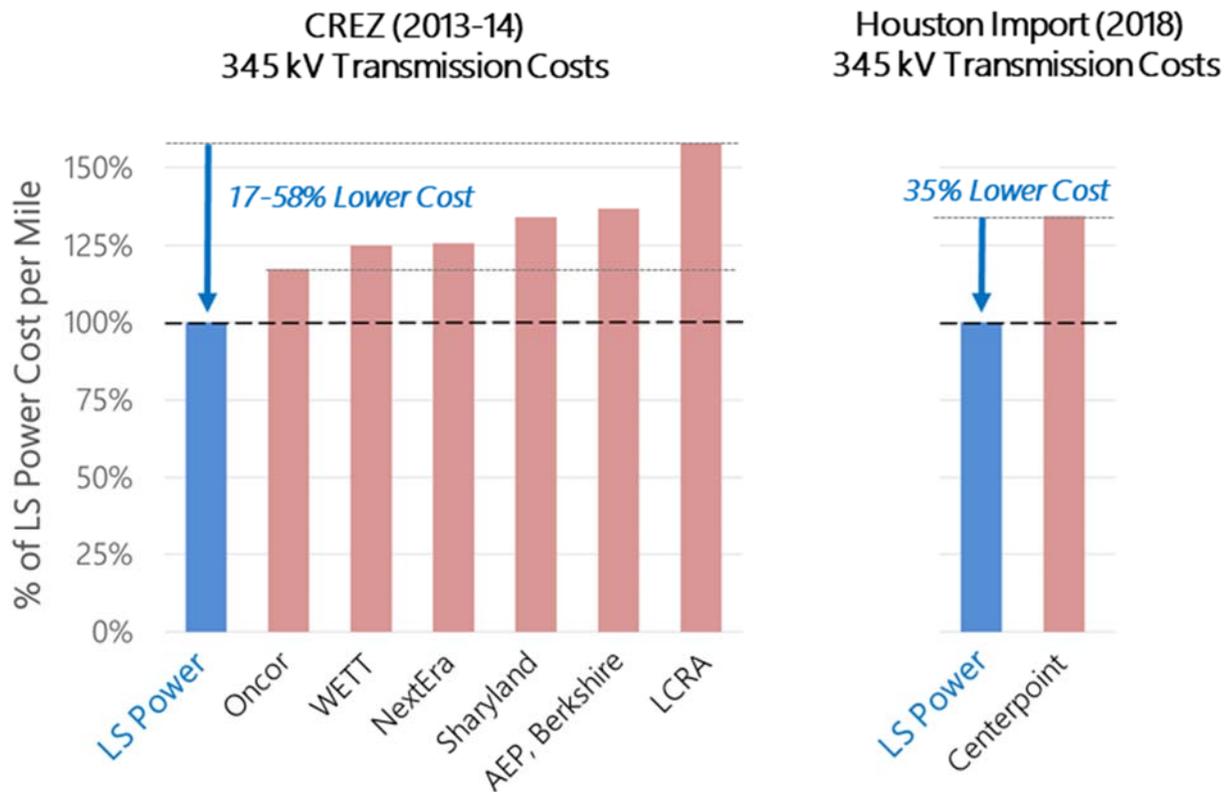


Figure 10.1- Texas Double Circuit 345 kV Cost Comparison

LS Power has bolstered its track record of providing low-cost transmission solutions with continued recent success across the country. LS Power was the low-cost provider for the 60-mile Harry Allen – Eldorado 500 kV transmission line in CAISO with competing proposals from Exelon, NextEra, and Southern California Edison. CAISO awarded the project to LS Power and identified that LS Power had the lowest construction cost cap. The project is now operating and was placed in-service without exceeding the binding construction cost cap. LS Power is one of the only project sponsors to meet its schedule in CAISO with transmission projects awarded to NextEra and Starwood delayed by several years.

In MISO, LS Power completed its facilities ahead of schedule and below its cost commitments. Of note, LS Power is the only Selected Developer that did not cause MISO to commence a Variance Analysis.

- In August 2019, MISO commenced a Variance Analysis for Xcel Energy and ITC due to their estimated project cost increasing from \$115.1 million to \$150.5 million – an increase of 31%.
- In November 2019, MISO commenced a Variance Analysis for NextEra due to schedule delays and the potential inability for NextEra to complete its project.
- In January 2021, MISO commenced a Variance Analysis for NIPSCO due to its estimated project cost increasing from \$22.4 million to \$33.3 million – an increase of 49%.

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In PJM, LS Power offered cost containment 39% to 77% lower than Transource (AEP/Evergy) for a similar project scope as part of the Artificial Island selection process. PJM awarded the project to LS Power and, in addition to being lower cost, PJM found LS Power's proposal provided greater cost certainty with fewer exclusions to its cost commitment. The project is now operating and, similar to LS Power's other competitive projects, was constructed on schedule and without exceeding the binding construction cost cap.

In New York, LS Power has proven its low cost approach, and recently filed a settlement of its formula rate filing at FERC that accepted a construction cost cap over \$200 million less than NYISO's independent cost estimate for the Segment A Project at the time of selection. This cost savings is passed through to ratepayers with a lower baseline estimate for the purpose of the risk sharing under the Public Service Commission identified 80/20 risk sharing approach for the AC Transmission PPTN Upgrades.

LS Power has an extensive track record of raising capital to support its business activities with over \$47 billion of debt and equity capital raised as illustrated in Figure 10.2.

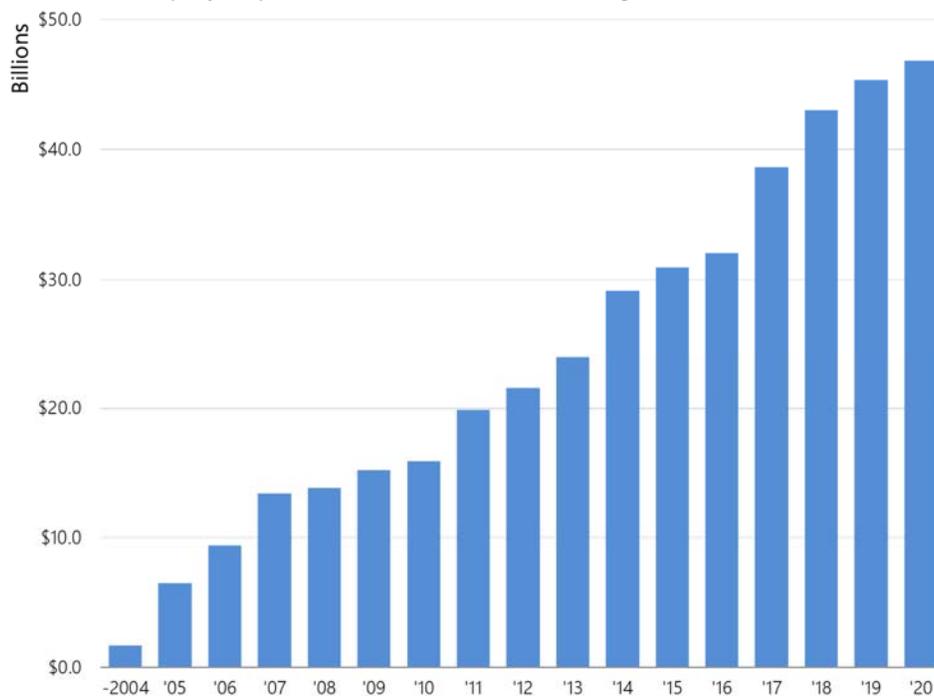


Figure 10.2 - Cumulative Capital Raised by LS Power

Table 10.1 identifies over \$2.25 billion in debt and equity capital for construction and operation of LS Power's more than 700 miles of new EHV transmission facilities since 2011.

LS Power Transmission Project/Entity	Year	Financing Purpose		Capital Issuance (\$ millions)	
		Construction	Operations	Equity	Debt
ON Line	2011	✓	✓	\$85	\$343
Cross Texas	2011	✓		\$200	\$274
	2014		✓		\$295
	2016	✓	✓	\$39	\$70
	2017	✓	✓		\$30
	2019		✓		\$30
Silver Run	2018	✓		\$73	\$83
	2020		✓		\$82
DesertLink	2018	✓		\$115	\$110
	2020		✓		\$117
Republic	2020		✓		\$34
LS Power Grid New York	2020	✓		\$216	\$220
<b>Total</b>				<b>\$728</b>	<b>\$1,688</b>

*Table 10.1 - LS Power Transmission Financing*

LS Power has demonstrated its success in establishing and executing seven similar transmission-only businesses in five different RTO's/ISO's. The T4C Project is being implemented by an experienced transmission developer who has raised substantial capital in the power industry.



## Disclosures

The following requested disclosures are provided below:

- LS Power and T4C do not have any current or recent credit issues/ credit rating downgrade events.
- Neither LS Power, T4C nor any of their officers, partners, and directors or members of any similarly governing body have been indicted for any felony, or convicted for a felony within the past five years, under the laws of the United States or any state or territory of the United States. Neither LS Power, T4C nor any of their officers, partners, and directors or members of any similarly governing body have been debarred or suspended by any agency of the U.S. Government or the New York State Department of Labor.
- The expected operating life of the T4C Project is at least 40 years.
- There are no pending (currently or in the past three years) litigation or disputes related to projects planned, developed, owned, or managed by LS Power, T4C or any of their affiliates in the United States, or related to any energy product sale agreement, that could reasonably be expected to have a material adverse effect on LS Power, T4C or any of their affiliates.
- There are no litigation, disputes, claims or complaints, or events of default or other failure to

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satisfy contract obligations, or failure to deliver products, involving LS Power, T4C or any of their affiliates, and relating to the purchase or sale of energy, capacity or RECs or other electricity products.

## Section 11 - Permitting Plan

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### Permitting Approach

Being mindful of protecting the environment is key to project success during each phase of project development, engineering, construction, and operations. By prioritizing environmental protection early in the project planning stages, LS Power seeks to avoid and minimize many environmental impacts associated with its projects. Residual impacts that still remain after avoidance and minimization measures will be offset or mitigated to ensure that the proposal is consistent with the state's values and in the public interest. This commitment to environmental protection guides LS Power's overall approach.

In routing the proposed transmission lines, environmental impacts have been avoided

As early as possible in the design and planning phase, an extensive set of environmental surveys is needed to ensure the avoidance and protection of sensitive biological and cultural resources.

Consultations with NYSDEC, the U.S. Fish and Wildlife Service (USFWS), Department of Agriculture and Markets, and the New York State office of Parks, Recreation and Historic Preservation will enable impact avoidance and mitigation measures to be incorporated into the Article VII Certificate of Environmental Compatibility and Public Need. Further, the Community Engagement Plan will afford affected municipalities, elected officials, non-governmental organizations, and members of the public opportunities to learn about the project and provide input that will shape the project design.

During construction, low-impact construction methods will be used. Additionally, Best Management Practices (BMPs) will be used during construction to minimize environmental impacts. Environmental monitoring during construction will ensure that commitments to impact avoidance and environmental protection are honored. To prevent

impacts to sensitive species, T4C will implement seasonal restrictions on construction activities as determined through consultation with USFWS and NYSDEC.

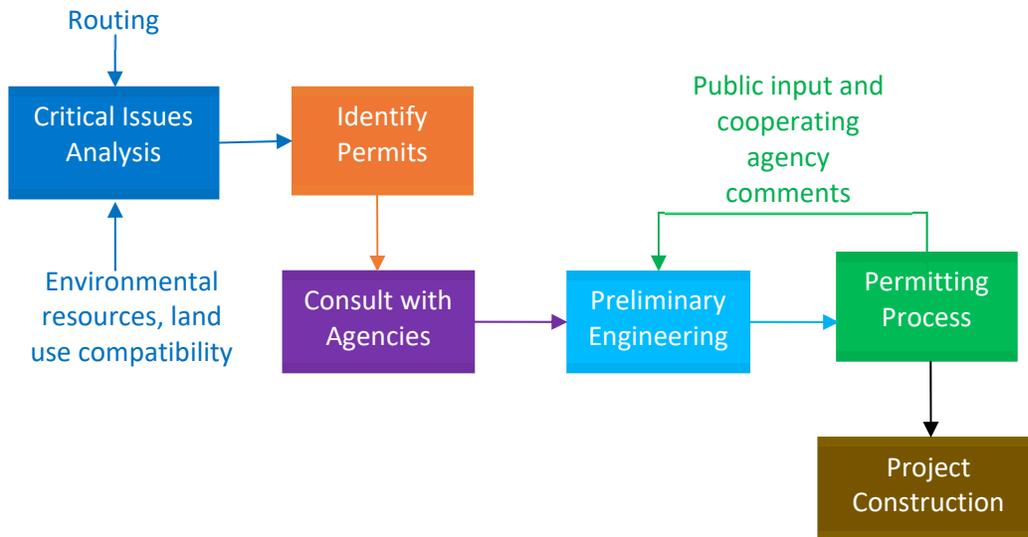


Figure 11.1 – LS Power Project Assessment Process

The scope of the project is defined with an intent of minimizing the required facilities which minimizes the environmental impact. Coordination with the involved communities will further refine the Project throughout the permitting process. Establishing trust is a crucial component of public engagement. Clear and substantiated data, responsiveness, accessibility, collaboration, and openness are all essential to building a productive working relationship. These are principles that have made LS Power affiliate companies successfully develop complex energy projects in communities across the United States.

A proactive approach to public outreach and involvement will be demonstrated in all aspects of project development, as well as the Article VII and other permitting processes. Prior to filing the Article VII application and federal permit applications, face-to-face meetings with resource agencies, municipalities, and legislators will identify the interests of stakeholders and with to goal to minimize the effect of interveners on the Article VII process. A formal public outreach plan will include regular communication with local officials, agencies, and others to ensure open channels of communication with key stakeholders.

### Permitting Requirements

Prior to construction, the project will undergo an extensive permitting process that will carefully evaluate the environmental effects of the project and ensure that all appropriate environmental protection and mitigation measures are implemented. Those permitting requirements are identified in Attachment 11.1 and summarized below.

The project will be a “major utility transmission facility”, and require a Certificate of Environmental

Compatibility and Public Need (Certificate) before the New York State Public Service Commission (PSC) and meet the Article VII requirements prior to construction. In addition, the project will apply for USACE Section 10 and 404 permits for wetlands and waterbody crossings. Other permits related to stormwater, transportation impacts, and state lands will be required. These permits are described in the following subsections.

### Article VII

Prior to the start of construction, the project will be evaluated and improved through an intensive review and permitting process under Article VII of the New York State Public Service Law. The Article VII process includes a comprehensive environmental review and ensures that state and local environmental protection requirements are incorporated in a single authorization.

The Article VII permitting process provides the PSC with jurisdiction to issue all state and local approvals required for the proposed project as part of the Certificate of Environmental Compatibility and Public Need (“Certificate”). The substantive requirements of state and local laws will be incorporated into the Article VII process.

A complete Article VII application will be submitted to the New York State Public Service Commission. Table 11.1 summarizes the required exhibits for the application and the supporting analyses anticipated as appendices to the application.

<b>Article VII Application Contents</b>	
<b>Exhibits</b>	
1	General Information
2	Location of Facilities and General Description
3	Alternatives
4	Environmental Impact
5	Design Drawings
6	Economic Effects
7	Local Ordinances
8	Other Pending Filings
9	Cost of Facility
<b>Appendices (Anticipated)</b>	
	Agency Correspondence
	Wildlife Reports
	Stream and Wetlands Photos
	ROW Character Photos
	Cultural Resources Phase 1A Report
	Local Ordinances
	Service List
	Affidavit of Service and Publication
	Prefiled Testimony

Table 11.1 – Article VII Application Contents

Upon filing of an Article VII application, the Secretary to the PSC typically takes about 30 days to determine if the application is in compliance with Article VII filing requirements. T4C's affiliate LS Power Grid New York had an application deemed complete without deficiencies. Once the application is determined to be in compliance, the review of the application begins and the PSC provides an independent Administrative Law Judge (ALJ) to preside in the case. The ALJ oversees procedural matters and is tasked with conducting the public statement and evidentiary hearings.

Two types of hearings are typically conducted in order to inform the PSC's decision on whether the construction and operation of T4C Project facilities will fulfill public needs and be compatible with environmental values and the public health and safety, and comply with legal requirements:

- Public Statement Hearings are formal hearings held in the project area to receive comments from local residents affected by an applicant's proposal. The first formal hearing must be held between 60 and 90 days of the application filing date. Comments received at the public statement hearings are entered into the record for the project and might identify concerns that should be addressed in the evidentiary hearings.
- Evidentiary Hearings are presided over by the ALJ for the presentation of evidence. These hearings typically consist of written filings that include the applicant's direct case, cross-examination of the applicant's witnesses by the parties to the case, the DPS staff's and other parties' testimony on issues in the case, and the cross-examination of rebuttal testimony by the parties. Several weeks are typically allowed between the three presentations (i.e., an applicant's direct case, all other parties' direct cases and rebuttal cases).

Once the hearings have concluded, all parties have an opportunity to file written briefs to the ALJ to support their positions. Initial briefs are usually filed 20 to 30 days after the final evidentiary hearing. Reply briefs that refute points made in the initial briefs are typically filed within two weeks after the initial briefs. Additional briefs and motions may be filed by the various parties to the case at this stage.

Evidentiary hearings and briefs can be avoided to the extent the applicant and intervening parties are willing agree on impacts and mitigations through a Joint Proposal ("JP"). For the Marcy to New Scotland Project, a JP was reached with all parties other than a generator who was challenging the need for the project. LS Power has been successful in reaching a JP or equivalent agreement in Certificates in other jurisdictions. For example, Cross Texas was able to reach a settlement with all intervening landowners for each of its initial CREZ Certificates of Convenience and Necessity.

After considering all the evidence presented in a case from the hearings and briefs, the ALJ makes a recommendation for the PSC's consideration. The PSC reviews the recommendation and considers the views of the applicant, DPS staff, other governmental or non-governmental organizations, and the general public in the record for the case. To grant a Certificate, the PSC must determine all of the following:

1. The need for the facility;
2. The nature of the probable environmental impact;
3. The extent to which the facility minimizes adverse environmental impact, given environmental and other pertinent considerations;
4. In the case of an electric transmission line,
  - what part, if any, of the line shall be constructed underground;
  - the extent to which the facility conforms to the long-range plan for the electric power grid and interconnected utility systems to serve the electric system with economy and reliability;
5. The location conforms with applicable state and local laws; and,
6. The construction and operation of the facility is in the public interest.

After the Certificate is granted, the PSC typically requires the Certificate holder to submit an "Environmental Management and Construction Plan" (EM&CP). The project's EM&CP will incorporate the environmental protection measures contained in the Article VII Application and the PSC Opinion and Order Granting Certificate of Environmental Compatibility and Public Need. The EM&CP will also contain the engineering design that reflects conformance with the Certificate, applicable federal, state and local regulations, and industry standards. The EM&CP will include a discussion of the status of efforts to obtain federal permits necessary for project construction, all of which Bidders currently expect to obtain prior to the completion of the EM&CP. Any field studies to be performed in areas where access was not previously available and that would be necessary for federal or state permitting would be identified and documented as well. The EM&CP must be approved by the PSC before construction can commence. In cases where the route and other key features are agreed in a JP, an EM&CP can be prepared, submitted, and reviewed in parallel with the Article VII application review.

### Federal and Other Permits

The key federal permits required for the project are USACE Section 404 and Section 10 permits for wetlands and waterbody construction. Impacts will be avoided, minimized, and mitigated in coordination with the USACE. The USACE permitting process will also involve formal consultation with NOAA Fisheries and USFWS to protect biological resources and with the New York State Historic Preservation Office (SHPO) to protect historic and cultural resources.

Many other required permits are subsumed in the Article VII certification process, with several stand-alone permits that will be obtained prior to the start of construction. The proposed lines are expected to require the following additional permits:

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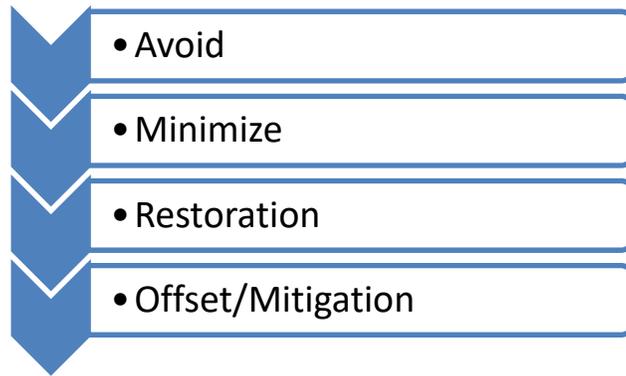
- NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharge during Construction Activities (GP-0-15-002);
- Utility Work Permit from the New York State Department of Transportation (NYSDOT);
- Coastal Zone Consistency Determination from the New York State Department of State (NYSDOS);
- Use and Occupancy of Lands Underwater Easement from the New York State Office of General Services (NYSOGS).

## Section 12 - Environmental Mitigation Plan

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### Environmental Impact Hierarchy

LS Power follows an environmental impact hierarchy of first avoiding impacts, then minimizing impacts that cannot be avoided, and additionally offsetting or mitigating impacts, as identified in Figure 12.1.



*Figure 12.1 – Environmental Impact Hierarchy*

### Environmental Mitigation

Recognizing and mitigating risk is a key factor in delivering large energy projects on schedule and on budget. Keys to budget and schedule performance include well-structured contracts, oversight of contractors and the ability to quickly identify and resolve unanticipated events. Affiliates of LS Power have a proven track record of being able to deliver quality facilities at the least cost while managing these risks, including through an innovative approach.

For example, affiliate Cross Texas completed its facilities ahead of schedule, under ERCOT's original budget and at the proven least cost per mile of any CREZ developer. Cross Texas recognized the potential for project delay due to potential impacts to sensitive features. Cross Texas entered into

## TIER FOUR CONNECTOR

several mitigation agreements in order to minimize potential impacts identified during project routing and consultation. Due to the geography and location of terminating substations, Cross Texas was not able to avoid a crossing of the Caprock Canyon Trailway. To offset adverse impacts of this crossing, Cross Texas entered into an Agreement with Texas Parks and Wildlife to mitigate these impacts. In addition, Cross Texas's facilities are located in an area identified as Lesser Prairie Chicken habitat. In order to mitigate potential impacts on this sensitive species, Cross Texas agreed to expand existing preserves for the species elsewhere in the state. Cross Texas worked with oil and gas operators and local farmers and ranchers in the routing of the transmission lines to minimize impacts to these parties. These mitigation agreements maintained the project schedule and did not materially impact the project budget.

A second example is the ON Line project in Nevada. In response to environmental concerns, LS Power implemented several project features which were creatively designed to address issues identified by federal and state agencies or other special interest groups. During permitting, project engineers identified an innovative tubular guyed-V structure design which provided specific environmental mitigation benefits to protect sensitive species (Greater Sage Grouse and Mojave Desert Tortoise) and also provided for a lower project cost. In addition, LS Power agreed to fund a long term sage grouse impact study to allow biologists to evaluate actual impacts to the species and its habitat due to the construction of a long linear project.

The Silver Run Project is a third example of LS Power identifying an innovative technical solution to a challenge faced in project permitting. The U.S. Army Corps of Engineers had established a requirement for any new cables to be installed in the Delaware River to be installed at least 25 feet below the river bottom in the main channel. While this requirement was not established for the Silver Run Project, the Silver Run Project was the first permit application submitted after this requirement had been established. Since the length of the river crossing was 3 miles LS Power was concerned that in order to meet this requirement, several lengthy horizontal directional drills (HDD) would be required, with a high cost and high risk due to the length of the HDDs. In working with cable installers, an innovative installation technique using a vertical injector was identified as an alternative that would achieve the technical requirements in a cost effective manner. While a vertical injector had never been used for cable installation in North America, it was a proven technique in Europe and Asia. LS Power permitted the use of vertical injector technology and successfully completed the project with this technique, a first in the U.S.



## **Section 13 -Project Schedule**

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*Figure 13.1 – Project Schedule*

## TIER FOUR CONNECTOR

Table 12.2 identifies the application date and approval date for all stand-alone transmission line (excluding transmission facilities associated with a generation facility) Article VII applications issued in the past five years. The first three rows are associated with AC Transmission PPTN Upgrades.

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Case Number	Project	Company/Organization	Application Date	Date of Order Granting Certificate	Days to Certificate
20-T-0549	Shoemaker-Sugarloaf 115 kV, 12 miles	New York Transco LLC	11/5/2020		
19-T-0684	Knickerbocker-Pleasant Valley 345/115 kV, 54.5 miles	New York Transco LLC	10/18/2019	2/11/2021	482
19-T-0549	Marcy-New Scotland 345 kV, 100 miles	LS Power Grid NY / NYPA	8/20/2019	1/21/2021	520
18-T-0561	Gardenville-Dunkirk 115 kV line rebuild, 20 miles	Niagara Mohawk Power Corporation	8/30/2018	5/14/2020	623
18-T-0499	Dysinger-Stolle 345 kV line, 20 miles	NextEra Energy Transmission New York, Inc.	8/10/2018	6/16/2020	676
18-T-0207	Moses-Adirondack rebuild, 345 kV, 86 miles	NYPA	4/5/2018	11/14/2019	588
17-T-0816	H & SB 115 kV line, 23.6 miles	Central Hudson Gas & Electric Corporation	12/29/2017	8/14/2020	959
17-T-0752	Western Nassau Transmission Project, 138 kV Underground, 7.3 miles	PSEG Long Island	11/30/2017	9/19/2019	658
15-T-0305	Clay-Dewitt/Teall 115 kV Rebuild, 22 miles	Niagara Mohawk Power Corporation	5/29/2015	4/23/2018	1060
13-T-0469	A & C Line 115 kV Rebuild, 10.85 miles	Central Hudson Gas & Electric Corporation	10/11/2013	3/30/2015	535
Average					728

Table 13.2 – Article VII Timelines

## **Section 14 - Operational Flexibility and Peak Coincidence**

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### Operational Flexibility

### Peak Coincidence

#### **Deliverability of Offshore Wind**

The Delivery Point of West 49<sup>th</sup> Street complements the foreseeable deployment of offshore wind into Zone J. There are currently 26,000 MW of offshore wind interconnection requests in the NYISO queue in Zones J and K, 9,000 MW of which is in Zone J, with no requests identifying West 49<sup>th</sup> Street as an interconnection point.

## **Section 15 - Communities Engagement Plan**

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A Community Engagement Plan is a living document that evolves with the development of the project, and will expand during the permitting process and again during project implementation. Attachment 15.1 represents an initial Community Engagement Plan.

The Community Engagement Plan was developed based on a set of public involvement guiding principles and goals. The first principle is that dialogue with stakeholders needs to be meaningful, clear, and respectful of the stakeholder's interests. In addition, a dialogue should allow for two-way communication including face-to-face dialogue whenever possible. The second principle is that all information provided to stakeholders should be clear, understandable, and based on objective information. The first public involvement goal is to establish awareness of the project with stakeholders related to key aspects of the project, including clear communication of the process and timeline. A second public involvement goal is to provide easy access to project information, and simple mechanisms for public feedback. In addition, public participation and input should be documented, and the effectiveness of communication and feedback should be measured where possible.

LS Power has successfully coordinated with the public and other stakeholders for all of its past projects, including in New York State. LS Power completed public outreach and community relations activities in connection with the Marcy to New Scotland project. This includes eleven public open house meetings with numerous project representatives available to offer one-on-one discussions with attendees to answer specific questions. Public and landowner notices included newspaper publications, copies of materials at 16 local libraries, and mailings including direct mailings to affected landowners and abutting landowners. There were over 100 attendees at the open house meetings and telephone conversations and e-mail exchanges with more than 50 neighbors along the project corridor. Individual meetings were held with agricultural operators along the right-of-way.

## Section 16 -Incremental Economic Benefits Plan

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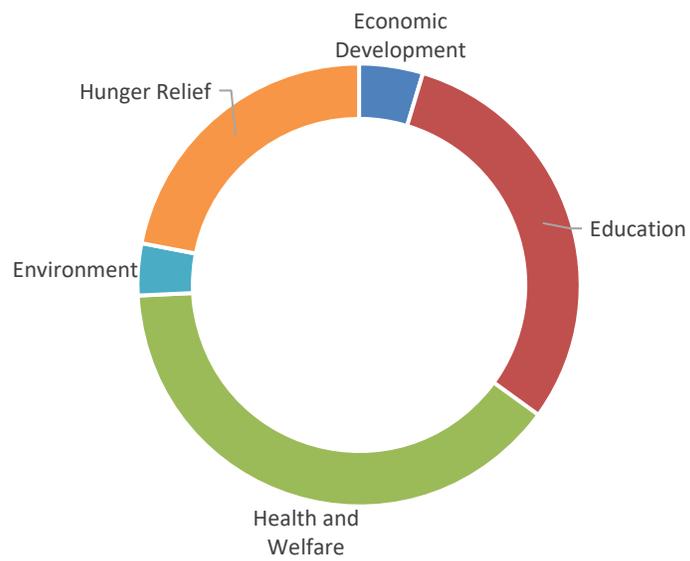


Figure 16.1 –LS Power Community Support 2017-2021