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Statement designating one category for which Applicant seeks funding for the capital improvement project:

Georgia Power Company is submitting this Oliver Generator Upgrade project under Category 1: Improving Grid Resiliency, under subcategory (a) (1) "adapting more quickly to changing grid conditions." The capital improvement project will upgrade Units 1 through 3 at the Oliver Dam by replacing the turbine runners on all units and refurbishing the generator for Unit 3. The nameplate rated capacity is 18 megawatts (MW) each for units 1 through 3. Following the upgrade, units 1 and 2 will remain at 18 MW and Unit 3 will be approximately 19.9 MW. The existing maximum hydraulic capacity is approximately 3,640 cubic feet per second (cfs) for unit 1, 3,708 cfs for Unit 2, and 3,775 cfs for Unit 3. Following the upgrades, the maximum hydraulic capacity will be approximately 4,183 cfs for Units 1-3.

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Documentation relating to the existing conditions and the capital improvement

1. Detailed, written narrative describing the capital improvement project at the hydroelectric generation facility, the need or rationale for the project, and the expected outcomes or benefits of the project:

Baseline (Existing) Configuration, Conditions, and Operations

Georgia Power Company's (Georgia Power or "GPC") Oliver Development, a part of the Middle Chattahoochee Hydroelectric Project (FERC Project No. P-2177), is a complex located Muscogee County, Georgia on the Chattahoochee River at river mile (RM) 163.5 just downstream of the Goat Rock Development and approximately 1.5-miles (mi) upstream from Columbus, Georgia. The existing FERC license was issued on December 27, 2004, with a term of 30 years at which the license will expire on December 31, 2034.

The complex consists of a 2,021-foot (ft) long, 70-feet (ft) tall concrete gravity dam; a 9-mi long, 2,280-acre (ac) impoundment with 32,000-acre-feet (ac-ft) (6,080-ac-ft of which are reserved as storage for operations) of gross storage at elevation 337-ft powerplant datum (PD); a 284-ft long west non-overflow structure; a 198-ft long combined powerhouse and intake section; a 1,324-ft long gated spillway section containing 33 radial arm Tainter gates, each 35-ft long and 16-ft high; an 11-ft long, 16-ft high trash gate; a 215-ft long east non-overflow section; and a tailrace that is 100-ft wide and extends 1,500-ft downstream into the North Highlands impoundment. The crest of the 12-ft wide non-overflow sections is at elevation 350-ft PD. Normal operating range is between 334- to 337-ft PD.

The powerhouse contains four vertically oriented generating units with a total installed capacity of 60-megawatts (MW) and total hydraulic capacity of approximately 12,496-cubic-feet-per-second (cfs). Unit 1 has a rated power capacity of 18-MW and hydraulic capacity of 3,640-cfs. Unit 2 has a rated power capacity of 18-MW and hydraulic capacity of 3,708-cfs. Unit 3 has a rated power capacity of 18-MW and hydraulic capacity of 3,775-cfs. Unit 4 has a rated power capacity of 6-MW and hydraulic capacity of 1,373-cfs. The Oliver Development is owned and operated by GPC in a run-of-river-with-pondage mode to follow daily or weekly load demand patterns to the greatest extent practical after meeting flow and reservoir elevation environmental constraints.

Scope of the Capital Improvement Project(s)

As part of its fleet modernization and infrastructure revitalization efforts, GPC is heavily investing into upgrading and restoring aging hardware and facilities throughout its hydropower sector. For this project, GPC intends to upgrade Oliver Development's four generating units, which includes replacing the turbine runners on all units and refurbishing generators for Units 3 and 4. Upgrading said units will allow Oliver Development to continue to meet the operational requirements of the existing Middle Chattahoochee

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Project license. Pending authorization by FERC, the upgrade is scheduled to begin in 2025, with a unit upgrade starting at the beginning of each year in 2025, 2026, 2027, and 2028.

All applicable and available common systems at Oliver Dam will be replaced as part of the scope of this project. Common systems shared by multiple, or all units will be modified or upgraded with the first unit at the site to undergo modernization.

Common systems that are part of this scope of work include the following:

- Switchyard
- General Service Water
- Station Service
- Service Facilities
- Fire Detection
- Computer System
- Reservoirs and Dams

The planned modernization scope of work for Oliver includes the following, as applicable:

- Turbine replacement and comprehensive turbine rehabilitation.
- Generator rewind and other refurbishment as determined by component testing.
- Instrumentation and controls replacement to cover control systems for the units and the plant by implementing the Southern Company Hydro Generation model. It will also address communications systems local to the plant, river system or area and corporate networks for remote connectivity.
- Electrical balance of plant systems including replacement of line breakers, generator breakers, excitation, protective relaying, station service transformers, cable bus and switchgear and AC and DC panels. Demolition and removal of existing conduit and cable tray is to be planned as necessary to accommodate new cable and equipment. Existing electrical components that are being replaced or abandoned will be demolished.
- Mechanical balance of plant systems including replacement of station cooling water, service water and potable water, bearing lube oil, thrust bearing high pressure oil lift, governor hydraulic pumping unit, service air, instrument air, generator brake air, tailrace depressing air, powerhouse HVAC, automatic grease system, unit and station sumps and unwatering systems. Also planned is the demolition and removal of equipment and skid to be replaced or abandoned, as necessary. Rehabilitation of surfaces in demolished areas will also be implemented, as necessary.
- Civil infrastructure as applicable including trash racks, headgates, equipment foundations, and physical access.

Rationale for Capital Improvement Project(s)

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As of recent history, GPC's hydropower system has experienced chronic maintenance issues and increasing failures that have impacted each of the station's operating performance and reliability across GPC's entire domain. These events confirmed that the major electrical, mechanical, and civil systems, structures, and components at each of these sites were nearing the end of their service lives according to industry-recognized standards. To address these matters, GPC has initiated a comprehensive program for the rehabilitation and modernization of 15 generating stations within their hydropower fleet—Oliver Development is one of these 15 stations. The final goal of this modernization effort is to modernize and extend the life of Oliver Dam powerhouse units and balance of plant electrical/mechanical systems, instrumentation, controls, and civil infrastructure for another 40 to 50 years.

In support of GPC's Hydro Fleet Modernization Program, an Oliver station modernization, scoping assessment, and development is being performed to apply the previously agreed upon standardized balance of plant (BOP) system and prime mover modernization concepts. The goal of this modernization program is to modernize and extend the life of the Oliver turbine and generating units and balance of plant electrical/mechanical systems, instrumentation and controls and civil infrastructure for another 40 to 50 years.

As stated previously, the complex and its appurtenant facilities are aging. Since the conception, construction, and commission of the site, new technologies and methodologies have been devised to help increase system resilience, versatility, and efficiency. With little to no major upgrades historically implemented at Oliver, the gap between actual and potential performance has continued to expand. To glean the maximum benefits from the Oliver site, GPC is dedicated to the elevation of Oliver's vintage facilities to modern, cutting-edge technologies combining both the forces of nature with mankind's greatest innovations to reach a sustainable, effective power solution for the present's ever growing energy demands.

Expected Outcomes of the Capital Improvement Project(s)

The Oliver Development was originally established with a rated capacity of 60-MW. With the newly renovated systems, GPC expects to see a 6.5-percent (%) increase in overall capacity from 60-MW to 63.9-MW. Units 1-3 will see 10.5% increases in their rated capacities from 18-MW to 19.9-MW. Unit 4, however, will see a 30% decrease in rated capacity from 6-MW to 4.2-MW. The drop in capacity for Unit 4 is justified in that the lower capacity and decreased hydraulic flow are the optimal conditions of operations for the newly renovated unit.

GPC has developed a Community Benefits Plan (CBP) for the capital improvement project and has already begun the community engagement effort. See CBP included in the Identifier Community Benefits Plan section of this application. GPC's CBP Team will further evaluate the impacted communities that will enjoy the benefits and bear any concerns associated with the project. The assessment will seek to

understand how these benefits and any concerns are likely to interact with cumulative burdens borne by these communities.

2. If the hydroelectric facility is not in compliance with all applicable Federal, State, and/or Tribal requirements, include a short narrative explaining why the facility is out of compliance.

Not applicable. The Oliver facility complies with all applicable Federal, State and Tribal requirements.

3. A written narrative describing and, where possible, identifying potential areas of risk in the project work plan or other sources of risk associated with the capital improvement (e.g., project completion schedule, procuring materials and equipment, deployment of new technologies).

Potential Areas of Risk

GPC has identified potential areas of risk that could impact the project completion schedule and the cost of the project, which are set forth below. These risks are acceptable and manageable, and the project involves no more risk than would typically be expected for heavy construction performed over/near water.

- Risks associated with lack of complete set of electrical drawings of existing systems.
- Generator and Turbine schedule coordination risk.
- Risk of fluctuation of total project cost due to changes from original project plan and assumptions.
- Risks associated with moving Oliver Control room to new building being constructed during project
- Risk associated with lack of complete set of existing turbine drawings
- Risk associated with lack of complete set of existing generator drawings
- Risk associated with safety concerns/checklist
- FERC review/approval schedule delays
- Risk associated with uptick in lead times from suppliers.
- Potential risk of unforeseen delays during the bid process
- Potential risk associated with asbestos and lead abatement management
- Risks associated with limited laydown space near construction site adding material handling and additional security concerns.

4. A project timeline summarizing the major steps/milestones described in the capital improvement project work plan and Community Benefits Plan.

Project Timeline

Southern Company and GPC project managers' experience with hydroelectric upgrades conducted during the previous decade provides a tested methodology and optimal schedule for expediting generator and turbine upgrades. The results of this experience support the proposed project schedule completion within the project period. See detailed Project schedule for the capital improvement project included herein in **Appendix A – Exhibit A**.

Oliver Hydroelectric Development Generator/turbine Upgrade Milestones	
Description	Milestone Date
Community Benefit Plan Mobilization	2023, Q3
Capital Improvement Project Mobilization	2025, Q1
Complete Unit 1	2025, Q4
Complete Unit 2	2026, Q4
Complete Unit 3	2027, Q4
Complete Unit 4	2028, Q4
Demobilization	2028, Q4

5. Any monitoring plans, required through the FERC regulatory process or otherwise, that will document the effectiveness of the capital improvement project.

Monitoring Plan

GPC understands that efficient project management, capable leadership, and effective oversight and monitoring are necessary requirements for the successful implementation of the Oliver generator and turbine upgrades capital improvement project and the associated Community Benefits Plan (CBP). Senior management fully supports the goals and objectives of the generator upgrades as described in this application. A letter of support from Mr. Brandon Dillard, Senior Vice President & Senior Production Officer West, Southern Company, is included in the Identifier Executive Authorization section of this application.

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To ensure and achieve the effectiveness of the technical and system-wide objectives set forth in this application, GPC has designated Dwight Daniel, Jr., Project Manager with Southern Company, as the project manager for the project. As the project manager, Mr. Daniel will have overall accountability for the safety, scope, schedule, cost, risk, and quality associated with this scope of work, and to ensure that project delivery process requirements and associated procedures, standards, and guidelines are followed. He will also oversee development and maintenance of the Project Implementation Plan.

Mr. Daniel is a proven leader with strong technical and project management experience and will be supported by GPC Project Managers, Shawn Dunne and Amber Sullivan, and GPC and Southern Company subject matter experts with relevant experience and expertise, with most of their time spent at Georgia Power. This dedicated project leadership, along with its existing engineering and construction expertise, will ensure the project is managed on budget and completed on schedule, and completed in a safe and efficient manner.

After the generator and turbine upgrades are complete, GPC Project Managers and Southern Company and GPC Hydro Generation Management will develop and submit a Quality Control and Inspection Plan (or QCIP) for approval by FERC. This is done to document that the project is performed in accordance with the plans and specifications approved by FERC.

To achieve the effectiveness of the CBP objectives set forth in this application, Southern Company has a designated individual (*i.e.*, the Community Benefits and Justice 40 Project Manager) responsible for ensuring that CBPs and similar requirements are implemented appropriately. In addition, GPC has existing resources dedicated to engagement within its service territory. For the proposed project location, the project team includes Division Vice Presidents (VPs), Area Managers, and Community Relations Representatives that will assist in carrying out the community benefits plans requirements for this project. The Division VP and Area Managers have regular engagements with city and county officials and other community leaders and will engage with the local community leaders on behalf of the CBP team.

6. A project budget summarizing: a. The total cost of the capital of the capital improvement(s); b. The major cost categories of the capital improvement(s); c. The total amount of incentive payment requested; and d. Any other federal funding sources used to support the project.

See project budget included herein in **Appendix A – Exhibit B**.

7. A detailed itemized list of expected or actual capital costs for the capital improvement and documentation of the stated costs including but not limited to, as applicable, price estimates, vendor quotes, statements, invoices, or bills of sale for the capital improvement being applied for.

See itemized list of expected costs included herein in **Appendix A- Exhibit B**.

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8. If applicable, documentation of FERC authorization of the capital improvement project, or if an amendment to the license is required, proof that a final application for authorization has been filed with FERC.

FERC issued a license order for the Middle Chattahoochee Project – FERC No. P-2177 on December 27, 2004. On April 22, 2004, FERC issued an Environmental Assessment ("EA") for the relicensing of the project. GPC filed a license amendment application for this capital improvement project with FERC on September 29, 2023. GPC included an Applicant Prepared Environmental Assessment ("APEA") that was submitted to FERC as part of its license amendment application.

See copies of GPC's license amendment application and APEA included herein in **Appendix A – Exhibit C**.

9. If applicable, a request for a DOE NEPA determination as described in Section VII of DOE's Guidance.

Not applicable. GPC has complied with the National Environmental Policy Act of 1969 (NEPA).

According to the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) (40 C.F.R. § 1508.7), a cumulative effect is an impact on the environment resulting from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities. Based on information set forth in GPC's APEA and consultation to date, no resources have the potential to be cumulatively affected by the Oliver generator/turbine upgrade capital improvement project.

See copies of GPC's license amendment application and APEA included herein in **Appendix A – Exhibit C**.

10. If applicable, documentation demonstrating compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA) has been completed or is currently ongoing as described in Section VII of DOE's Guidance.

GPC is complying with Section 106 of NHPA.

NHPA Section 106 requires FERC to consider potential adverse effects to historic properties prior to issuing the Order approving a license amendment. The "Programmatic Agreement Among the Federal Energy Regulatory Commission and the State Historic Preservation Officers of the States of Georgia and

Alabama for Managing Historic Properties That May Be Affected by Issuing a License to Georgia Power Company for the Continued Operation and Maintenance of the Middle Chattahoochee Project in Lee and Russell Counties, Alabama and Harris and Muscogee Counties, Georgia" (PA) as implemented by Article 411 of GPC's Middle Chattahoochee license provides for the protection and management of historic properties at the Middle Chattahoochee Project. GPC is consulting with the Georgia State Historic Preservation Office (SHPO) per requirements of the PA on this capital improvement project as documented in its license amendment application filed with FERC.

See Section 12.0 of the APEA submitted to FERC as part of GPC's license amendment application included herein in **Appendix A – Exhibit C**.

11. If the project affects Indian Tribes, evidence to support that the project does not disturb, desecrate, or otherwise impair the integrity of a sacred site or Tribal cultural property of an Indian Tribe. Supporting documentation from an Indian Tribe potentially impacted by the capital improvement project is encouraged.

GPC will consult with the Georgia State Historic Preservation Office and anticipates a "no adverse effect" determination with respect to this capital improvement project.

See Section 12.0 of the APEA submitted to FERC with GPC's license amendment application included herein in **Appendix A – Exhibit C**.

12. With respect to the funding restrictions outlined in Section XIII of this Guidance:

- **A statement on whether Build America, Buy America requirements apply to the project and the impact, if any, this requirement may have on the project's budget. If an applicant is seeking a waiver of the Build America, Buy America requirements, a written waiver request that includes all the information outlined in Section XIII(a) of this Guidance.**

According to FAQ guidance on the Section 247 program, the Build American, Buy American requirements "only apply to a State, local government, territory, Indian Tribe, institution of Higher Education or nonprofit organization". As a for-profit, investor-owned utility, the requirements therefore do not apply to Georgia Power Company or its proposed project.

- **Acknowledgment that the applicant will comply with all of the Davis-Bacon Act requirements as outlined in Section XIII(b) of this Guidance.**

Georgia Power Company (GPC) acknowledges that it will comply with all the Davis-Bacon Act (DBA) requirements, and it has already begun taking the necessary steps with vendors and internally towards compliance. The DBA requires that laborers and mechanics who perform construction, alteration, or repair

work, at the site of work, be paid no less than the prevailing wages and fringe benefits in the applicable wage determination. For this project, the "site of work" shall be 1000 Municipal Marina Road, Columbus, GA 31904, where the upgraded generator and turbine equipment will remain.

(1) GPC will ensure that the wage determination(s) and appropriate DBA clauses and requirements are flowed down to and incorporated into any applicable subcontracts or subrecipient awards.
(2) GPC will ensure that if wage determination(s) and appropriate DBA clauses and requirements are improperly omitted from contracts and subrecipient awards, the applicable wage determination(s) and clauses are retroactively incorporated to the start of performance. However, this is an ongoing project that began prior to the program being finalized and this application being submitted. While GPC is confident that prevailing wages have been paid to date, GPC agrees to audit prior payrolls for any laborers and mechanics who performed construction work at the site of work to ensure that prevailing wages and fringe benefits were in fact paid. GPC agrees to pay back wages to any such laborer or mechanic who performed construction work at the site of work who was not paid prevailing wages and fringe benefits. GPC agrees that it and its subcontractors will comply with all DBA requirements from the date the grant is effective forward.
(3) GPC agrees to be responsible for compliance by any subcontractor or subrecipient with the DBA labor standards.
(4) GPC will receive and review certified weekly payrolls for all work performed by laborers and mechanics on the site of work submitted by all subcontractors and subrecipients for accuracy and to identify potential compliance issues.
(5) GPC will maintain original certified weekly payrolls for 3 years after the completion of the project and will make those payrolls available to the Department of Energy (DOE) or the Department of Labor (DOL) upon request, as required by 29 CFR 5.6(a)(2).
(6) GPC will conduct payroll and job-site reviews for construction work, including interviews with employees, with such frequency as may be necessary to assure compliance by its subcontractors and subrecipients and as requested or directed by the DOE.
(7) GPC will cooperate with any authorized representative of the DOL in their inspection of records, interviews with employees, and other actions undertaken as part of a DOL investigation.
(8) GPC will post in a prominent and accessible place the wage determination(s) and DOL Publication: WH-1321, Notice to Employees Working on Federal or Federally Assisted Construction Projects.
(9) GPC will notify the DOE Grid Deployment Office's Hydroelectric Incentive Program Section 243 of all labor standards issues, including all complaints regarding incorrect payment of prevailing wages and/or fringe benefits, received from the recipient, subrecipient, contractor, or subcontractor employees; significant labor standards violations, as defined in 29 CFR 5.7; disputes concerning labor standards pursuant to 29 CFR Parts 4, 6, and 8 and as defined in FAR 52.222-14; disputed labor standards determinations; DOL investigations; or legal or judicial proceedings related to the labor standards under a contract, a subcontract, or subrecipient award.
(10) GPC will prepare and submit to the Contracting Officer, the Office of Management and Budget Control Number 1910-5165, Davis Bacon Semi-Annual Labor Compliance Report, by April 21 and

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October 21 of each year through the iBenefits system (https://doeibenefits2.energy.gov), its successor system, or other manner of compliance as directed by the Contracting Officer.

GPC will undergo Davis-Bacon Act compliance training and will maintain competency in Davis-Bacon Act compliance. GPC currently contracts with a third-party Davis-Bacon Act electronic payroll compliance software application – eMars. **Accordingly, GPC specifically requests waiver of the use of DOE's Davis-Bacon compliance software application, and requests approval of its continued use of this third-party vendor for electronic submission of DBA weekly payrolls and other DBA requirements.**

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IX(1)(b)(2)(i). Stamped drawings, calculation sheets, or other appropriate documentation that clearly describes current conditions, the approach, and the expected or quantified outcome made through the capital improvement project.

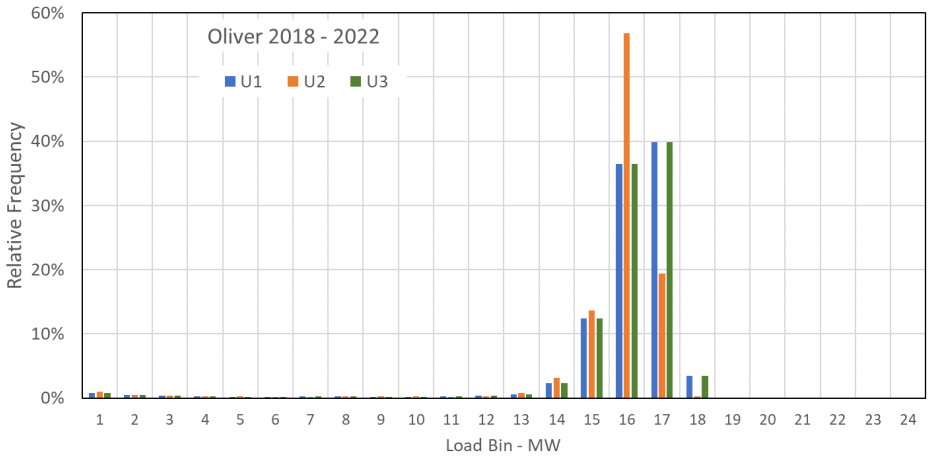
The Applicant's self-scoring of this application is as follows:

Criterion		Scoring
Operating Range		4 of 4 points
Flexibility	Ramp rates	3 of 4 points
	Start/stops per day	2 of 2 points
	Automation and advanced controls	2 of 2 points
Firm Capacity		1 of 4 points
Grid Reliability		4 of 4 points
Total		**16 of 20 points**

Upgrades of Units 1 through 3 at Oliver will improve the capabilities of the facility as follows:

Operating Range: DOE guidance for Section 247 applications does not define operating range. The Applicant assumes for the case of turbine-generator unit upgrade applications to DOE that *operating range* is quantified as the difference between the minimum and maximum power outputs that a unit can sustain in normal operations.

While GPC does not explicitly require that upgrades increase operating range in its specifications, a comparison of historical unit operations to the proposed post-upgrade capabilities of the units does reveal an increase in operating range. GPC does not have original equipment manufacturer (OEM) guidance for the minimum and maximum power outputs for the existing units at Oliver. However, an examination of historical hourly unit power output data for Oliver (the same data GPC submitted within the DOE Efficiency Spreadsheet Tool for its Section 243 application) reveals the normal minimum and maximum of unit power output. Minimum and maximum thresholds are evident for Units 1 through 3 in the histogram plot below.



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GPC also has proposed capabilities, in the form of power versus flow and head relationships (Hill charts) and statements of minimum and maximum operating limits from the selected upgrade OEM. GPC is prohibited from disclosing details of these proposed capabilities due to nondisclosure/confidentiality requirements with the OEM, but is reporting the quantifications of the proposed operating ranges for Units 1 through 3. These values are included in the operating range summary tables below.

Unit	Proposed Rated Capacity	Historical Outputs - MW			Proposed Output Range Width* - MW	Increase in Range Width
		Min	Max	Range Width		
1	19.9	12.5	18.5	6.0	6.5	8.3%
2	19.9	12.5	17.5	5.0	6.5	30%
3	19.9	12.5	18.5	6.0	6.5	8.3%
Facility Increase in Operating Range Width (capacity weighted)						**15.6% (+4 points)**

*at rated head

Ramp Rate: The upgraded units will be capable of increasing or decreasing output between condensing to generating at full power as quickly as existing units. Upgraded units will thus be capable of adding more power (at best efficiency or maximum output) than the existing units to the grid in the same amount of time. Accordingly, the percentage increase in ramp rate may be assumed equal to the percentage increase in rated capacity, to wit:

Unit	Rated Capacity – MW			Ramp Rate increase
	Existing	Proposed	Increase	
1	18	19.9	10.6%	
2	18	19.9	10.6%	
3	18	19.9	10.6%	
Facility Increase in Ramp Rate (capacity weighted)			**10.6% (+3 points)**	

Start/Stops: Upgraded units will maintain and/or improve capability to run continuously in either condensing or generating mode, with no limitation on the number of transitions between modes **(+2 points)**.

Automation and Advanced Controls: The applicant's modernization plan documents call for remote operation capability. The applicant's technical specifications for equipment bidders require proposed equipment capability for remote start operation, regulation, tripping, and annunciation **(+2 points)**.

Firm Capacity: The Applicant has used the DOE Facility Efficiency Increase Tool with historical data and proposed upgraded performance data for Oliver to calculate baseline and improved energy production of 975,379 and 979,715, respectively—a 0.4% increase in energy production for the 5 year period of historical data **(+1 point)**.

Grid Reliability: Appendix A of the *2022-2023 SERC Regional Risk Report* identifies the following Major Risk to Engineering Reliability: *There has been an increase in the SERC renewable energy resource*

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portfolio, wind energy in the west and solar in the south and southeast. Integration of VERs raises the risk of voltage regulation, dynamic response, and sudden change in dispatch patterns. The changing characteristic of the grid with the growth of VERs will affect how the grid is operated in future. Since VERs are weather dependent, planning for backup resources in the absence of generation becomes essential to maintaining the reliability of the system.

The Applicant asserts that the increases in rated capacity of units at Oliver may contribute to "backup resources in the absence of [VER] generation", and that the improvement in operational reliability of and services from the upgraded units at Oliver may be useful in mitigating "risk of voltage regulation, dynamic response, and sudden change in dispatch patterns" associated with VERs **(+4 points)**.