COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM A
FOR MEETING OF AUGUST 12, 2025

SUBJECT: Roll Call / Conformance to Open Meeting Law.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: None.
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

Announcement of actions taken to conform to the Open Meeting Law will be reported at the meeting.

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM B
FOR MEETING OF AUGUST 12, 2025

SUBJECT: Comments from the public. Members of the public are invited to comment on items on the meeting agenda. (No action may be taken on a matter raised during public comment until the matter itself has been specifically included on an agenda as an item for possible action).
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: None.
FISCAL IMPACT: None.

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM C
FOR MEETING OF AUGUST 12, 2025

SUBJECT: *For Possible Action:* Approval of minutes of the June 10, 2025, meeting.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: None.
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

The minutes of the June 10, 2025, meeting is enclosed for your review.

The Colorado River Commission of Nevada (Commission) Meeting was held at 1:30 p.m. on Tuesday, June 10, 2025, at the Clark County Government Center, Commission Chambers, 500 South Grand Central Parkway, Las Vegas, NV 89155.

COMMISSIONERS IN ATTENDANCE

Vice Chairwoman	Kara J. Kelley
Commissioner	Marilyn Kirkpatrick
Commissioner	Allen J. Puliz
Commissioner	Dan Stewart
Commissioner	Steve Walton

COMMISSIONERS PRESENT VIA TELECONFERENCE

Commissioner	Cody Winterton

COMMISSIONER NOT IN ATTENDANCE

Chairwoman	Puoy K. Premsrirut

DEPUTY ATTORNEY(S) GENERAL

Special Counsel, Attorney General	Michelle D. Briggs
Special Counsel, Attorney General	David W. Newton

COMMISSION STAFF IN ATTENDANCE

Executive Director	Eric Witkoski
Senior Assistant Director	Sara Price
Chief of Finance and Administration	Douglas N. Beatty
Assistant Director, Engineering and Operations	Shae Pelkowski
Assistant Director, Energy Information Systems	Kaleb Hall
Assistant Director, Hydropower	Gail Bates
Assistant Director, Natural Resources	Warren Turkett, Ph.D.
Chief Accountant	Gail L. Benton
Assistant Hydropower Program Manager	Matthew Alinsod
Energy Management Data Analyst	Rebecca Suafoa
Hydropower Analyst	Elissa Emery
Power Systems Operations Manager	Walter Shupe
Senior Energy Accountant	Hyelim Hong
System Coordinator	Chris Smith
Natural Resources Specialist	Danielle Collins
Natural Resources Specialist	Kristina Sasser
Executive Assistant Manager	Gina L. Goodman
Manager, Comm. and Special Projects	Noah Fischel
Administrative Assistant IV	Elsa Nava
Administrative Assistant III	Tamisha Randolph
Administrative Assistant II	Joshua Cleveland
Administrative Assistant II	Bobbie Hickman
Administrative Assistant II	Thyandra Lewis

OTHERS PRESENT: REPRESENTING

AVO Multi-Amp Corp dba Megger	Tyler Bean
City of Boulder City	Joe Stubitz
City of Henderson	Becky Rise
City of Henderson	Christopher Boyd
College of Southern Nevada	Tina Dobbs
Intermountain Consumer Professional Engineers, Inc.	Matt Levorsen
Las Vegas Valley Water District	Laura Browning
Legislative Counsel Bureau	Justin Luna
Self	V. Robinson
Southern Nevada Water Authority	Jordan Bunker
Southern Nevada Water Authority	Scott Krantz
Water and Power Legal Group	John Bezdek

COLORADO RIVER COMMISSION OF NEVADA

MEETING OF

June 10, 2025

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The Colorado River Commission of Nevada (Commission) meeting was called to order by Vice Chairwoman Kelley at 1:30 p.m., followed by the pledge of allegiance.

A. Conformance of Open Meeting Law.

Executive Director, Eric Witkoski, confirmed that the meeting was posted in compliance with the Open Meeting Law.

B. Comments from the public. Members of the public are invited to comment on items on the meeting agenda or on items not contained therein. No action may be taken on a matter raised during public comments until the matter itself has been specifically included on the agenda as an item for possible action.

Vice Chairwoman Kelley asked if there were any comments from the public. There were none.

C. *For Possible Action*: Approval of minutes of April 8, 2025, meeting.

Commissioner Stewart moved for approval of the minutes of the April 8, 2025, meeting. The motion was seconded by Commissioner Puliz and approved by unanimous vote of those present.

D. *For Possible Action:* Approve Contract No. LS-25-SLC between Summit Line Construction, Inc., and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3056 for construction and repair services for a term ending June 30, 2028, not to exceed $2,000,000.

Commissioner Kirkpatrick arrived at this time.

Mr. Witkoski introduced Item D for possible action.

Shae Pelkowski, Assistant Director, Engineering and Operations, provided background information on contract No. LS-25-SLC between Summit Line Construction, Inc., stating the contract will focus on construction and repair. This contract is an enabling contract to allow necessary work to be requested and performed under purchase orders that outline the specific scope of work and negotiated cost.

Vice Chairwoman Kelley commented on the competitive bidding process and staff having four qualified contractors available for construction and repair. Emergency planning is critical to ensure reliability and power supplied by the Commission and benefit the state.

Commissioner Puliz moved for approval of Contract No. LS-25-SLC between Summit Line Construction, Inc., and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3056 for construction and repair services for a term ending June 30, 2028, not to exceed $2,000,000.

The motion was seconded by Commissioner Stewart and approved by unanimous vote.

E. ***For Possible Action*: Approve Contract No. CRCGV-06 between successful bidder, Electrical Power Products, Inc., and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3215, for Control Enclosure for Southern Nevada Water Authority's Garnet Valley Water System Project in the amount of $716,273 and authorize a change order contingency amount not to exceed $71,627.**

Mr. Witkoski introduced Item E for possible action.

Mr. Pelkowski explained SNWA has requested the Commission to assist in the design and procurement of the electrical infrastructure for the Garnet Valley Water System project. The Control Enclosure will be purchased by the Commission pursuant to NRS 538.161 (2) and the Commission's established Procedures for Purchasing Electrical Materials. This contract is for one fully equipped prefabricated metal Control Enclosure, including all power panelboards (AC and DC), Relay Panels, SCADA/Communications Panels, Battery Charger, and miscellaneous supporting materials and equipment.

Commissioner Kirkpatrick moved for approval Contract No. CRCGV-06 between successful bidder, Electrical Power Products, Inc., and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3215, for Control Enclosure for Southern Nevada Water Authority's Garnet Valley Water System Project in the amount of $716,273 and authorize a change order contingency amount not to exceed $71,627.

The motion was seconded by Commissioner Puliz and approved by unanimous vote.

F. ***For Possible Action:* Approve Contract No. ES-25-ENE between EN Engineering, LLC and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3216 for High Voltage System Engineering services for a term ending June 30, 2029, not to exceed $1,200,000.**

G. ***For Possible Action:* Approve Contract No. ES-25-ICPE between Intermountain Consumer Professional Engineers, Inc., and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3216 for High Voltage System Engineering services for a term ending June 30, 2029, not to exceed $1,200,000.**

Mr. Witkoski introduced Item F and G for possible action.

Mr. Pelkoski provided details about Item F and G for High Voltage System Engineering services.

The Commission's Staff includes an in-house electrical engineer to provide engineering support for the system, so Staff can perform many routine engineering support functions. However, the Commission occasionally requires further engineering support for its operation and maintenance functions and to assist with the preparation of designs of ongoing and future projects for the agencies it serves. The PDG is looking to expand its list of available high voltage engineering services to increase competition and open opportunities for additional firms that provide quality specialized services and provide the extra support the Commission needs.

The proposed contracts will provide engineering, drafting, and analysis services as needed. These services may be used to assist with the operation and maintenance of high-voltage transmission and distribution systems, or with the upgrade, repair, or extension of such systems. These enabling contracts will allow necessary work to be requested and performed under purchase orders that outline the specific scope of work and negotiated cost.

Commissioner Walton moved to approve Items F and G. The motion was seconded by Commissioner Puliz and approved by unanimous vote.

H. ***For Possible Action:*** **Approve Contract No. TR-25-TRC between TRC Environmental Corporation and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3220 for Specialized Substation Safety and Maintenance Training for a term ending August 1, 2029, not to exceed $250,000.**

Mr. Witkoski introduced Item H for possible action.

Mr. Pelkowski provided details for the contract. TRC Environmental Corporation will provide the Commission's Power Delivery Group (PDG) personnel complete specialized substation safety and maintenance training programs delivered in-person and virtually to ensure our employees remain excellent.

Commissioner Kirkpatrick asked, 'Is TRC a national firm with a national perspective?'

Mr. Pelkowski stated TRC is a large corporation that works with power and utilities around the country. TRC has a mock substation set up in Pennsylvania so that the Commission can send Staff to get real hands-on training by performing this maintenance on assets.

Mr. Witkoski added the Commission is a member of the American Public Power Association (APPA) a national organization. Staff receives training from APPA and has recently become a member of the Nevada Rural Electric Association that also conducted safety training.

Commissioner Stewart moved to approve Contract No. CRCGV-06 between successful bidder, Electrical Power Products, Inc., and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3215, for Control Enclosure for Southern Nevada Water Authority's Garnet Valley Water System Project in the amount of $716,273 and authorize a change order contingency amount not to exceed $71,627.

The motion was seconded by Commissioner Kirkpatrick and approved by unanimous vote.

I. ***For Possible Action:*** **Approve a Lease Agreement between AVO Multi-Amp Corp dba Megger and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3224 for Electrical Test Equipment and software license for a term ending August 1, 2029, for an amount not to exceed $700,000.**

Mr. Witkoski introduced Item I for possible action.

Mr. Pelkowski stated the proposed enabling lease will allow the Commission's Power Delivery Group to access Megger's specialized testing equipment and software as needed for various electrical infrastructure projects, as well as for operations and maintenance of existing infrastructure.

Commissioner Puliz asked if there were no Nevada companies available to enter a contract with this type of training.

Mr. Pelkowski replied that Megger's group competitors and similar companies did not submit a bid and are not located in Nevada.

Commissioner Kirkpatrick moved to approve the Lease Agreement between AVO Multi-Amp Corp dba Megger and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3224 for Electrical Test Equipment and software license for a term ending August 1, 2029, for an amount not to exceed $700,000.

The motion was seconded by Commissioner Walton and approved by unanimous vote.

J. ***For Possible Action:*** **Approval of Amendment No. 1 to Boulder Flats Solar Interconnection Project Documents Contract No. CRCBF-14 between the Colorado River Commission of Nevada and Summit Line Construction, Inc., to increase the contract price by $744,017.51 relating to changes for the TS2 Interconnection.**

Mr. Witkoski introduced Item J for possible action.

Mr. Pelkowski stated Amendment No. 1 adds in the construction portion of the contract for the new 230KV Boulder Flats switch yard and transmission line project intended to interconnection the new Boulder Flats solar facility and the El Dorado Valley. It will allow for the expansion of the project to accommodate an interconnection of Townsite 2, a solar and battery project, being built near the Boulder Flats line by another developer.

Commissioner Puliz asked if this contract is built into the contracted price with Southern Nevada Water Authority?

Mr. Pelkowski replied, yes. Staff has been working closely with SNWA on the budget process. Yes, there were estimates.

Vice Chairwoman Kelley asked, does the physical impact involve the transmission lines switching from a 3 breaker to a 4 breaker.

Mr. Pelkowski replied, yes. The station needed a significant reconfiguration to take on this new developer.

Commissioner Puliz moved to approve of Amendment No. 1 to Boulder Flats Solar Interconnection Project Documents Contract No. CRCBF-14 between the Colorado River Commission of Nevada and Summit Line Construction, Inc., to increase the contract price by $744,017.51 relating to changes for the TS2 Interconnection.

The motion was seconded by Commissioner Stewart and approved by unanimous vote.

K. ***For Possible Action:*** **Approve Amendment No. 4 to Contract No. SA-12-02 between Survalent Technology Inc., and the Colorado River Commission of Nevada for Substation Automation System Support Services to extend the term to June 30, 2028.**

Mr. Witkoski introduced item K for possible action.

Mr. Pelkowski provided details about Amendment No. 4 to Contract No. SA-12-02 with Survalent Technology, Inc. The extension of the contract is for three more years to June 30, 2028, and there is no request to increase the authorized contract amount. Staff anticipates the continued need for these substation automation system support services in order to enable the Commission and its electric customers to continue to benefit from Survalent's proprietary software.

Prior Amendment No. 3 extended the contract to June 30, 2025, and there was no additional amount authorized under the contract.

Prior Amendment No. 2 extended the term of the contract for an additional three years to June 30, 2022, and increased the contract amount by $100,000 to a not-to-exceed total of $575,000 over the term of the contract.

The current balance remaining on the contract is $147,529.94 and that is expected to be sufficient for the term of Amendment No. 4.

Commissioner Walton moved to approve Amendment No. 4 to Contract No. SA-12-02 between Survalent Technology Inc., and the Colorado River Commission of Nevada for Substation Automation System Support Services to extend the term to June 30, 2028.

The motion was seconded by Commissioner Puliz and approved by unanimous vote.

L. ***For Possible Action:*** **Approve a contract for legal services between the Colorado River Commission of Nevada, Office of the Nevada Attorney General, and Water and Power Law Group for an amount not to exceed $65,000 for a term of two years.**

Mr. Witkoski introduced Item L for possible action and provided details.

Commissioner Kirkpatrick asked if Staff is using the best people for this task. If you want the best sometimes we have to pay more.

Mr. Witkoski replied that Water and Power Legal Group comes highly recommended by Marcus Faust and the DC colleagues. Staff did interview John Bezdek of the Water and Power Legal Group. He is very knowledgeable, has all the contacts and is familiar with the legal complexities of navigating federal administrative procedures.

Commissioner Kirkpatrick moved to approve contract for legal services between the Colorado River Commission of Nevada, Office of the Nevada Attorney General, and Water and Power Law Group for an amount not to exceed $65,000 for a term of two years.

The motion was seconded by Commissioner Puliz and approved by unanimous vote.

M. ***For Possible Action:*** **Approve Contract No. AT-25-TSK between TSK Architects and the Colorado River Commission of Nevada, for architect services in the amount of $116,600 and a ten percent contingency for a total contract amount not to exceed of $128,260 and a term ending June 30, 2027 for services relating to the expansion of office space at Newport substation.**

Mr. Witkoski introduced Item M for possible action.

Mr. Pelkowski provided details about Contract No. AT-25-TSK between TSK Architects of the plan to expand the office space at Newport substation to meet current operational needs and ensure the security of critical systems.

Commissioner Stewart moved to approve Contract No. AT-25-TSK between TSK Architects and the Colorado River Commission of Nevada, for architect services in the amount of $116,600 and a ten percent contingency for a total contract amount not to exceed $128,260 and a term ending June 30, 2027, for services relating to the expansion of office space at Newport substation.

The motion was seconded by Commissioner Walton and approved by unanimous vote.

N. ***For Possible Action:*** **Staff update on the proposed process for the Commission's Allocation of Power from the Parker-Davis Project for eligible customers; and the Western Area Power Administration, Department of Energy's 2028 Parker-Davis Project Power Marketing Plan.**

Mr. Witkoski introduced Item N for possible action.

Gail Bates, Assistant Director, Hydropower, gave a presentation providing staff update on the proposed process for the Commission's Allocation of Power from the Parker-Davis Project for eligible customers; and the Western Area Power Administration, Department of Energy's 2028 Parker-Davis Project Power Marketing Plan.

Commissioner Kirkpatrick commented that she wants to make sure all eligible customers have a fair chance of receiving an Allocation of Power for the Parker-Davis Project.

Commissioner Stewart asked if Parker-Davis will be producing less power due to hydrology. In previous contracts Parker-Davis would supplement internally within the contract and now they will not, but they will give an option to do so. Trying to understand the different mechanisms that will be embedded into the new contract.

Ms. Bates replied Parker-Davis will tell the Commission on a quarterly basis what the plant is actually going to generate and then they will offer the customer the option to go to the

market to purchase power on their behalf and pass that through to those customers who want the optional product as opposed to those that do not have to take it.

Agenda Item N will be brought back in August 2025 for possible approval.

O. ***For Information Only:*** **Update on financial audit, budget submitted for FY 2026 and FY 2027 and related matters for the 2025 Nevada Legislative session.**

Mr. Witkoski introduced Item O for Information Only.

Doug N. Beatty, Chief of Finance and Administration provided an update on FY24 financial audit placed on continuous hold while waiting for information from the state controller's office. There have been meetings and correspondences however their office is still working on FY23. Commission staff does not have a definitive answer as to when the Commission's Annual Comprehensive Financial Report can be issued.

P. ***For Information Only:*** **Update on pending legal matters, including Federal Energy Regulatory Commission, Public Utilities Commission of Nevada filings and Federal Legislation and related matters.**

Mr. Witkoski introduced Item P for Information Only. There were no updates at this time.

Q. ***For Information Only:*** **Status update from Staff on the hydrological conditions, drought, and climate of the Colorado River Basin, Nevada's consumptive use of Colorado River water, basin negotiations, impacts on hydropower generation, electrical construction activities and other developments on the Colorado River.**

Mr. Witkoski introduced Item Q for possible action.

Warren Turkett, Assistant Director, Natural Resources, gave a brief update on hydrological conditions. including precipitation, temperature, snowpack, the May 2025 24-month study of Lake Powell and Lake Mead, and water use in Southern Nevada.

R. Comments from the public. Members of the public are invited to comment on items on the meeting agenda or on items not contained therein. No action may be taken on a matter raised during public comment until the matter itself has been specifically included on the agenda as an item for possible action.

Vice Chairwoman Kelley asked if there were any comments from any member of the public present in the Chamber or any member of the public participating remotely that wish to address the Commission. There were none.

S. Comments and questions from the Commission members.

Vice Chairwoman Kelley asked if there were any comments or questions from any Commission members. There were none.

T. Selection of the next possible meeting date.

The next meeting is tentatively scheduled for 1:30 p.m. on July 8, 2025, at the Clark County Government Center, Commission Chambers, 500 South Grand Central Parkway, Las Vegas, Nevada 89155**.**

U. Adjournment.

The meeting was adjourned at 2:34 p.m.

_____
Eric Witkoski, Executive Director

APPROVED:

_____
Puoy K. Premsrirut, Chairwoman

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM D
FOR MEETING OF AUGUST 12, 2025

SUBJECT: *For Possible Action:* Approve Contract No. SA-25-SEL between the successful bidder, Schweitzer Engineering Laboratories, Inc. and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3218, for Protective Relays and Supervisory Control and Data Acquisition (SCADA) equipment, in an amount not to exceed $1,200,000, with the contract ending July 31, 2029.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: Staff recommend the Commission approve the contract and authorize the Executive Director to sign the contract on behalf of the Commission.
FISCAL IMPACT: Contract not to exceed $1,200,000.

STAFF COMMENTS AND BACKGROUND:

A. Background on Operations

Pursuant to NRS 538.161, the Colorado River Commission of Nevada (Commission) is authorized to execute contracts for the planning and development of facilities for the generation or transmission of electricity for the greatest possible benefit to the state. In addition, the Commission has entered into a Facilities Development Agreement with the Southern Nevada Water Authority (SNWA) to establish a cooperative relationship to jointly develop, operate, maintain, utilize, and replace a Power System for SNWA and its member agencies.

B. Purpose of the Contract

As a part of our Capital and Operations and Maintenance projects, the Power Delivery Group procures a large amount of relaying and communications equipment for protection of the high voltage transmission system and associated substations. This contract allows us to procure this equipment at direct market rates without any third-party markups.

C. Background of Bid/Procurement

On March 7, 2025, Bid Solicitation No. 69CRC-S3216 was posted in NVEPro. Bid invitations were distributed to 24 vendors registered with NVEPro. The deadline for submissions was 2:00 p.m. on April 10, 2025. Two proposals were received.

The evaluation committee reviewed the submissions and selected the proposal submitted by Schweitzer Engineering Laboratories, Inc. as the most responsive and responsible bid.

The procurement is authorized under NRS 538.161(2) and complies with the Commission's established Procedures for Purchasing Electrical Materials for the Power Delivery Project and the State Administrative Manual (SAM) §0326.

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM D
FOR MEETING OF AUGUST 12, 2025

D. Staff's Recommendation

Staff recommend the Commission approve the contract with Schweitzer Engineering Laboratories, Inc., and authorize the Executive Director to sign it on behalf of the Commission.

CONTRACT FOR EQUIPMENT FROM INDEPENDENT CONTRACTOR

A Contract Between the State of Nevada
Acting by and Through its

Agency Name:	**Colorado River Commission of Nevada**
Address:	**100 N. City Pkwy, Suite 1100**
City, State, Zip Code:	**Las Vegas, Nevada 89106**
Contact:	**Shae Pelkowski**
Phone:	**702-376-9997**
Email:	**spelkowski@crc.nv.gov**

and

Contractor Name:	**Schweitzer Engineering Laboratories, Inc.**
Address:	**2350 NE Hopkins Court**
City, State, Zip Code:	**Pullman, Washington 99163**
Contact:	**Contracts and Legal**
Phone:	**509-339-5465**
Email:	**Selcontracts@selinc.com**

WHEREAS, NRS 333.700(8)(b) authorizes state departments and agencies to contract for any work of construction or major repairs of state buildings without approval from the Board of Examiners, if the contracting process is controlled by the rules of competitive bidding;

WHEREAS, the Colorado River Commission of Nevada, pursuant to NRS 538.161, represents and acts for the State of Nevada in negotiation and execution of contracts for the use, planning, development or ownership of any facilities for the generation or transmission of electricity for the greatest possible benefit to this State; and

WHEREAS, it is deemed that the equipment provided hereunder by Contractor is both necessary and in the best interests of the State of Nevada.

NOW, THEREFORE, in consideration of the aforesaid premises, the parties mutually agree as follows:

1. **DEFINITIONS**.

A. "State" – means the State of Nevada and any State agency identified herein, its officers, employees and immune contractors as defined in NRS 41.0307.

B. "Contracting Agency" – means the State agency identified above.

C. "Contractor" – means the person or entity identified above that provides goods for the State under the terms and conditions set forth in this Contract.

D. "Fiscal Year" – means the period beginning July 1st and ending June 30th of the following year.

E. "Contract" – Unless the context otherwise requires, "Contract" means this document entitled Contract for Equipment from Independent Contractor and all Attachments or Incorporated Documents.

F. "Contract for Independent Contractor" – means this document entitled Contract for Equipment from Independent Contractor exclusive of any Attachments or Incorporated Documents.

2. **CONTRACT TERM.** This Contract shall be effective as noted below, unless sooner terminated by either party as specified in *Section 9, Contract Termination*.

Effective from:	August 12, 2025	To:	July 31, 2029

3. **NOTICE**. All communications, including notices, required or permitted to be given under this Contract shall be in writing and directed to the parties at the addresses stated above. Notices may be given: (i) by delivery in person; (ii) by a nationally recognized next-day courier service, return receipt requested; (iii) email; or (iv) by certified mail, return receipt requested.

4. **INCORPORATED DOCUMENTS**. The parties agree that this Contract, inclusive of the following attachments, specifically describes the equipment to be provided under a scope of work. This Contract incorporates the following attachments in descending order of constructive precedence:

ATTACHMENT AA:	SCOPE OF WORK
ATTACHMENT BB:	INSURANCE SCHEDULE
ATTACHMENT CC:	STATE SOLICITATION # 69CRC-S3218
ATTACHMENT DD:	VENDOR PROPOSAL

Any provision, term or condition of an Attachment that contradicts the terms of this Contract for Independent Contractor, or that would change the obligations of the State under this Contract for Independent Contractor, shall be void and unenforceable.

5. **CONSIDERATION**. The parties agree that Contractor will provide the services specified in *Section 5, Incorporated Documents* at a price as noted below:

$ agreed	per	Purchase Order
Total Contract Not to Exceed:	$1,200,000	

The State does not agree to reimburse Contractor for expenses unless otherwise specified in the incorporated attachments. Any intervening end to a biennial appropriation period shall be deemed an automatic renewal (not changing the overall Contract term) or a termination as the result of legislative appropriation may require.

6. **ASSENT**. The parties agree that the terms and conditions listed on incorporated attachments of this Contract are also specifically part of this Contract and are limited only by their respective order of precedence and any limitations specified.

7. **BILLING SUBMISSION: TIMELINESS**. The parties agree that timeliness of billing is of the essence to the Contract and recognize that the State is on a Fiscal Year. All billings for dates of service prior to July 1 must be submitted to the State no later than the first Friday in August of the same calendar year. A billing submitted after the first Friday in August, which forces the State to process the billing as a stale claim pursuant to NRS 353.097, will subject Contractor to an administrative fee not to exceed one hundred dollars ($100.00). The parties hereby agree this is a reasonable estimate of the additional costs to the State of processing the billing as a stale claim and that this amount will be deducted from the stale claim payment due to Contractor. The State will pay Contractor's billing within 30 days from receiving a correct and timely billing.

8. **INSPECTION & AUDIT**.

A. Books and Records. Contractor agrees to keep and maintain under generally accepted accounting principles (GAAP) full, true and complete records, contracts, books, and documents as are necessary to fully disclose to the State or United States Government, or their authorized representatives, upon audits or reviews, sufficient information to determine compliance with all State and federal regulations and statutes.

B. Inspection & Audit. Contractor agrees that the relevant books, records (written, electronic, computer related or otherwise), including, without limitation, relevant accounting procedures and practices of Contractor or its subcontractors shall be subject, at any reasonable time, to inspection, examination, review, and audit at the headquarters location of Contractor where such records may be found, with or without notice by the State Auditor, the relevant State agency or its contracted examiners, the department of Administration, Budget Division, the Nevada State Attorney General's Office or its Fraud Control Units, the state Legislative Auditor, and with regard to any federal funding, the relevant federal agency, the Comptroller General, the General Accounting Office, the Office of the Inspector General, or any of their authorized representatives. All subcontracts shall reflect requirements of this Section. The State shall not have access to Contractor's composition of fixed overhead rates or lump sums, the financial make up of payroll burdens nor to any costs expressed as a percentage of direct labor costs. The State will sign a non-disclosure agreement to protect any confidential information of Contractor prior to conducting an audit provided such information is confidential under Nevada law.

C. Period of Retention. All books, records, reports, and statements relevant to this Contract must be retained a minimum three (3) years, and for five (5) years if any federal funds are used pursuant to the Contract. The retention period runs from the date of payment for the relevant goods by the State, or from the date of termination of the Contract, whichever is later. Retention time shall be extended when an audit is scheduled or in progress for a period reasonably necessary to complete an audit and/or to complete any administrative and judicial litigation which may ensue.

9. **CONTRACT TERMINATION**.

A. Termination Without Cause. Regardless of any terms to the contrary, this Contract may be terminated upon written notice by mutual consent of both parties. The State unilaterally may terminate this contract without cause by giving not less than thirty (30) days' prior written notice in the manner specified in *Section 3, Notice*. If this Contract is unilaterally terminated by the State, Contractor shall use its best efforts to minimize cost to the State and Contractor will not be paid for any cost that Contractor could have reasonably avoided. The State shall pay Contractor for all non-cancellable obligations, expense incurred, and close out costs, including restocking fees of cancelled product orders. Cancelled customized products cannot be re-stocked and the State shall pay Contractor for the full cost of such custom products which have been completed.

B. State Termination for Non-Appropriation. The continuation of this Contract beyond the current biennium is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the State Legislature and/or federal sources. The State may terminate this Contract, and Contractor waives claims(s) for damages related to such termination, effective immediately upon receipt of written notice (or any date specified therein) if for any reason the contracting Agency's funding from State and/or federal sources is not appropriated or is withdrawn, limited, or impaired. Such waiver shall not apply to unpaid amounts for goods delivered.

C. Termination with Cause for Breach. A breach may be declared with or without termination. A notice of breach and termination shall specify the date of termination of the Contract, which shall not be sooner than the expiration of the Time to Correct, if applicable, allowed under subsection 9D. This Contract may be terminated by either party upon written notice of breach to the other party on the following grounds:

1) If Contractor fails to provide the goods called for by this Contract within the time requirements specified in this Contract or within any granted extension of those time requirements; or

2) If any state, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the goods required by this Contract is for any reason denied, revoked, debarred, excluded, terminated, suspended due to Contractor's breach, lapsed, or not renewed; or

3) If either Party becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the Bankruptcy Court; or

4) If the State materially breaches any material duty under this Contract and any such breach impairs Contractor's ability to perform; or

5) If it is found by the State that any quid pro quo or gratuities in the form of money, services, entertainment, gifts, or otherwise were offered or given by Contractor, or any agent or representative of Contractor, to any officer or employee of the State of Nevada with a view toward securing a contract or securing favorable treatment with

respect to awarding, extending, amending, or making any determination with respect to the performing of such contract; or

6) If it is found by the State that Contractor has failed to disclose any material conflict of interest relative to the performance of this Contract; or

7) If the State fails to pay Contractor in accordance with this Contract.

D. Time to Correct. Unless the breach is not curable, or unless circumstances do not permit an opportunity to cure, termination upon declared breach may be exercised only after service of formal written notice as specified in *Section 3, Notice*, and the subsequent failure of the breaching party within fifteen (15) calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared breach has been corrected or commencement of such correction is underway. Upon a notice of breach, the time to correct and the time for termination of this Contract upon breach under subsection 9C, above, shall run concurrently, unless the notice expressly states otherwise.

E. Winding Up Affairs Upon Termination. In the event of termination of this Contract for any reason, the parties agree that the provisions of this Section survive termination:

1) The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Contract.

2) Contractor shall execute any documents and take any actions necessary to effectuate an assignment of this Contract if so requested by the Contracting Agency;

3) Contractor shall preserve, protect and promptly deliver into State possession all proprietary information provided by the State in accordance with *Section 20, State Ownership of Proprietary Information*.

10. **REMEDIES**. Except as otherwise provided for by law or this Contract, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, actual damages, and to a prevailing party reasonable attorneys' fees and costs. For purposes of an award of attorneys' fees to either party, the parties stipulate and agree that a reasonable hourly rate of attorneys' fees shall be three hundred dollars ($300.00) per hour. The State may set off consideration against any unpaid obligation of Contractor to any State agency in accordance with NRS 353C.190. In the event that Contractor voluntarily or involuntarily becomes subject to the jurisdiction of the Bankruptcy Court, the State may set off consideration against any unpaid obligation of Contractor to the State or its agencies, to the extent allowed by bankruptcy law, without regard to whether the procedures of NRS 353C.190 have been utilized.

11. **LIMITED LIABILITY**. The State will not waive and intends to assert available NRS Chapter 41 liability limitations in all cases. Neither party shall have any liability or responsibility for or with respect to consequential, special, indirect, incidental, exemplary, or punitive damages, claims, losses, or liabilities, in all cases, regardless of the foreseeability thereof or having been advised of the possibility of any thereof. Contract liability of both parties shall not be subject to punitive damages. Damages for any State breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to Contractor, for the Fiscal Year budget in existence at the time of the breach. Contractor's maximum aggregate liability under or with respect to this Contract, from any cause and based on any theory whatsoever, other than Third-Party Claims indemnified by Contractor hereunder and Contractor's (including parties under its control) gross negligence, fraud, willful misconduct, and/or breach of confidentiality provisions, shall not exceed Two Million Dollars ($2,000,000). Contractor's maximum aggregate liability for Third-Party Claims shall not exceed Five Million Dollars ($5,000,000). This Section 11 shall survive the expiration or termination of this Contract.

12. **FORCE MAJEURE**. Neither party shall be deemed to be in violation of this Contract if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including without limitation, earthquakes, floods, winds, or storms. In such an event the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of the Contract after the intervening cause ceases.

13. **INDEMNIFICATION AND DEFENSE**. To the fullest extent permitted by law, Contractor shall defend, not excluding the State's right to participate, all claims brought against the State by a third party ("Third-Party Claims") and indemnify and hold the State harmless for liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, (collectively "Damages") resulting from Third-Party Claims to the extent that such Third-Party Claims and Damages are arising out of any breach of the obligations of Contractor under this Contract, or any alleged negligent or willful acts or omissions of Contractor, its officers, employees, and agents related to Contractor's performance under this Contract. Contractor's obligation to indemnify the State shall apply except for Third-Party Claims arising from the State's own negligence or willful misconduct. Contractor waives any rights of subrogation against the State.

Assumption of Defense. Regarding Contractor's defense obligation: (a) Contractor shall assume the defense of a Third-Party Claim through counsel chosen by Contractor; and (b) the State shall: (i) give prompt written notice of the Third-Party Claim to Contractor; (ii) provide reasonable assistance to Contractor in the defense of the Third-Party Claim; (iii) mitigate damages related to the Third-Party Claim; and (iv) give Contractor full control of all aspects of defense of the Third-Party Claim, including settlement, except as otherwise provided herein. Contractor shall obtain written consent from the State before settling the Third-Party Claim if the proposed settlement requires action by the State or contains an admission of liability or wrongdoing by the State. The State may, at its sole option and expense, participate in the defense of such Third-Party Claim with counsel chosen by the State.

Additionally, if the Third-Party Claim against the State is not covered by Contractor's insurance policy maintained pursuant to this Contract, then Contractor shall: (a) bear all costs of defense; provided, however, if the State is determined to be liable for the Third-Party Claim, then: (i) the State shall reimburse Contractor for the costs of defense in proportion to the State's liability, as determined by the trier of fact or agreed to in a written settlement between Contractor and the State; and (ii) Contractor's duty to defend shall cease to the extent that the State is found to have been liable; and (b) pay Damages in proportion to Contractor's liability, as determined by the trier of fact or agreed to in a written settlement between Contractor and the State.

Exclusive Remedy. The indemnity provided by Contractor herein shall be the State's exclusive remedy for Third-Party Claims and resulting Damages.

14. **REPRESENTATIONS REGARDING INDEPENDENT CONTRACTOR STATUS**. Contractor represents that it is an independent contractor, as defined in NRS 333.700(2) and 616A.255, warrants that it will perform all work under this contract as an independent contractor, and warrants that the State of Nevada will not incur any employment liability by reason of this Contract or the work to be performed under this Contract. To the extent the State incurs any employment liability for the work under this Contract; Contractor will reimburse the State for that liability.

15. **INSURANCE SCHEDULE.** Unless expressly waived in writing by the State, Contractor must carry policies of insurance and pay all taxes and fees incident hereunto. Policies shall meet the terms and conditions as specified within this Contract along with the additional limits and provisions as described in *Attachment BB*, incorporated hereto by attachment. The State shall have no liability except as specifically provided in the Contract.

Contractor shall not commence work before Contractor has provided the required evidence of insurance to the Contracting Agency. The State's approval of any changes to insurance coverage during the course of performance shall constitute an ongoing condition subsequent to this Contract. Any failure of the State to timely approve shall not constitute a waiver of the condition.

A. Insurance Coverage. Contractor shall, at Contractor's sole expense, procure, maintain and keep in force for the duration of the Contract insurance conforming to the minimum limits as specified in *Attachment BB*, incorporated hereto by attachment. Unless specifically stated herein or otherwise agreed to by the State, the required insurance shall be in effect prior to the commencement of work by Contractor and shall continue in force as appropriate until:

1) Final acceptance by the State of the completion of this Contract; or
2) Such time as the insurance is no longer required by the State under the terms of this Contract; whichever occurs later.

Any insurance or self-insurance available to the State shall be in excess of and non-contributing with, any insurance required from Contractor. Contractor's insurance policies shall apply on a primary basis. Until such time as the insurance is no longer required by the State, Contractor shall provide the State with renewal or replacement evidence of insurance no less than thirty (30) days before the expiration or replacement of the required insurance. If at any

time during the period when insurance is required by the Contract, an insurer or surety shall fail to comply with the requirements of this Contract, as soon as Contractor has knowledge of any such failure, Contractor shall immediately notify the State and immediately replace such insurance or bond with an insurer meeting the requirements.

B. General Requirements.

1) Additional Insured: By endorsement to the general liability insurance policy, the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 shall be named as additional insureds for all liability arising from the Contract.

2) Waiver of Subrogation: Each insurance policy shall provide for a waiver of subrogation against the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 for losses arising from work/materials/equipment performed or provided by or on behalf of Contractor.

3) Cross Liability: All required liability policies shall provide cross-liability coverage as would be achieved under the standard ISO separation of insureds clause.

4) Deductibles and Self-Insured Retentions: Insurance maintained by Contractor shall apply on a first dollar basis without application of a deductible or self-insured retention unless otherwise specifically agreed to by the State. Such approval shall not relieve Contractor from the obligation to pay any deductible or self-insured retention.

5) Policy Cancellation: Except for ten (10) days' notice for non-payment of premiums, each insurance policy shall be endorsed to state that without thirty (30) days prior written notice to the State of Nevada, c/o Contracting Agency, the policy shall not be canceled, non-renewed or coverage and/or limits reduced or materially altered, and shall provide that notices required by this Section shall be sent by certified mail to the address shown on page one (1) of this contract.

6) Approved Insurer: Each insurance policy shall be:

a) Issued by insurance companies authorized to do business in the State of Nevada or eligible surplus lines insurers acceptable to the State and having agents in Nevada upon whom service of process may be made; and

b) Currently rated by A.M. Best as "A-VII" or better.

C. Evidence of Insurance.

Prior to the start of any work, Contractor must provide the following documents to the contracting State agency:

1) Certificate of Insurance: The Acord 25 Certificate of Insurance form or a form substantially similar must be submitted to the State to evidence the insurance policies and coverages required of Contractor. The certificate must name the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 as the certificate holder. The certificate should be signed by a person authorized by the insurer to bind coverage on its behalf. The State project/Contract number; description and Contract effective dates shall be noted on the certificate, and upon renewal of the policies listed, Contractor shall furnish the State with replacement certificates as described within *Section 15A, Insurance Coverage*.

Mail all required insurance documents to the State Contracting Agency identified on Page one of the Contract.

2) Additional Insured Endorsement: An Additional Insured Endorsement (CG 20 10 11 85 or CG 20 26 11 85), signed by an authorized insurance company representative, must be submitted to the State to evidence the endorsement of the State as an additional insured per *Section 15B, General Requirements*.

3) Schedule of Underlying Insurance Policies: If Umbrella or Excess policy is evidenced to comply with minimum limits, a copy of the underlying Schedule from the Umbrella or Excess insurance policy may be required.

4) Review and Approval: Documents specified above must be submitted for review and approval by the State prior to the commencement of work by Contractor. Neither approval by the State nor failure to disapprove the insurance furnished by Contractor shall relieve Contractor of Contractor's full responsibility to provide the insurance required by this Contract.

16. **COMPLIANCE WITH LEGAL OBLIGATIONS.** Contractor shall procure and maintain for the duration of this Contract any state, county, city or federal license, authorization, waiver, permit qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the equipment required by this Contract. Contractor shall provide proof of its compliance upon request of the Contracting Agency. Contractor will be responsible to pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are the responsibility of Contractor in accordance with NRS 361.157 and NRS 361.159. Contractor agrees to be responsible for payment of any such government obligations not paid by its subcontractors during performance of this Contract. Contractor's quoted prices do not include sales, use, value added nor similar taxes which will be added as a separate line item to the invoice for the rate(s) applicable at the time of invoicing.

17. **WAIVER OF BREACH**. Failure to declare a breach or the actual waiver of any particular breach of the Contract or its material or nonmaterial terms by either party shall not operate as a waiver by such party of any of its rights or remedies as to any other breach.

18. **SEVERABILITY.** If any provision contained in this Contract is held to be unenforceable by a court of law or equity, this Contract shall be construed as if such provision did not exist and the non-enforceability of such provision shall not be held to render any other provision or provisions of this Contract unenforceable.

19. **ASSIGNMENT/DELEGATION.** To the extent that any assignment of any right under this Contract changes the duty of either party, increases the burden or risk involved, impairs the chances of obtaining the performance of this Contract, attempts to operate as a novation, or includes a waiver or abrogation of any defense to payment by State, such offending portion of the assignment shall be void, and shall be a breach of this Contract. Contractor shall neither assign, transfer nor delegate any rights, obligations nor duties under this Contract without the prior written consent of the State.

20. **STATE OWNERSHIP OF PROPRIETARY INFORMATION**. Any data or information provided by the State to Contractor and any documents or materials provided by the State to Contractor in the course of this Contract ("State Materials") shall be and remain the exclusive property of the State and all such State Materials shall be delivered into State possession by Contractor upon receipt by Contractor of the State's written request to return the State Materials.

21. **PUBLIC RECORDS**. Pursuant to NRS 239.010, information or documents received from Contractor may be open to public inspection and copying. The State has a legal obligation to disclose such information unless a particular record is made confidential by law or a common law balancing interests. Contractor may label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 333.333, provided that Contractor thereby agrees to indemnify and defend the State for honoring such a designation. The failure to so label any document that is released by the State shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

22. **CONFIDENTIALITY**. Contractor shall keep confidential all information, in whatever form, produced, prepared, observed or received by Contractor to the extent that such information is confidential by law or otherwise required by this Contract.

23. **FEDERAL FUNDING**. In the event federal funds are used for payment of all or part of this Contract, Contractor agrees to comply with all applicable federal laws, regulations and executive orders, including, without limitation the following:

A. Contractor certifies, by signing this Contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency. This certification is made pursuant to Executive Orders 12549 and 12689 and Federal Acquisition Regulation subpart 9.4, and any relevant program-specific regulations. This provision shall be required of every subcontractor receiving any payment in whole or in part from federal funds.

B. Contractor and its subcontracts shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1990 (P.L. 101-136), 42 U.S.C. 12101, as amended, and regulations adopted thereunder, including 28 C.F.R. Section 35, inclusive, and any relevant program-specific regulations.

C. Contractor and it subcontractors shall comply with the requirements of the Civil Rights Act of 1964 (P.L. 88-352), as amended, the Rehabilitation Act of 1973 (P.L. 93-112), as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or offeror for employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition (including AIDS and AIDS-related conditions.)

24. **LOBBYING**. The parties agree, whether expressly prohibited by federal law, or otherwise, that no funding associated with this Contract will be used for any purpose associated with or related to lobbying or influencing or attempting to lobby or influence for any purpose the following:

A. Any federal, state, county or local agency, legislature, commission, council or board;

B. Any federal, state, county or local legislator, commission member, council member, board member, or other elected official; or

C. Any officer or employee of any federal, state, county or local agency; legislature, commission, council or board.

25. **PRODUCT WARRANTY**. Contractor warrants to the State that equipment manufactured by Contractor and provided hereunder (herein referred to as "Product(s)") are free from defects in material and workmanship for ten (10) years after shipment, including Contractor-manufactured control enclosure structures and panels. The sole and exclusive warranties for any software are set forth in the Contractor Software License Agreement. This warranty is conditioned upon proper storage and shall be void in its entirety if the State modifies Product(s) without prior written consent to and subsequent approval of any such modifications by Contractor or uses Product(s) for any applications that require product listing or qualification not specifically included in the Contractor written quotation or proposal. If any Product fails to conform to this warranty, the State properly notifies Contractor of such failure and the State returns the Product to Contractor's factory (unless another location is agreed upon by Contractor) for diagnosis (and pays all expenses for such return), Contractor shall correct any such failure by, at its sole discretion, either repairing any defective or damaged Product part(s) or making available any necessary replacement part(s) or Product(s). Contractor will pay the freight to return the Product to the State (Carriage Paid To (CPT) customer's place of business). If Contractor is unable or unwilling to repair or replace, Contractor and the State shall negotiate an equitable resolution such as a prorated refund or credit to the State's account. Any Product repair or upgrade shall be covered by this warranty for the longer of one (1) year from date of repair or the remainder of the original warranty period. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER STATUTORY, EXPRESS OR IMPLIED (INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE AND WARRANTIES ARISING FROM COURSE OF PERFORMANCE OR DEALING OR USAGE OF TRADE), EXCEPT WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. Contractor shall, whenever possible, pass the original manufacturer warranty to the State for equipment which is not manufactured by Contractor. Contractor does not warrant non-Contractor manufactured equipment, including non-Contractor control enclosure structures, and non-Contractor equipment within Contractor panels, control enclosure structures and systems, and products or prototypes provided by Contractor for testing, marketing, or loan purposes.

26. **PROPER AUTHORITY**. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract. Contractor acknowledges that as required by statute or regulation this Contract is effective only for the period of time specified in the Contract.

27. **DISCLOSURES REGARDING CURRENT OR FORMER STATE EMPLOYEES**. Intentionally deleted.

28. **ASSIGNMENT OF ANTITRUST CLAIMS**. Contractor irrevocably assigns to the State any claim for relief or cause of action which Contractor now has or which may accrue to Contractor in the future by reason of any violation of State of Nevada or federal antitrust laws in connection with any goods provided under this Contract.

29. **GOVERNING LAW: JURISDICTION**. This Contract and the rights and obligations of the parties hereto shall be governed by, and construed according to, the laws of the State of Nevada, without giving effect to any principle of conflict-of-law that would require the application of the law of any other jurisdiction. The parties consent to the exclusive jurisdiction of and venue in the state District Court, Clark County, Nevada for enforcement of this Contract, and consent to personal jurisdiction in such court for any action or proceeding arising out of this Contract.

30. **ENTIRE CONTRACT AND MODIFICATION**. This Contract and its integrated attachment(s) constitute the entire agreement of the parties and as such are intended to be the complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Contract specifically displays a mutual intent to amend a particular part of this Contract, general conflicts in language between any such attachment and this Contract shall be construed consistent with the terms of this Contract. Unless otherwise expressly authorized by the terms of this Contract, no modification or amendment to this Contract shall be binding upon the parties unless the same is in writing and signed by the respective parties hereto and approved by the Office of the Attorney General. This Contract, and any amendments, may be executed in counterparts.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be signed and intend to be legally bound thereby.

Schweitzer Engineering Laboratories, Inc.

DocuSigned by:
Jeremy Nickels 6/24/2025 | Vice President of Finance

Name: Jeremy Nickels — Date — Title

Colorado River Commission of Nevada

Executive Director

Eric Witkoski — Date — Title

Approved as to form by:

Office of the Attorney General

On:

Michelle Briggs, Special Counsel — Date

ATTACHMENT AA

SCOPE OF WORK

COLORADO RIVER COMMISSION OF NEVADA

PROTECTIVE RELAYING AND SCADA EQUIPMENT

SCOPE OF WORK

March 2025

REVISION 0

Revisions

REVISION	DESCRIPTION	DATE
0	INITIAL ISSUE	03/01/2025

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01 00 00 – GENERAL REQUIREMENTS

01 11 00 - SUMMARY OF WORK

1. **Objective**
    a. The Colorado River Commission of Nevada (CRCNV, Owner) Power Delivery Group (PDG) is looking for qualified protective relaying and SCADA equipment supplier for high voltage substation and transmission line relays and data aggregation as needed for the reliable operations and maintenance of the CRCNV Power Delivery system.
2. **Scope of Work**
    a. NRS 333.700(8)(b) authorizes state departments and agencies to contract for any work of construction or major repairs of state buildings without approval from the Board of Examiners if the contracting process is controlled by the rules of competitive bidding.
    b. The Colorado River Commission of Nevada, pursuant to NRS 538.161, negotiates and contracts for the planning, development or ownership of any facilities for the generation or transmission of electricity for the greatest possible benefit to this State.
    c. This scope of work covers the ability to use a contractor for the purpose of maintaining the Colorado River Commission of Nevada's high voltage transmission and substation public works assets.
    d. Contractor should be willing and capable of providing at a minimum the following services:
        i. Protective Relaying Procurement
            1. Transformer Protection
            2. Feeder Protection
            3. Line Protection
            4. Other equipment related to Protective Relaying not listed above as technology evolves.
        ii. SCADA Equipment Procurement
            1. Data Aggregation and Conversion

2. SCADA I/O Modules
3. Networking Equipment
4. Other equipment related to SCADA and Networking not listed above as technology evolves.

iii. Misc.

1. Cabling
2. Fiber Equipment
3. Software
4. Test Equipment
5. Existing Relay Modifications (card replacements, RMA Repairs, etc.)

iv. All equipment must be quality controlled by the supplier prior to shipment.

v. Supplier shall provide tracking information once the equipment ships from supplier's facilities.

vi. Supplier shall be available for technical questions and assistance with determining the proper application of supplier's equipment.

ATTACHMENT BB

INSURANCE SCHEDULE

INSURANCE REQUIREMENTS:

Contractor and subcontractors shall procure and maintain until all of their obligations have been discharged, including any warranty periods under this Contract are satisfied, insurance against claims for injury to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

A. **MINIMUM SCOPE AND LIMITS OF INSURANCE -** Contractor shall provide coverage with limits of liability not less than those stated below. An excess liability policy or umbrella liability policy may be used to meet the minimum liability requirements provided that the coverage is written on a "following form" basis.

1. **Commercial General Liability – Occurrence Form**
   Policy shall include bodily injury, property damage, broad form contractual liability and XCU coverage.

   Minimum Requirements:

• General Aggregate	$2,000,000
• Products – Completed Operations Aggregate	$1,000,000
• Personal and Advertising Injury	$1,000,000
• Each Occurrence	$1,000,000

   a. The policy shall be endorsed to include the following additional insured language: "The State of Nevada shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Contractor".

2. **Automobile Liability**
   Bodily injury and property damage for any owned, hired, and non-owned vehicles used in the performance of this Contract.

Combined Single Limit (CSL)	$1,000,000

   a. The policy shall be endorsed to include the following additional insured language: "The State of Nevada shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Contractor, including automobiles owned, leased, hired or borrowed by the Contractor".

3. **Worker's Compensation and Employers' Liability**

Workers' Compensation	Statutory
Employers' Liability	
Each Accident	$100,000
Disease – Each Employee	$100,000
Disease – Policy Limit	$500,000

   a. Policy shall contain a waiver of subrogation against the State.

   b. This requirement shall not apply when a contractor or subcontractor is exempt under N.R.S., **AND** when such contractor or subcontractor executes the appropriate sole proprietor waiver form.

B. **ADDITIONAL INSURANCE REQUIREMENTS:** The policies shall include, or be endorsed to include, the following provisions:

1. On insurance policies where the State of Nevada, Colorado River Commission of Nevada is named as an additional insured, the State of Nevada, Colorado River Commission of Nevada shall be an additional insured to the full limits of liability purchased by the Contractor even if those limits of liability are in excess of those required by this Contract.
2. The Contractor's insurance coverage shall be primary insurance and non-contributory with respect to all other available sources.

3. Contractor is responsible for the payment of all policy deductibles.

C. **NOTICE OF CANCELLATION:** Contractor shall for each insurance policy required by the insurance provisions of this Contract shall not be suspended, voided or canceled except after providing thirty (30) days prior written notice been given to the State, except when cancellation is for non-payment of premium, then ten (10) days prior notice may be given. Such notice shall be sent directly to **(Gina Goodman 100 N. City Pkwy, Suite 1100, Las Vegas, NV 89106)**. Should contractor fail to provide State timely notice, contractor will be considered in breach and subject to cure provisions set forth within this contract.

D. **ACCEPTABILITY OF INSURERS:** Insurance is to be placed with insurers duly licensed or authorized to do business in the state of Nevada and with an "A.M. Best" rating of not less than A-VII. The State in no way warrants that the above-required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

E. **VERIFICATION OF COVERAGE:** Contractor shall furnish the State with certificates of insurance (ACORD form or equivalent approved by the State) as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

All certificates and any required endorsements are to be received and approved by the State before work commences. Each insurance policy required by this Contract must be in effect at or prior to commencement of work under this Contract and remain in effect for the duration of the project. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of contract.

All certificates required by this Contract shall be sent directly to **(Gina Goodman 100 N. City Pkwy, Suite 1100, Las Vegas, NV 89106).** The State project/contract number and project description shall be noted on the certificate of insurance.

F. **SUBCONTRACTORS:** Contractors' certificate(s) shall include all subcontractors as additional insureds under its policies **or** subcontractors shall maintain separate insurance as determined by the Contractor, however, subcontractor's limits of liability shall not be less than $1,000,000 per occurrence / $2,000,000 aggregate.

G. **APPROVAL:** Any modification or variation from the insurance requirements in this Contract shall be made by the State Risk Management Division or the Attorney General's Office, whose decision shall be final. Such action will not require a formal Contract amendment, but may be made by administrative action.

ATTACHMENT CC

STATE SOLICIATION # 69CRC-S3218

STATE OF NEVADA
Colorado River Commission of Nevada
100 N. City Parkway, Suite 1100 | Las Vegas, NV 89106 Phone: 775-684-0170 | Fax: 775-684-0188

Solicitation: **69CRC-S3218**
For
Protective Relaying and SCADA Equipment

Release Date: **03/07/2025**
Deadline for Submission and Opening Date and Time: **4/10/2025@ 2:00 pm**

Single point of contact for the solicitation:
David Rodriguez, Power Systems Engineering Manager
Phone, 702-373-9403
Email Address, drodriguez@crc.nv.gov

(TTY for Deaf and Hard of Hearing, 800-326-6868
Ask the relay agent to dial, 1-775-515-5173/V.)

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1. APPLICABLE REGULATIONS GOVERNING PROCUREMENT

1.1. All applicable Nevada Revised Statutes (NRS) and Nevada Administrative Code (NAC) documentation can be found at: www.leg.state.nv.us/law1.cfm.

1.2. Prospective vendors are advised to review Nevada's ethical standards requirements, including but not limited to NRS 281A, NRS 333.800, and NAC 333.155.

2. PROJECT OVERVIEW

2.1. The State of Nevada, Colorado River Commission of Nevada is seeking proposals from qualified vendors to provide Protective Relaying and SCADA Equipment goods as described in the scope of work and attachments.

2.2. The State intends to award one (1) contract in conjunction with this Request for Proposals (RFP), as determined in the best interests of the State. Colorado River Commission of Nevada shall administer contract(s) resulting from this solicitation. The resulting contract(s) are expected to be for a contract term of four years.

2.3. AGENCY BACKGROUND

2.3.1. The Colorado River Commission of Nevada (CRCNV) owns and operates high-voltage transmission and distribution system consisting of two 230/69-kV substations, three 230/14.4-kV substations, four 69/13.8-kV substations, seven 69/4.16-kV substation, 32 miles of 230-kV transmission lines, 5 miles 69-kV overhead transmission lines, eleven miles of 69-kV underground transmission lines and other related facilities in Clark County, Nevada. In addition, the Commission is responsible for the operation and maintenance of ten additional substations owned by the Southern Nevada Water Authority and three owned by the Clark County Water Reclamation District.

2.4. GOALS AND OBJECTIVES

2.4.1. The goal of this solicitation can be seen in Attachment A – Scope of Work.

3. SCOPE OF WORK

3.1. See Attachments 4.1.1.

4. ATTACHMENTS

4.1. ATTACHMENTS INCORPORATED BY REFERENCE. To be read and not returned.

4.1.1. Attachment A - Scope of Work
4.1.2. Attachment B - Terms and Conditions for Services

4.2. ATTACHMENTS FOR REVIEW. To be read and not returned (unless redlining).

4.2.1. Attachment C – Standard Form Contract
4.2.2. Attachment D - Insurance Schedule

4.3. PROPOSAL ATTACHMENTS. To be completed and returned in proposal.

4.3.1. Attachment E - Cost Schedule
4.3.2. Attachment F - Proposed Staff Resume
4.3.3. Attachment G - Reference Questionnaire
4.3.4. Attachment H - Vendor Information Response – **Must Be Signed**
   A. Vendor Contact Information
   B. Vendor Information
   C. Payment Authorization for use of Procurement Card
   D. Name of Individual Authorized to Bind the Organization
   E. Vendor Certifications
   F. Confidentiality and Certification of Indemnification
   G. Certification Regarding Lobbying

5. TIMELINE

5.1. QUESTIONS. All questions regarding this solicitation shall be submitted using the Bid Q&A feature in NevadaEPro.

5.2. TIMELINE. The following represents the proposed timeline for this project.

5.2.1. All times stated are Pacific Time (PT).
5.2.2. These dates represent a tentative schedule of events.
5.2.3. The State reserves the right to modify these dates at any time.

A. Deadline for Questions ..... No later than 5:00 pm on 03/27/2025
B. Answers Posted ..... On or about 04/03/2025
C. Deadline for References ..... No later than 5:00 pm on 04/09/2025
D. Deadline Proposal Submission and Opening ..... No later than 2:00 pm on 4/10/2025
E. Evaluation Period (estimated) ..... 04/10/2025 - 04/24/2025
F. Selection of a Vendor (estimated) ..... On or about 04/24/2025
G. Contract start date (estimated) 05/15/2025

6. EVALUATION

6.1. Evaluation and scoring are conducted in accordance with NRS 333.335 and NAC 333.160-333.165.

6.1.1. Proposals shall be kept confidential until a contract is awarded.
6.1.2. In the event the solicitation is withdrawn prior to award, proposals remain confidential.
6.1.3. The evaluation committee is an independent committee established to evaluate and score proposals submitted in response to the solicitation.
6.1.4. Financial stability shall be scored on a pass/fail basis.
6.1.5. Proposals shall be consistently evaluated and scored based upon the following factors and relative weights.

A. Addressed all Scope of Work items 50
B. Provided examples of Contractor's industry experience on all Scope of Work items 40
C. Cost Factor 8
D. No redlines of State contract 2

6.1.6. Cost proposals will be evaluated based on the following formula.

A. Cost Factor Weight x (Lowest Cost Submitted by a Vendor / Proposer Total Cost) = Cost Score

6.1.7. Presentations

A. Following evaluation and scoring specified above, the State may require vendors to make a presentation of their proposal to the evaluation committee or other State staff, as applicable.
B. The State, at its option, may limit participation in vendor presentations to vendors above a natural break in relative scores from technical and cost scores.
C. Following presentations, the combined technical, cost, and presentation scores will become the final score for a proposal.
D. The State reserves the right to add additional criteria or presentations.
E. The State reserves the right to forego vendor presentations and select vendor(s) based on the written proposals submitted.

6.2. NEVADA-BASED BUSINESS PREFERENCE

6.2.1. The State awards a five percent (5%) preference to Nevada-based businesses pursuant to NRS 333.3351 to 333.3356, inclusive.
6.2.2. Nevada-based business is defined in NRS 333.3352(1).
6.2.3. The term 'principal place of business' has the meaning outlined by the United States Supreme Court in Hertz Corp v. Friend, 559 U.S. 77 (2010), typically meaning a business's corporate headquarters.
6.2.4. To claim this preference a vendor must indicate it on their vendor account and submitted Quote in NevadaEPro.

6.2.5. This preference cannot be combined with any other preference, granted for the award of a contract using federal funds, or granted for the award of a contract procured on a multi-state basis.

6.3. INVERSE PREFERENCE

6.3.1. The State applies an inverse preference to vendors that have a principal place of business in a state other than Nevada and that state applies an in-state preference not afforded to Nevada based vendors, pursuant to AB28 passed in the 81st session of the Nevada Legislature.
6.3.2. The amount of the inverse preference is correlated to the amount of preference applied in the other state.
6.3.3. Vendors who meet this criterion must indicated it on their submitted Quote in NevadaEPro.
6.3.4. This preference cannot be combined with any other preference, granted for the award of a contract using federal funds, or granted for the award of a contract procured on a multi-state basis.

7. MANDATORY MINIMUM REQUIREMENTS

7.1. Pursuant to NRS 333.311 a contact cannot be awarded to a proposal that does not comply with the requirements listed in this section. Proposal shall include confirmation of compliance with all mandatory minimum requirements.

7.2. NEVADA LAW AND STATE INDEMNITY. Pursuant to NRS 333.339, any contract that is entered into may not: (1) Require the filing of any action or the arbitration of any dispute that arises from the contract to be instituted or heard in another state or nation; or (2) Require the State to indemnify another party against liability for damages.

7.3. NO BOYCOTT OF ISRAEL. Pursuant to NRS 333.338, the State of Nevada cannot enter a contract with a company unless that company agrees for the duration of the contract not to engage in a boycott of Israel. By submitting a proposal or bid, vendor agrees that if it is awarded a contract, it will not engage in a boycott of Israel as defined in NRS 333.338(3)(a).

7.4. INDEMNIFICATION. Required contract terms on Indemnification: "To the fullest extent permitted by law, Contractor shall indemnify, hold harmless and defend, not excluding the State's right to participate, the State from and against all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising out of any breach of the obligations of Contractor under this contract, or any alleged negligent or willful acts or omissions of Contractor, its officers, employees and agents. Contractor's obligation to indemnify the State shall apply in all cases except for claims arising solely from the State's own negligence or willful misconduct. Contractor waives any rights of subrogation against the State. Contractor's duty to defend begins when the State requests defense of any claim arising from this Contract."

7.5. LIMITED LIABILITY. Required contract terms on Limited Liability: "The State will not waive and intends to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. Damages for any State breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to Contractor, for the Fiscal Year budget in existence at the time of the breach. Contractor's tort liability shall not be limited."

7.6. CONTRACT RESPONSIBILITY. Awarded vendor shall be the sole point of contract responsibility. The State shall look solely to the awarded vendor for the performance of all contractual obligations which may result from an award based on this solicitation, and the awarded vendor shall not be relieved for the non-performance of any or all subcontractors.

7.7. DATA ENCRYPTION. State IT requires that data be encrypted in transit and in rest.

7.8. STATESIDE DATA. State IT requires that State data assets must be maintained in the United States and data will not be held offshore.

7.9. NEVADA BUSINESS LICENSE. Pursuant to NRS 353.007, prior to contract execution awarded vendor must hold a state business license pursuant to NRS chapter 76 unless exempted by NRS 76.100(7)(b).

7.10. DISCLOSURE. Each vendor shall include in its proposal a complete disclosure of any alleged significant prior or ongoing contract failures, contract breaches, any civil or criminal litigation or investigations pending which involves the vendor or in which the vendor has been judged guilty or liable.

8. CRITICAL ITEMS

8.1. In addition to the *Scope of Work* and *Attachments*, the items listed in this section are critical to the success of the project. These items will be used in evaluating and scoring the proposal. Vendor proposal should address items in this section in enough detail to provide evaluators an accurate understanding of vendor capabilities. Proposals that fail to sufficiently respond to these items may be considered non-responsive.

8.2. CONTRACT FORM. The State strongly prefers vendors agree to the terms of the attached *Contract Form* as is. Ability to agree to contract terms is a high priority to the State. Vendors who cannot agree to the contract as is must include a redlined Word version of the attached *Contract Form* with their proposal response. To the extent a vendor has prior contractual dealings with the State, no assumption should be made that terms outside those provided herein have any influence on this project.

8.3. INSURANCE SCHEDULE

8.3.1. The State strongly prefers vendors agree to the terms of the attached *Insurance Schedule* as is. Vendors who cannot agree must explain which areas are causing non-compliance and attach a red line if necessary.
8.3.2. Awarded vendor shall maintain, for the duration of the contract, insurance coverages as set forth in the fully executed contract.
8.3.3. Work on the contract shall not begin until after the awarded vendor has submitted acceptable evidence of the required insurance coverages.
8.3.4. Failure to maintain any required insurance coverage or acceptable alternative method of insurance shall be deemed a breach of contract.

8.4. VENDOR BACKGROUND

8.4.1. Company background/history and why vendor is qualified to provide the services described in this solicitation.
8.4.2. Provide a brief description of the length of time vendor has been providing services described in this solicitation to the public and/or private sector.

8.5. VENDOR STAFF RESUMES

8.5.1. A resume shall be included for each proposed key personnel, see *Proposed Staff Resume.*
8.5.2. A resume shall also be included for any proposed key subcontractor personnel.

8.6. SUBCONTRACTORS

8.6.1. Subcontractors are defined as a third party, not directly employed by the contractor, who shall provide services identified in this solicitation. This does not include third parties who provide support or incidental services to the contractor.
8.6.2. Proposal should include a completed *Vendor Information Response* form for each subcontractor.
8.6.3. Vendor shall not allow any subcontractor to commence work until all insurance required of the subcontractor is provided to the vendor.
8.6.4. Vendor proposal shall identify specific requirements of the project for which each subcontractor shall perform services.

A. How the work of any subcontractor(s) shall be supervised
B. How channels of communication shall be maintained
C. How compliance with contracts terms and conditions will be assured
D. Previous experience with subcontractor(s)

8.7. VENDOR FINANCIAL INFORMATION

8.7.1. The information requested in this section is designated as confidential business information by the Administrator pursuant to NRS 333.020(5)(b) and is not public information pursuant to NRS 333.333.
8.7.2. This information should be submitted as a separate attachment, flagged as confidential in NevadaEPro.
8.7.3. Proposing vendor shall provide the following financial information and documentation:

A. Dun and Bradstreet Number
B. Federal Tax Identification Number
C. The last two (2) full years and current year interim:

1. Profit and Loss Statements

2. Balance Statements

8.8. BUSINESS REFERENCES

8.8.1. The information requested in this section is designated as confidential business information by the Administrator pursuant to NRS 333.020(5)(b) and is not public information pursuant to NRS 333.333.
8.8.2. Vendors shall provide a minimum of three (3) business references from similar projects performed for private and/or public sector clients within the last five (5) years, see *Reference Questionnaire*.
8.8.3. The purpose of these references is to document relevant experience and aid in the evaluation process.
8.8.4. Business references should return *Reference Questionnaire* directly to Single Point of Contact via email.
8.8.5. Business references will not be accepted directly from proposing vendor.
8.8.6. The State will not disclose submitted references, but will confirm if a reference has been received.
8.8.7. The State reserves the right to contact references during evaluation.

9. SUBMISSION CHECKLIST

9.1. This section identifies documents that shall be submitted to be considered responsive. Vendors are encouraged to review all requirements to ensure all requested information is included in their response.

9.1.1. Proposals must be submitted as a Quote through NevadaEPro, https://NevadaEPro.com.
9.1.2. Vendors are encouraged to submit a single file attachment per proposal section if possible.
9.1.3. Technical proposal information and Cost proposal information shall not be included in the same attachment.
9.1.4. Cost proposal attachment shall not be flagged as confidential in NevadaEPro.
9.1.5. Additional attachments may be included, but are discouraged and should be kept to a minimum.

9.2. TECHNICAL PROPOSAL

A. Title Page
B. Table of Contents
C. Response to Mandatory Minimum Requirements
D. Response to Critical Items
E. Response to Scope of Work
F. Proposed Staff Resumes
G. Other Informational Material

9.3. PROPRIETARY INFORMATION. If necessary. Attachment should be flagged confidential in NevadaEPro.

A. Title Page
B. Table of Contents
C. Trade Secret information, cross referenced to the technical proposal

9.4. COST PROPOSAL

9.5. VENDOR FINANCIAL INFORMATION. Attachment should be flagged confidential in NevadaEPro.

9.6. SIGNED ATTACHMENTS

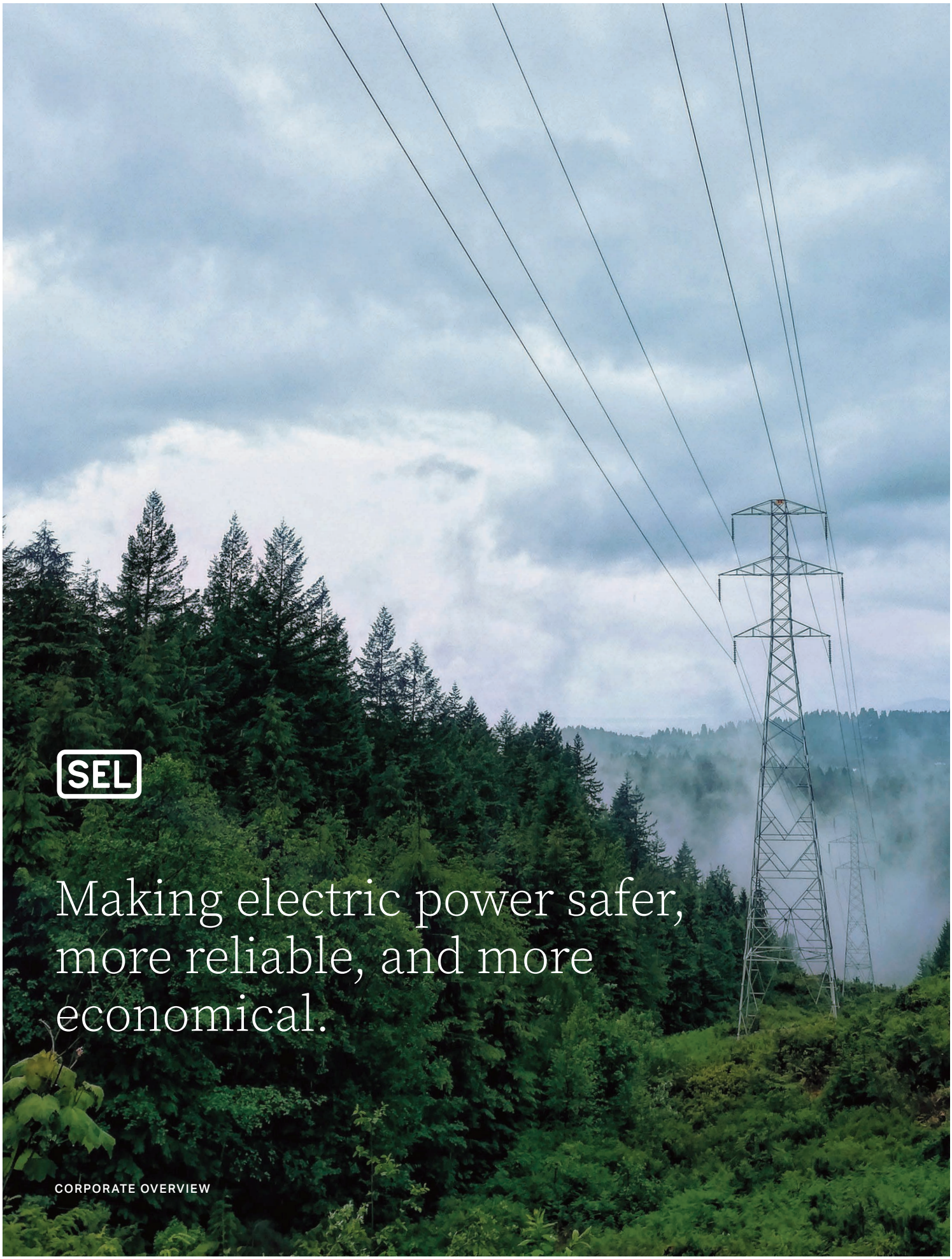
A. Vendor Information Response
B. Vendor Certifications
C. Confidentiality and Certification of Indemnification
D. Certification Regarding Lobbying

9.7. OTHER ATTACHMENTS. If necessary, not recommended.

9.8. REFERENCE QUESTIONNAIRES. Not submitted directly by vendor.

ATTACHMENT DD

VENDOR PROPOSAL


SEL
Making electric power safer, more reliable, and more economical.
CORPORATE OVERVIEW


Milwaukee

OVERVIEW

"We work daily to succeed at our mission by focusing on innovation, quality, and customer service. All of us at SEL are proud to serve our industry, and we look forward to working with you this year and for many years to come. Together we power the future."

Dr. Edmund O. Schweitzer, III, Founder and Chairman of the Board

At Schweitzer Engineering Laboratories, Inc. (SEL), innovation is more than just a mindset—it's how we power the future. As a globally recognized leader in the protection, control, and automation of electric power, SEL creates advanced technologies that help power flow safely from its source to transmission and distribution systems. Simplicity and continuous improvement are two principles that have been with us from the beginning and continue to inform and inspire everything we do.

Our mission

To make electric power safer, more reliable, and more economical.

What powers us

We are passionate about our work. Through efficiency, simplicity, and creativity, we keep people safe and help our customers conserve resources. Our company values are an essential part of our daily work and inform how we impact the industries we serve, the natural environment, and our global community.

OUR HISTORY

"Creativity is at the heart of SEL. It's the basis on which we were founded in 1982 and still operate on today."

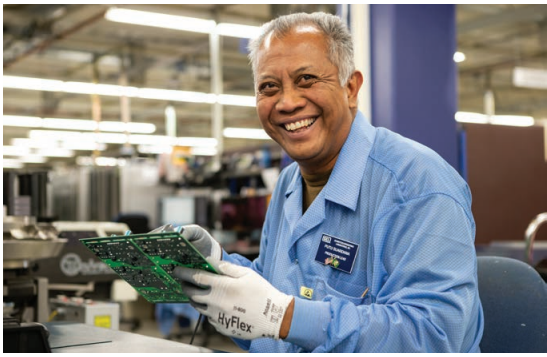
Dr. Edmund O. Schweitzer, III

Dr. Edmund O. Schweitzer, III, invented the first microprocessor-based digital protective relay, the SEL-21, in 1982. The SEL-21 revolutionized the electric power industry. It provided reliable transmission line protection with fault locating at a much lower cost than traditional electromechanical relays. Two years later, and operating with seven employees working from Dr. Schweitzer's basement, SEL made its first sale—to Otter Tail Power Company in Fergus Falls, Minnesota.

Industry-leading innovations followed, including the introduction of the load encroachment element in a transmission relay, synchrophasors as a standard feature in protective relays, and MIRRORED BITS® relay-to-relay communications.

SEL continued to exceed power system industry benchmarks through innovative products, integrated solutions, a world-class warranty, and unbeatable customer service. In 2020, we released the SEL-T401L Ultra-High-Speed Line Relay—the first relay in the world to combine traveling-wave and incremental-quantity elements with phasor-based protection. It joins our product family of protective relays, automation controllers, digital secondary system solutions, recloser controls, and more.

Our steadfast dedication to creativity and ongoing improvement extends beyond our products and services. In 1994, SEL became an employee-owned company, and in 2009, we achieved our long-term goal of 100 percent employee ownership. This provides the company—and our employee owners—with the framework to grow and provide a lasting commitment to our industry, customers, and community.



- Electronic Device and Component Manufacturing
- Regional Panel Assembly
- SEL Field Office

Today, SEL sets the global standard for power systems products and technologies. Together, the passion, determination, and innovation that drove SEL from a basement with a handful of employees to a worldwide company powers our future.

SEL manufactures all our electronic devices in the U.S.A.

SEL locations
Our company is headquartered in Pullman, Washington, and has offices and facilities around the world. In Pullman, you'll find our largest manufacturing facility, with more than 200,000 square feet of manufacturing space, as well as the SEL Solution Delivery Center, where customers can see their equipment and systems in action prior to delivery. Elsewhere in the United States, and in Mexico, Brazil, and Colombia, our regional assembly factories build panels that house our American-made electronic devices. These locations are close to our customers and cut down on shipping costs and fossil fuels used for transport and delivery.

6,500+ employees in 100+ offices around the globe

40,000+ customers in 170+ countries

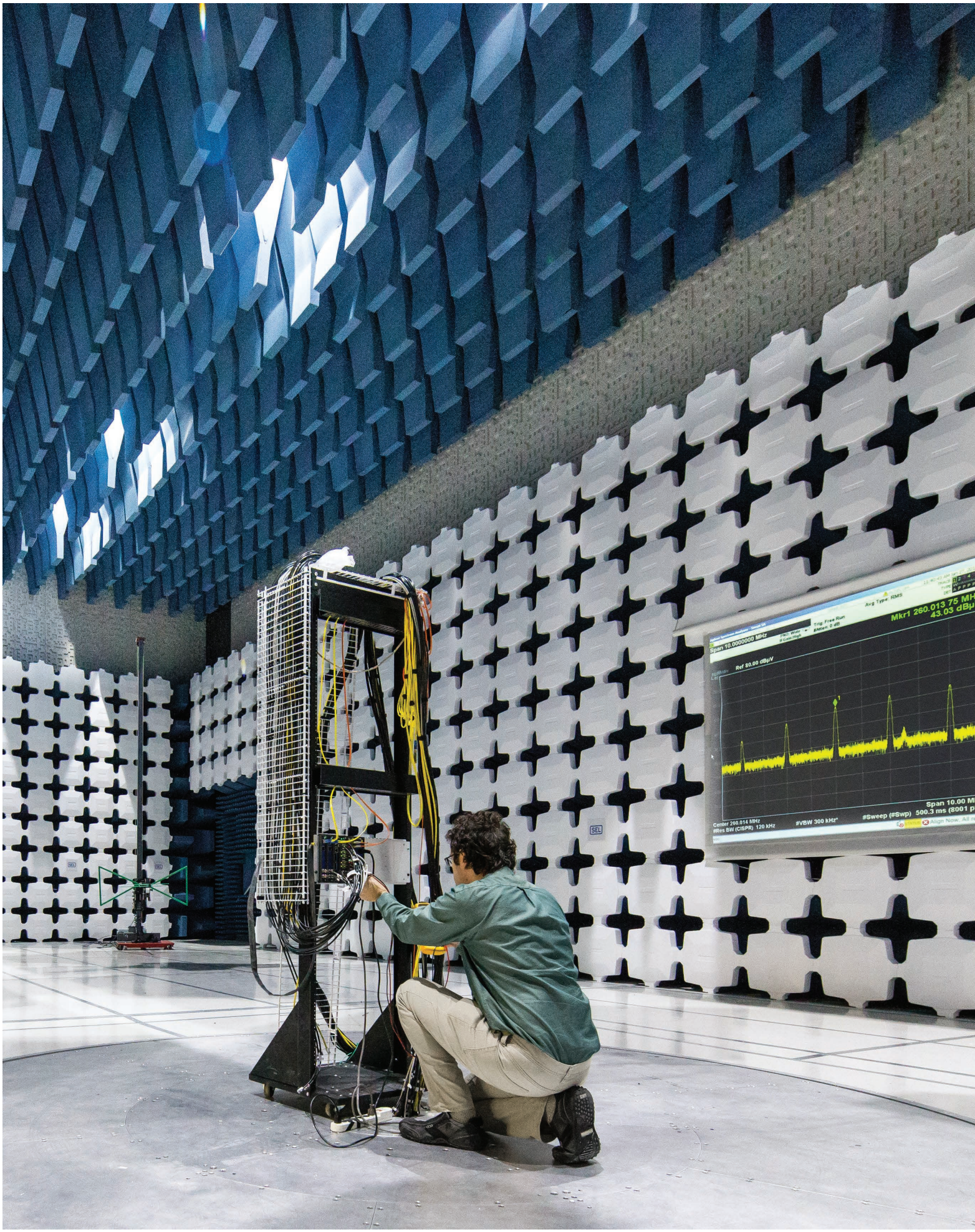
5 electronic device and component factories in the United States

1 printed circuit board factory in the United States

5 regional panel assembly factories across the globe

1,031,956 square feet of total manufacturing space worldwide

100% employee-owned


Avg Type: RMS
Mkr1 260.013 75 MH
43.03 dBµ
Span 10.0000000 MHz
Ref 80.00 dBµV
Center 260.014 MHz
#Res BW (CISPR) 120 kHz
#VBW 300 kHz*
#Sweep (#Swp) 500.3 ms (8001 p
Span 10.00 M
SEL

QUALITY, INNOVATION, AND MANUFACTURING

"We invest in our people, tools, and facilities in order to produce designs that exceed our customers' requirements. Engineering is our middle name, and it's what we love to do."

Dave Whitehead, President

From idea to execution, the products and technologies we develop directly reflect the challenges our customers face. Our focus on long-term reliability and quality begins in SEL Research and Development and extends through our Manufacturing division, where we employ world-class manufacturing techniques, like partnership and simplicity.

In the spirit of continuous improvement, SEL constantly seeks out new ways to reduce waste and make our products more reliable. We also work to bring components like sheet metal, magnetics, plastics, and printed circuit boards in-house, which gives us added control throughout the manufacturing process.

SEL complies with the highest quality standards—such as IPC-A-610 Class 3 and ISO 9001:2015—and constantly exceeds those requirements and customer expectations. We test our products thoroughly and verify that they will perform for decades under demanding and harsh conditions.

Our quality practices include:

- Monitoring and controlling processes to exceed the ISO 9001:2015 Quality Management Systems Standard.
- Developing robust, repeatable, and scalable manufacturing processes to address process errors.
- Ensuring that our test and calibration laboratories use the latest equipment and follow National Institute of Standards and Technology (NIST) traceable standards for accuracy and maintenance.
- Partnering with our suppliers for the highest possible quality and value.

INDUSTRIES

"Serving our industries is a tremendous privilege and responsibility that we take very seriously. Listening to our customers' requirements and needs, we strive to make our solutions innovative, reliable, and secure."

Leith Sorenson, Senior Vice President of Manufacturing

Our equipment becomes part of critical and complex infrastructure—ranging from the electric power grid to processing and manufacturing facilities. We engage in constant two-way communication with our customers to create practical solutions for many industries and applications.

Government Services

Working under stringent physical and information security requirements, our Government Services team delivers Job Done® solutions to official U.S. entities, like the Department of Homeland Security, Department of Energy, and Department of Defense.

Engineering Services

From consulting and design to drafting, installation, and support, our Engineering Services division provides turnkey protection, automation, and security systems for customers around the globe.

SEL University

We offer customers virtual and in-person continuing education courses through SEL University. All our classes satisfy Professional Development Hour (PDH) credit requirements.

Industries we serve include:

- Electric power generation
- Electric power transmission and distribution
- Oil, gas, and petrochemical
- Renewable energy
- Metals and mining
- Water and wastewater
- Pulp and paper
- Mission-critical power systems
- Government
- Education and healthcare
- Consumer product manufacturing
- Transportation


SEL


AUTO
MAN
CYCLE
RESET

SEL VALUES

"We are devoted to learning, innovation, safety, and wellness. Personal milestones, career achievements, and company-wide goals are all shared and celebrated among our SEL family."

Jake Schlosser, Vice President of Human Resources

Our values and commitment to community drive every decision we make at SEL. Through partnerships with select organizations, SEL works to enrich and improve the lives of people around the globe.

As a 100 percent employee-owned company, we offer a wide range of careers and paths for growth, from manufacturing and engineering to marketing and human resources.

Quality
We seek simplicity, use the best available tools and processes, and work in a spirit of continuous improvement.

Customer Focus
We offer our customers continual collaboration and unmatched value and support in all our products and services.

Discipline
We commit and deliver by managing resources, projects, and work wisely.

Communication
We listen carefully to our customers and communicate efficiently, clearly, and respectfully.

Integrity
We treat each other with dignity and respect at all times, make clear promises to our customers, and exceed their expectations.

Creativity
We work together to develop new ideas and encourage change in the spirit of innovation and improvement.

Community
We seek to grow our community by being the best employer possible and sharing our successes.

Ownership
We take a pride of ownership in our work and look for ways to help us all succeed.

Dignity of Work
We appreciate, respect, and enjoy diversity of thought and opinion.

Ranked #1 by Newton-Evans
In an independent study conducted by the Newton-Evans Research Company, international utilities ranked SEL first in overall customer experience. North American utilities ranked SEL first in all protective relay manufacturer categories, including technology, price, features, security against hackers, technical support, web information, ease of use, and maintenance costs.

Select awards include:

National Inventors Hall of Fame Inductee, Dr. Edmund O. Schweitzer, III

100 Best Companies to Work For; 20 Best Workplaces for Baby Boomers; and 100 Best Workplaces for Millennials—*FORTUNE* Magazine

15 Best Workplaces in Manufacturing & Production—Great Place to Work's Great Rated!

America's Dream Employers—Forbes

Association of Washington Business Employer of the Year

International and National Relief Award—American Red Cross

Top Project Award—Idaho Business Review

Environmental Excellence Award—Idaho Association of Commerce and Industry

14th largest 100 percent employee-owned company in America—National Center for Employee Ownership

CUSTOMER SERVICE

"Our outstanding customer service and support reflect who we are. We put our customers first. People, not automated systems, answer our phones."

Gerardo Urrea, Senior Vice President of Sales & Customer Service

SEL application and integration engineers, customer service representatives, and sales managers are located in more than 60 offices in the United States and more than 40 internationally. The SEL network of independent sales representatives and distributors provides additional sales support in many regions.

Disaster relief

To better help our communities and support our customers, SEL offers a 10 percent discount on all products destined for natural disaster relief. When major disasters occur, we rush deliveries and provide field support to restore power as quickly as possible.

Warranty

SEL backs our products and commitments with a ten-year warranty, no-charge diagnostic and repair services, local support, and a variety of test procedures and certifications. We design our products to last more than 20 years; however, should a product failure occur, we encourage our customers to return the product. Our goal is a 72-hour turnaround to get to root cause of the issue and either repair or replace the unit. When something goes wrong with a product, we want it back—this helps us better understand what our products must endure in the field and informs the ongoing improvements we make to our technologies and designs.

"We picked Schweitzer Engineering for two main reasons. They proposed the best solution with very technologically advanced relays. We also took into account that they had done comparable SPS projects in other countries, such as Georgia and Uruguay, with very good results."

Rodolphe Hanuise, Elia

"SEL made a proposal to come up with a custom solution based on the existing hardware…and essentially perform brain surgery on our substation while it was still operating."

Sacha Tibbetts,
Caribbean Utilities Company, Ltd.

"We have a real partnership with SEL. Our intent was to have a turnkey project with SEL, and that's been very successful—we're very pleased with what we've accomplished to date."

Alwyn VanderWalt,
Public Service Company of New Mexico


AUX 1
AUX 2
AUX 3
AUX 4
OPEN
CLOSED
BREAKER
TRIP
CLOSE
GROUND DISTANCE RELAY
OVERCURRENT RELAY
HWEITZER ENGINEERING LABORATORIES
SEL-3378
SYNCHROPHASOR
VECTOR
PROCESSOR
POWER
ALARM
SEL
SCHWEITZER
ENGINEERING
LABORATORIES
SEL-451
PROTECTION
AUTOMATION
CONTROL
GROUND
ENABLED
HOT LINE
TAG
RECLOSE
ENABLED
REMOTE
ENABLED
ALT
SETTINGS
BREAKER
CLOSED
CLOSE
BREAKER
OPEN
TRIP
SEL-421
MANUAL
CLOSE
ENABLED
SPT
ENABLED
COMM
SCHEME
ENABLED
Erin
Jessup

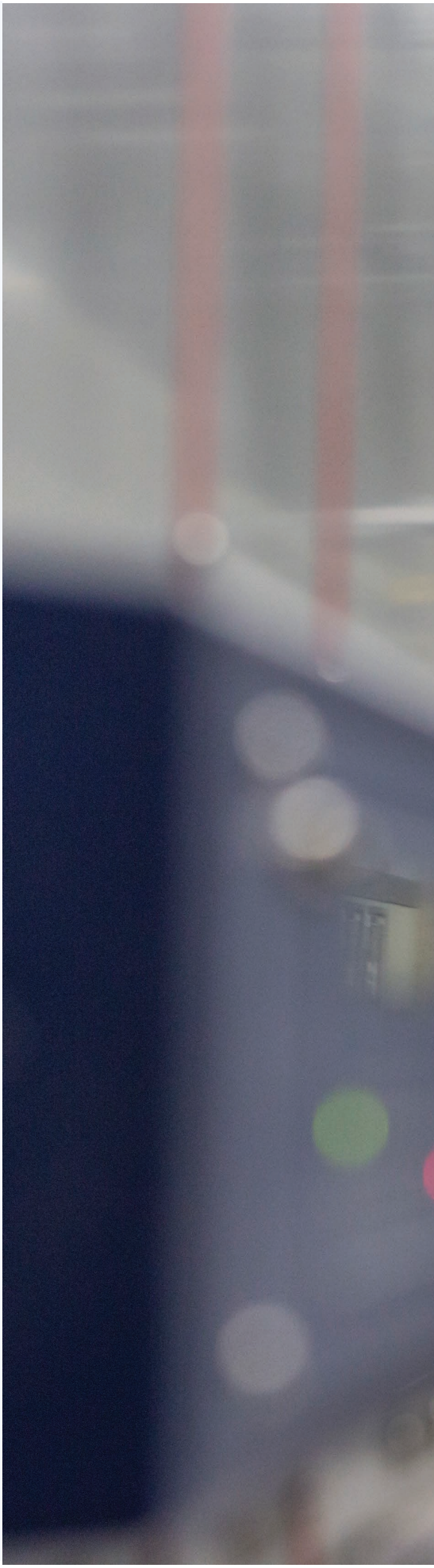
CONNECTIONS

“At SEL, it’s personal.”

Dr. Edmund O. Schweitzer, III

We do what is right for our customers, our industry, and our world. We create lasting partnerships with customers because we develop solutions that fit their needs—not the other way around. From research and design to testing, teaching, and commissioning, we look at our customers’ goals and build an effective approach from there. And the relationship doesn’t end with installation. Our customers know that if they call us at 2 a.m., we’re going to pick up the phone. When we’re a good partner to our customers, they’re able to be a good partner to theirs, and together we improve the safety and quality of life for communities around the globe.

Read more about our collaborative partnerships, innovative products and solutions, customer stories, and more: **selinc.com**



SCHWEITZER ENGINEERING LABORATORIES

2350 NE Hopkins Court, Pullman, WA 99163 USA | selinc.com

+1.509.332.1890 | info@selinc.com

LM00549-01 20250130

2025 Product and Solution Guide

New Products

Contents

SEL Innovations Make Electric Power Safer, More Reliable, and More Economical

Traveling-Wave and Time-Domain Technologies

- Protection that isn't dependent on sources; great for areas with high inverter-based resource integration.
- Detects and issues trip commands in 1–2 ms, 5–10 times faster than traditional protection.
- The most accurate fault locator available; pinpoints faults to within one tower span.

Software-Defined Networking

- The only engineered network designed for reliable control system operations.
- Ensures traffic only flows between designated points and blocks all other traffic, eliminating the need for complex firewall rules.
- Redirects network traffic to alternate paths in under 100 µs when the network breaks.

SEL POWERMAX® Power Management and Microgrid Control Solutions

- Maximizes uptime by controlling generation, shedding loads, and automatically synchronizing microgrids.
- Scalable from oil refineries to solar and wind farms to managing an entire country's power system.
- Manages energy costs and determines the optimal generation dispatch based on operational conditions.

SEL Arc Sense™ Technology for Wildfire Mitigation

- Detects and isolates high-impedance downed conductors to reduce fire risk while keeping unaffected line sections energized.
- Alerts operators of a fallen conductor or instructs circuit breakers or recloser controls to isolate the affected circuit.
- Available in many devices already deployed in your distribution systems.

Time-Domain Power Monitoring With Energy Packet Technology

- Streams continuous waveform data to SEL Synchrowave® software, which captures, analyzes, and stores every disturbance.
- Accurately measures energy transfer every millisecond, regardless of the waveshape, frequency, or phase.
- Calculates energy in a simple method that is traceable to the fundamentals of physics and mathematics.

SEL Time-Domain Link (TiDL®) Technology

- The simplest, most reliable, and lowest-cost digital secondary system available.
- Plug-and-operate configuration.
- Requires no network switches or clocks.

SEL ICON® Virtual Synchronous Networking

- Packet transport with deterministic time-division multiplexing (TDM) and better than 1 ms latency.
- Enables TDM-based line current differential protection within IP core networks.
- Allows packet-based and TDM-based systems to work together, greatly reducing communications migration or upgrade costs.

SEL Arc-Flash Solutions

- Life-saving arc-flash protection operates in milliseconds to reduce arc fault energy.
- Combines light sensing with fast overcurrent protection to provide high-speed detection without operating for external faults.
- Works with low- and medium-voltage switchgear and easily coordinates with other devices in industrial- and commercial-scale facilities.

SEL-487E Centralized Protection and Control

- Simplifies commissioning, testing, firmware management, and cybersecurity while reducing the total cost of ownership.
- Built on a proven relay platform.
- Offers flexible deployment solutions, including traditional I/O connections, SEL TiDL, or IEC 61850.

SEL-5702 Synchrowave Operations Software

- Wide-Area Situational Awareness (WASA) software that aggregates time-series data, including synchrophasor data, relay event reports, and high-resolution waveform streams.
- Equips transmission control centers with tools to transform time-synchronized data into detailed system insights that support decision making.
- Simple to use and customizable to maximize WASA.

Blueframe® Data Management and Automation (DMA)

- Automatically collects, stores, and manages device-specific information to simplify system-wide device management and compliance.
- Automates the collection of oscillography, Sequence of Events data, device settings, property information, and other data.
- Rotates passwords and streamlines device audits with summary reports that identify device changes.

Blueframe FLISR (Fault Location, Isolation, and Service Restoration)

- Enables you to create system configurations in minutes with no complex modeling required.
- Manages protection and switching devices at the grid edge, increasing the speed of service restoration.
- Manufacturer-agnostic recloser support through DNP3.

High-Density Coordination™ Solutions for Distribution Protection and Reclosing

- Simplify recloser deployment in any feeder topology, overcoming the limitations of traditional time-overcurrent coordination.
- Coordinate the actions of any number of SEL-651R Advanced Recloser Controls, allowing all of them to operate quickly, securely, and dependably.
- Implement with your existing communications infrastructure—or even without communications.

SEL Grid Configurator Software

- Provides context-oriented configuration and commissioning tools for SEL power system devices.
- Facilitates device testing and commissioning through customized HMI dashboards.
- Simplifies settings evaluation with intuitive comparison interfaces.

ACSELERATOR Architect® SEL-5032 Software

- Provides powerful and simple IEC 61850 configuration.
- Efficiently supports a top-down engineering workflow in the role of the IED Configuration Tool (ICT).
- Innovative interoperability features include the ability to create a custom IED data model and the ability to use multiple IEC 61850 editions in the same system.

About SEL

Our Mission: Making Electric Power Safer, More Reliable, and More Economical

SEL invents, designs, manufactures, and supports a complete line of products and services for the protection, monitoring, control, automation, and metering of electric power systems.

Our solutions range from comprehensive generator and transmission protection to distribution automation and control systems.

Our Engineering Services division partners with customers globally to create turnkey solutions and services that help protect and control critical electrical infrastructure worldwide. We also offer education and full product support.

SEL products are in 172 countries and support industries from petrochemical to transportation to electric utilities.


SEL
SEL
SCHWEITZER
ENGINEERING
LABORATORIES

Dr. Edmund O. Schweitzer, III
Inventor of the world's-first digital protective relay—the SEL-21.

Industries We Serve

- Electric power generation
- Power transmission and distribution
- Oil, gas, and petrochemical
- Renewable energy
- Metals and mining
- Water and wastewater
- Pulp and paper
- Mission-critical power systems
- Government
- Education and healthcare
- Consumer product manufacturing
- Transportation
- Data centers
- Land mobile radio systems

Looking Back, Moving Forward

SEL Founder and Chairman of the Board Dr. Edmund O. Schweitzer, III, invented the first microprocessor-based digital protective relay, the SEL-21, in 1982. The SEL-21 revolutionized the electric power industry by providing reliable transmission line protection with fault locating at a much lower cost than traditional electromechanical relays.

In the decades since, SEL has launched power industry innovations including the load-encroachment element in a transmission relay, synchrophasors as a standard feature in protective relays, and Mirrored Bits® relay-to-relay communications.

2020

We added the SEL-T401L Ultra-High-Speed Line Relay to our family of protective relays, automation controllers, digital secondary system solutions, recloser controls, and more. The SEL-T401L is the first relay in the world to combine traveling-wave and incremental-quantity elements with phasor-based protection.

2021

We released our newest overcurrent protective relay, the SEL-851 Feeder Protection Relay, as well as our operational technology (OT) application platform, Blueframe®, and its first application suite, SEL Data Management and Automation (DMA).

2022

We introduced the SEL-2240 Axion® bay controller, and SEL FLISR (fault location, isolation, and service restoration), a wide-area control application that operates on our Blueframe application platform to locate and isolate faults and automatically restore power to healthy portions of affected lines or feeders.

2023

We made major enhancements to our IEC 61850-based solutions, including a new gigabit Ethernet card for SEL-400 series relays and Parallel Redundancy Protocol (PRP) support for Sampled Values (SV)-based process bus applications.

2024

We released the SEL-TWFL Dual Traveling-Wave Fault Locator and 12-Channel MHz Recorder, which locates faults to within one tower span and monitors up to two transmission lines from a single substation. We also introduced the SEL-T35 Time-Domain Power Monitor, which continuously measures, streams, and records time-synchronized waveform oscillography.

Quality in Manufacturing

We design and manufacture all our electronic devices in the U.S.A. This allows for direct collaboration and short feedback loops between our research and development and manufacturing divisions as well as world-class supply chain security. We manufacture our own critical components, like metal cabinets, printed circuit boards (PCBs), and magnetic devices, in our secure, SEL-owned and -operated facilities in Washington, Idaho, Illinois, and Indiana.

SEL exceeds industry quality standards, requirements, and customer expectations. We test our products thoroughly and verify that they will perform under demanding and harsh conditions.

Our quality practices include:

- Monitoring and controlling processes to exceed the ISO 9001:2015 Quality Management Systems Standard.
- Developing robust, repeatable, and scalable manufacturing processes to address process errors.
- Ensuring that our test and calibration laboratories use the latest equipment and follow National Institute of Standards and Technology (NIST) traceable standards for accuracy and maintenance.
- Partnering with our suppliers for the highest possible quality and value.

Warranty, Service, and Support

We back our products with a ten-year warranty, no-charge diagnostic and repair services, local support, and a variety of test procedures and certifications.

Our dedicated support teams are located in regional offices around the globe and staffed with SEL application engineers who are experts in our products and in power system applications. We offer free, 24/7 emergency technical support for the life of your SEL products.

Many support questions may also be answered by visiting our video portal at video.selinc.com, where you'll find how-to and support videos ranging from product set up and configuration to report retrieval and resource management.

"As an engineering company, we work every day to invent, design, and support products that monitor, control, and protect power systems installed all over the world. Serving our industry is a tremendous privilege and responsibility that we take very seriously. Listening to our customers' requirements and needs, we strive to make our solutions innovative, reliable, easy to use, and secure. We invest in our people, tools, and facilities in order to produce designs that exceed our customers' requirements. Engineering is our middle name, and it's what we love to do."

Dave Whitehead
President

Learn More

Read more about our history, products, and practices at selinc.com/company/about.

SEL Power System Solutions

SEL creates digital products and systems that protect, control, automate, and secure power systems. Our devices help keep power flowing, prevent widespread blackouts, reduce outage durations, improve reliability and safety, and secure equipment, substations, and critical infrastructure.

Generation Systems

Our generation solutions provide primary and backup protection from stator and rotor faults in salient pole and round rotor generators. These devices help prevent equipment damage and failures while maintaining system performance and increasing availability.

Transmission Systems

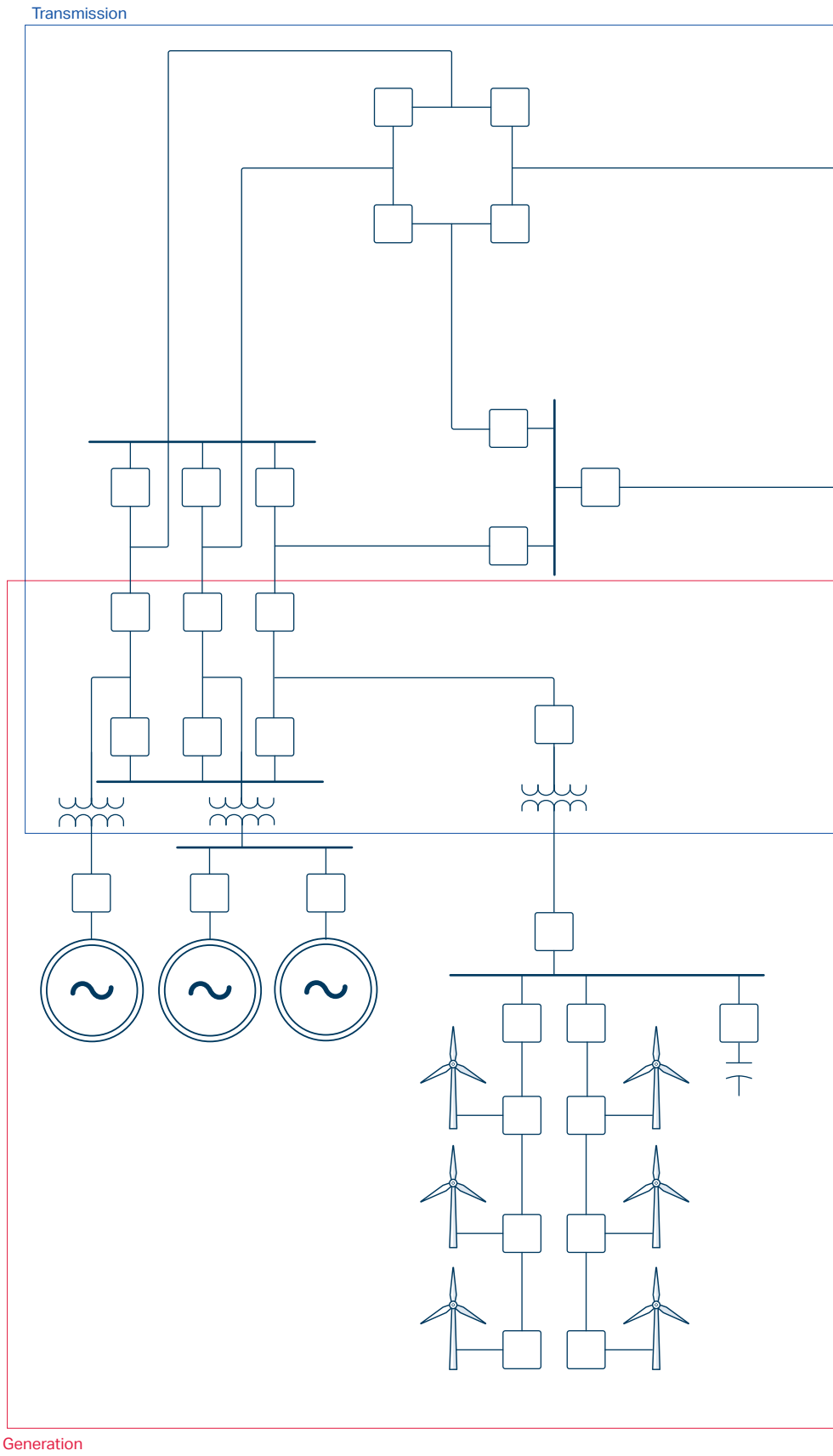
SEL transmission solutions protect high-voltage power lines, transformers, busbars, switchgear, and more. Our devices help reduce outages, speed up restoration times, and pinpoint a fault's location.

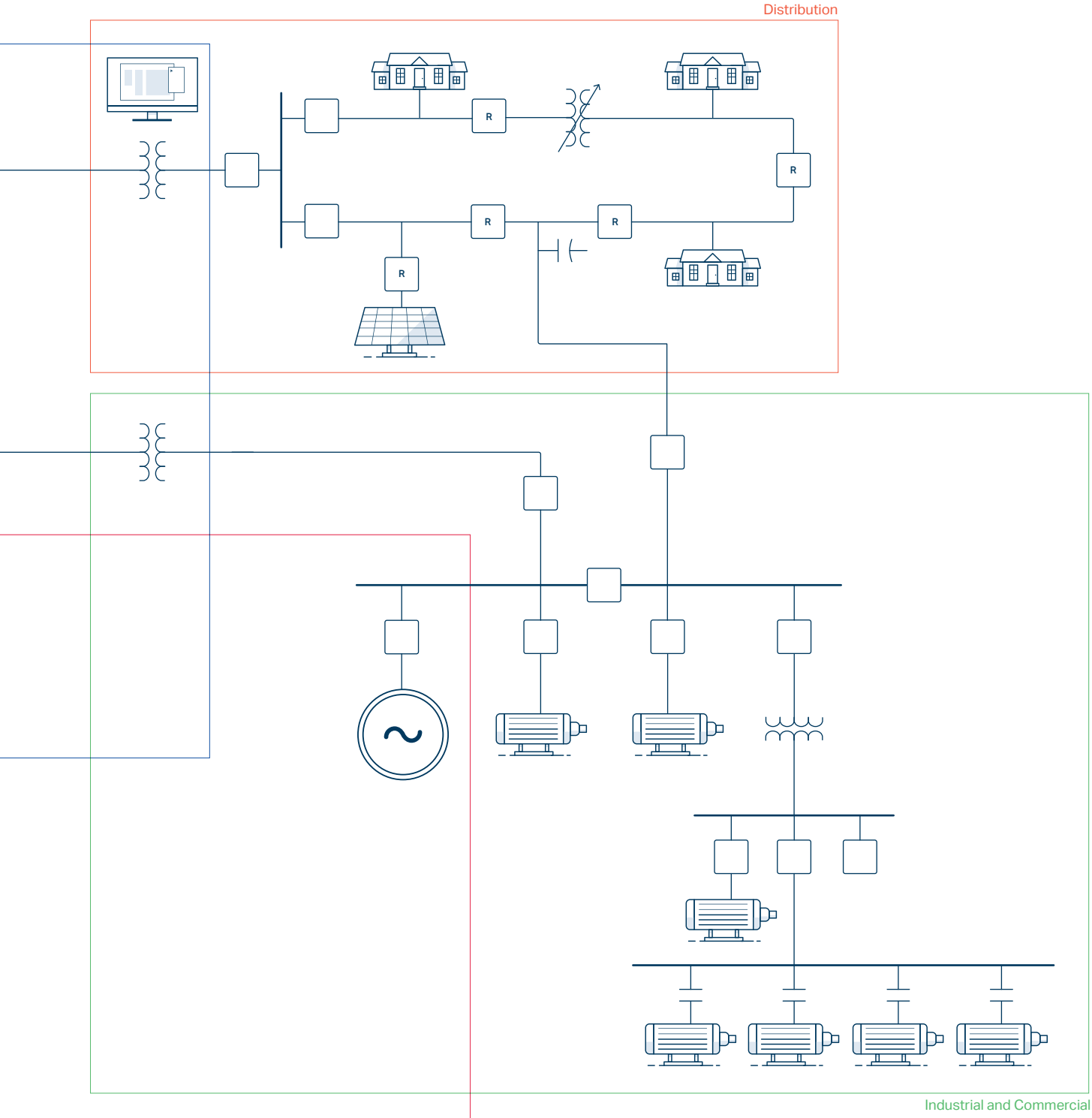
Distribution Systems

Our distribution solutions combine protective relays, recloser controls, communications, automation, and power quality devices. They protect equipment, integrate distributed energy resources, improve reliability metrics, reduce outages, and more.

Industrial and Commercial Systems

For petrochemical, metals and mining, and water and wastewater facilities as well as data centers, hospitals, and universities, SEL offers a wide range of solutions for low- and medium-voltage systems. Our devices protect infrastructure, keep processes online, increase efficiency, and keep workers safe.




Distribution
R
R
R
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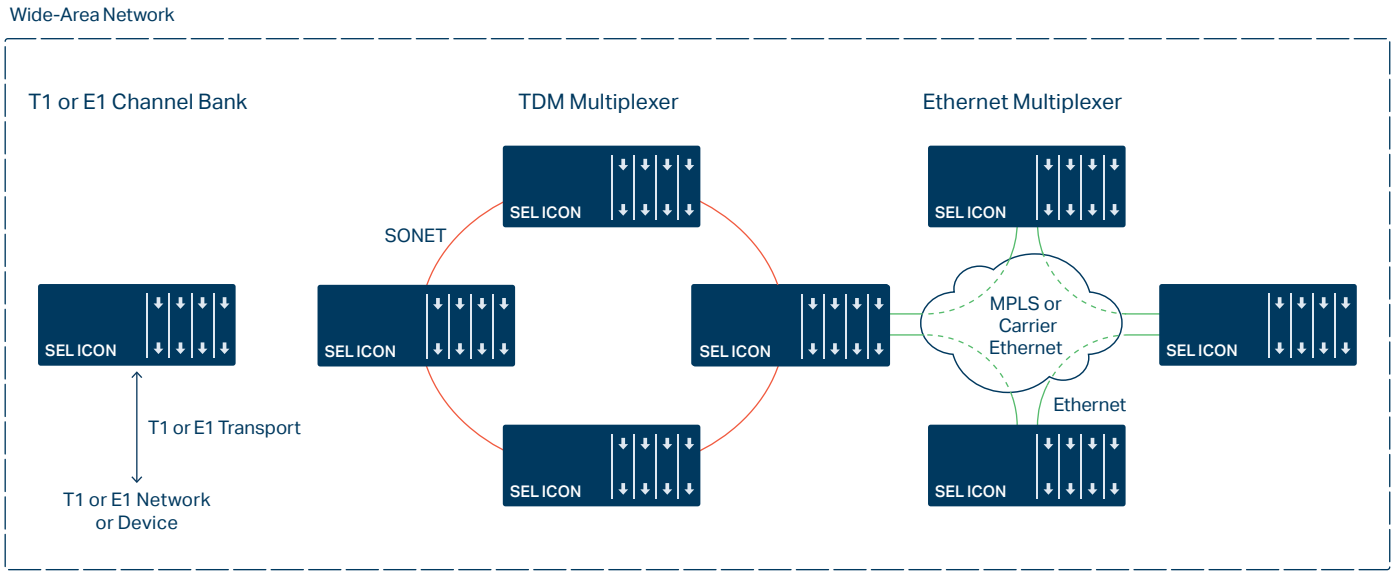
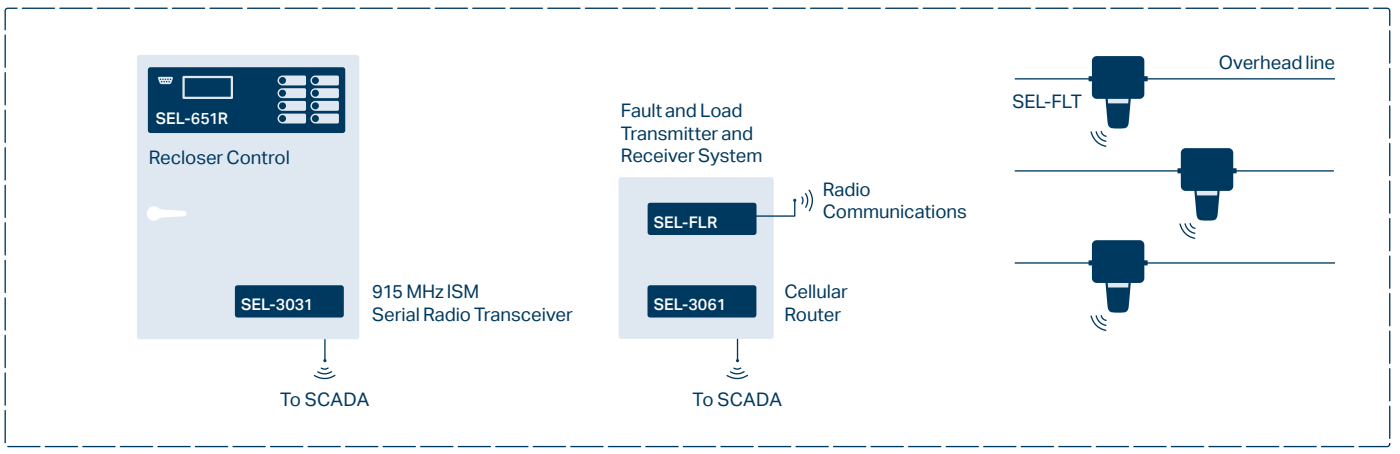
R
Industrial and Commercial

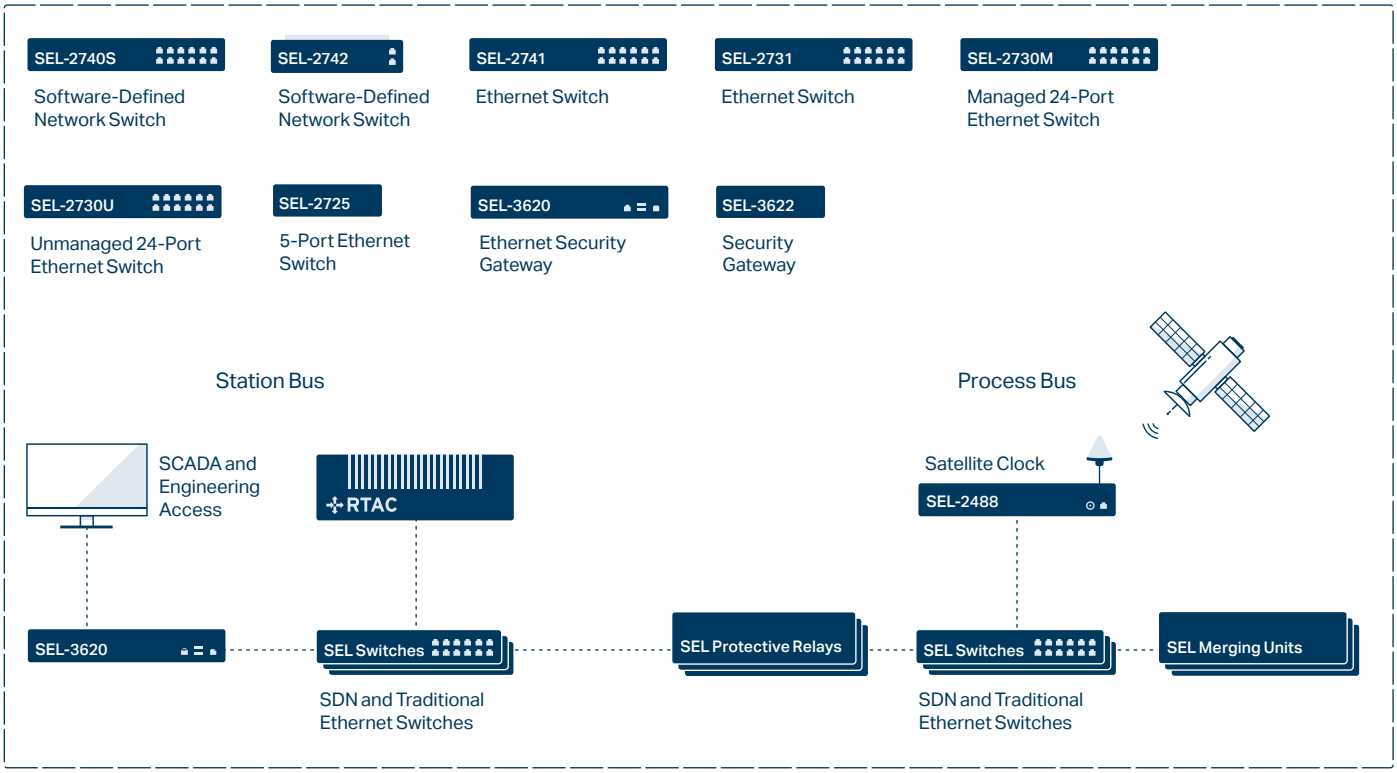
SEL Network Communications

SEL offers a simple, reliable communications architecture to tie together the protection, automation, control, and monitoring devices in a power system network.

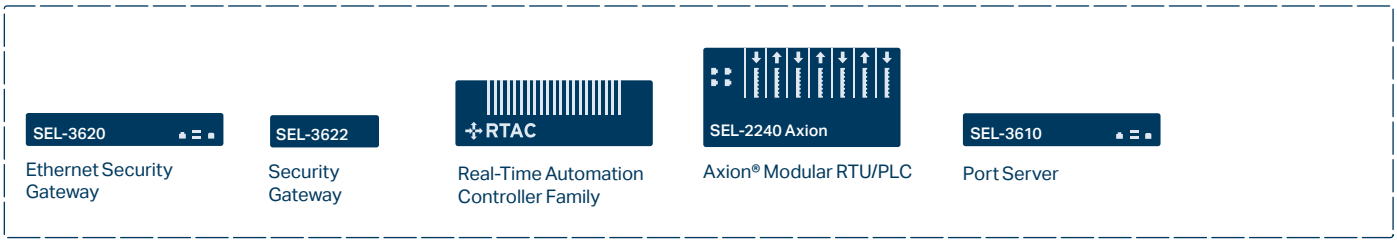




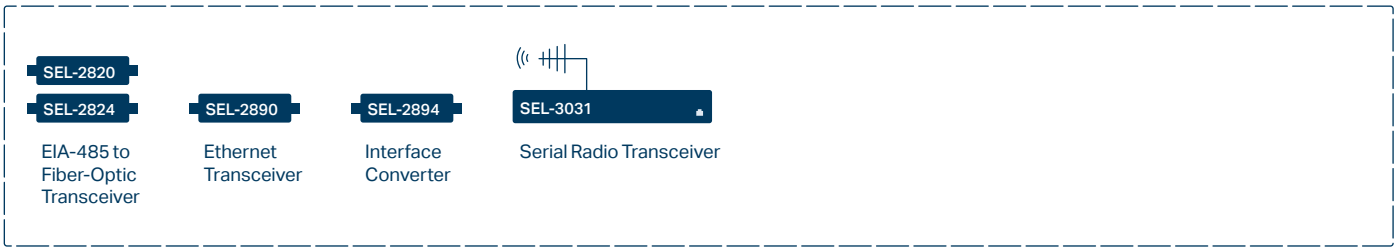
Local-Area Network



Hybrid Communications (Serial, Ethernet, and EtherCAT®)



Serial Communications



Generator Protection

selinc.com/solutions/generation

Modern generators and related equipment require advanced protection, automation, control, metering, and security. SEL products and solutions, including engineering services, address any nameplate rating from megawatt to kilowatt and range from wide-area protection systems down to utility-scale generation and microgrids.

Applications

- Hydropower
- Steam and thermal generation
- Combustion and combined-cycle generation
- Wind power
- Solar power
- Nuclear
- Power management (POWERMAX®)
- Microgrids
- Remedial action schemes/ special protection systems
- Electrical balance-of-plant

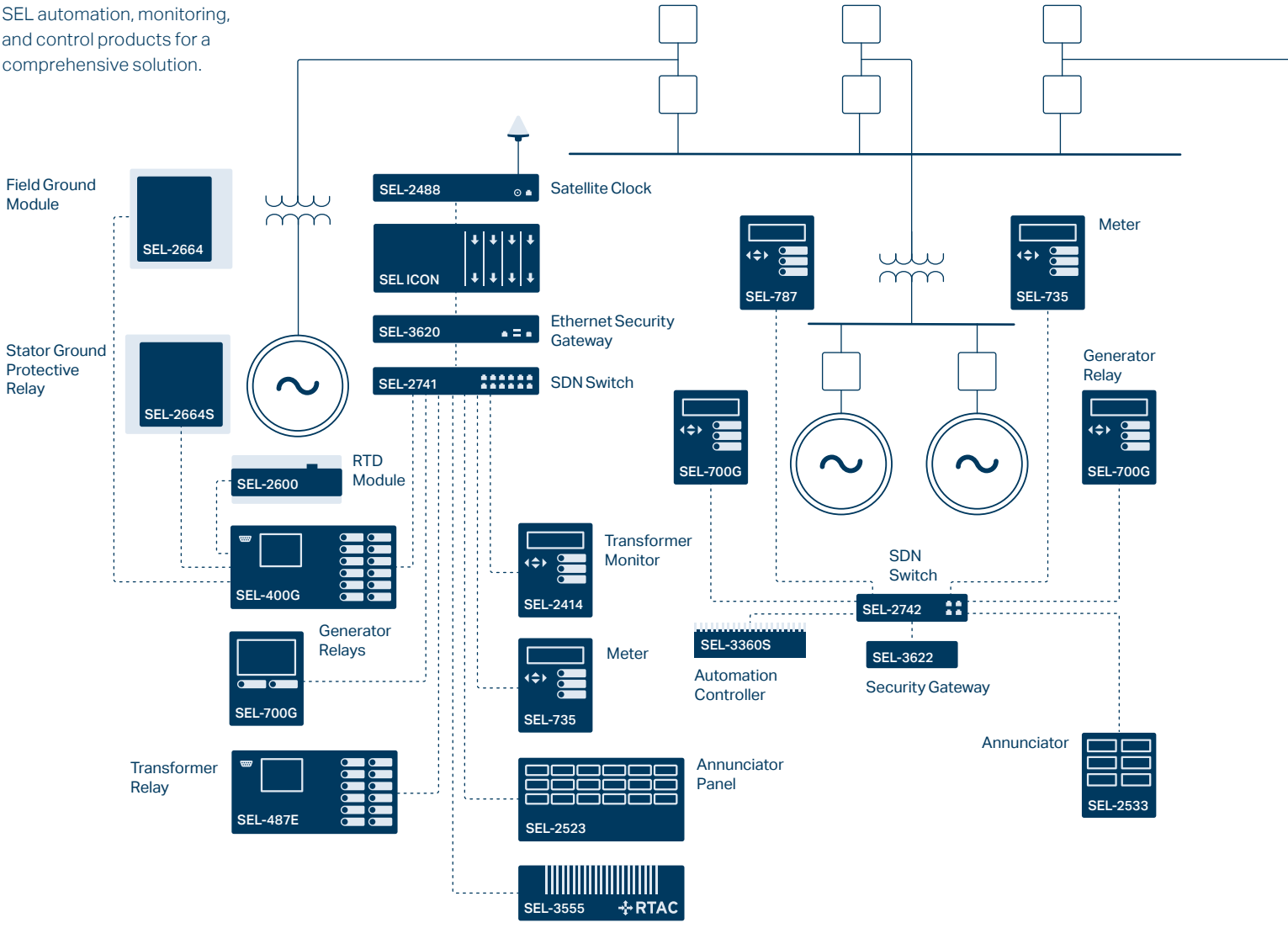
Customer Story

Belgium Integrates Offshore Wind Power Into European Grid

selinc.com/featured-stories/elia

Example System Diagram

Combine SEL generator protective relays with other SEL automation, monitoring, and control products for a comprehensive solution.



Webinar

Protection Advancements to Benefit Generators of All Sizes and Types

selinc.com/events/on-demand-webinar/130607

Related Material

POWERMAX Solutions

selinc.com/api/download/106293

Technical Papers

Wind Farm Volt/VAR Control Using a Real-Time Automation Controller

selinc.com/api/download/99167

Leveraging Digital Relays for Protection of Pumped Storage Hydro

selinc.com/api/download/121666

Capability Curve-Based Generator Protection Minimizes Generator Stress and Maintains Power System Stability

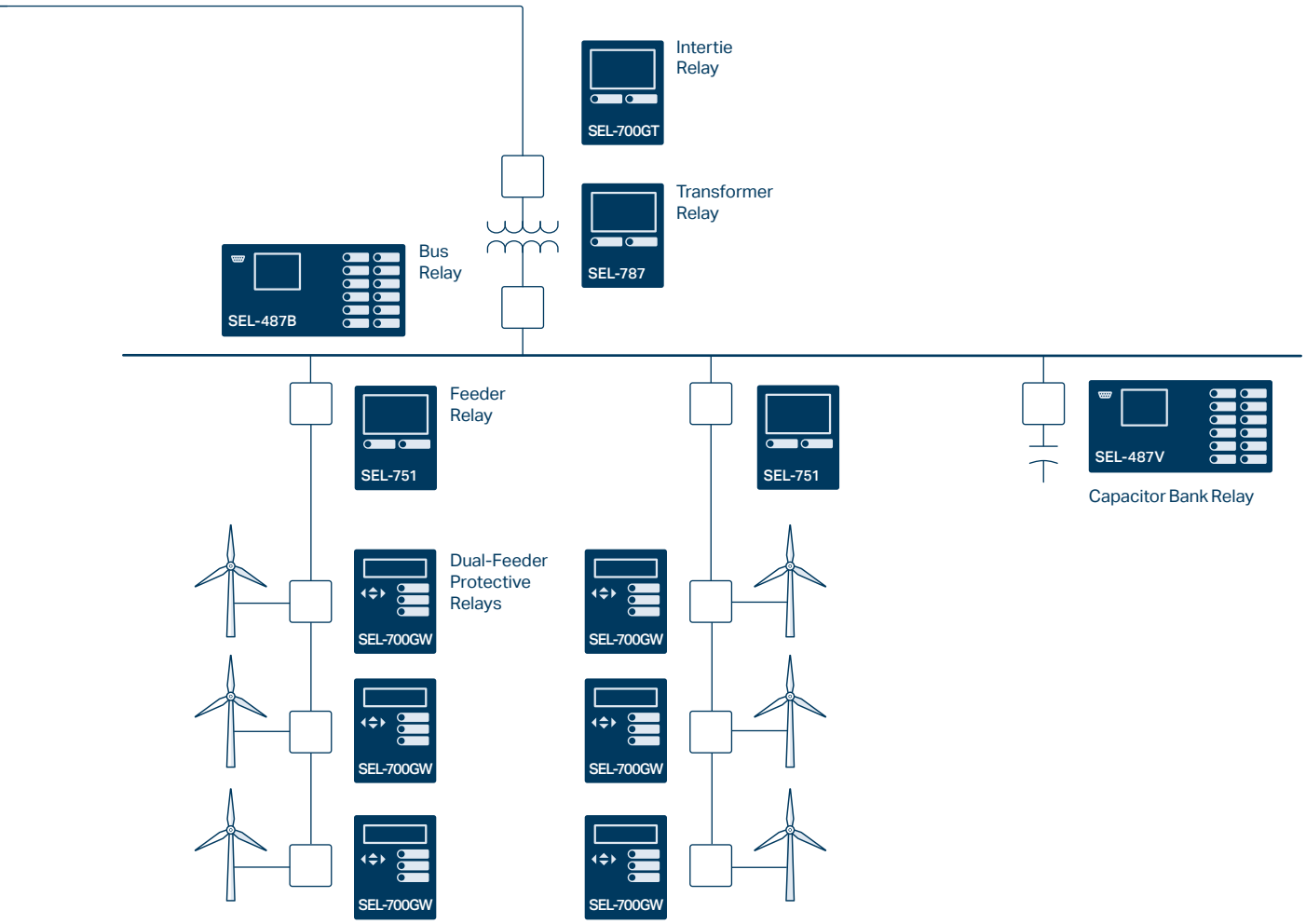
selinc.com/api/download/124333

Stator Ground Protection for Multiple High-Impedance Grounded Generators Sharing a Common Bus

selinc.com/api/download/124321

Understanding Generator Stator Ground Faults and Their Protection Schemes

selinc.com/api/download/111667



SEL-400G Advanced Generator Protection System

Combine generator, bus, and step-up transformer protection in one package, and achieve comprehensive protection and monitoring for generators of all types and sizes, including those used in pumped-storage applications.

SEL-700G Generator Protection Relay

Provide generator or unit protection in utility, industrial, and renewable applications with the flexible I/O and functionality of the compact, economical SEL-700G.

SEL-300G Generator Relay

Implement primary and backup protection for utility and industrial generators.

SEL-2664S Stator Ground Protection Relay

Protect high-impedance grounded generators from ground faults at standstill, during startup, and while running. All SEL-2664S relays are sold with the SEL-4664 Calibration Module.

SEL-2664 Field Ground Module

Combine the SEL-2664 with other SEL generator protective devices to continuously monitor field-to-ground resistance and protect critical components, including rotor and stator windings.

SEL-2600 RTD Module

Measure and transmit data from as many as 12 resistance temperature detector (RTD) inputs and one contact input over a single fiber-optic link.

Applications	SEL-400G	SEL-300G	SEL-700G	SEL-700GT	SEL-700GW
Generator Protection	■	■	■	+	■[1]
Unit/Overall (Generator + Generator Step-Up [GSU]) Differential Protection	■	+	■		
Independent GSU Transformer Protection	■				
Pumped-Storage Hydro Protection	■		■		
Integrated Synchronizer	+		+	+	
Breaker Failure Protection	■	*ƒ*	■	■	■
Equipment Thermal Monitoring	■	+	+	+	+
Generator Intertie Protection				■	

Instrumentation and Control	SEL-400G	SEL-300G	SEL-700G	SEL-700GT	SEL-700GW
SELogic® Control Equations/Remote Control Switches	■	■	■	■	■
Nonvolatile Latch Control Switches	■	■	■	■	■
Multiple Settings Groups	■	■	■	■	■
Station Battery Monitor	■	■			
Breaker Wear Monitor	■	■	■	■	■
Event Report (Multicycle Data)/Sequential Events Recorder	■	■	■	■	■
Disturbance Recording up to 300 seconds	■				
Demand Meter	■	■	■	■	■
Load Profile Report	■		■	■	■
RTD Inputs	+	+	+	+	+
Ethernet	+		+	+	+
Built-In Web Server	+		+	+	+
EtherNet/IP			+	+	+
IEEE 1588 Precision Time Protocol (PTP)	+		+	+	+
IEC 61850 Edition 2	+		+	+	+
IEC 60870-5-103			+	+	+
Parallel Redundancy Protocol (PRP)	+		+	+	+
DNP3 Serial	■		+	+	+
DNP3 LAN/WAN	+		+	+	+
Simple Network Time Protocol (SNTP)	+		+	+	+
Rapid Spanning Tree Protocol (RSTP)			+	+	+
Modbus TCP	+		+	+	+
Modbus RTU Outstation		■	■	■	■
IEEE C37.118 Synchrophasors (With Protocol Edition)	■ 2011		■ 2005	■ 2005	■ 2005
Mirrored Bits® Communications	■		■	■	■

Miscellaneous	SEL-400G	SEL-300G	SEL-700G	SEL-700GT	SEL-700GW
Dual Frequency Zones (Generator and System)	■				
Frequency Tracking Range	5–120 Hz	20–70 Hz	15–70 Hz	15–70 Hz	15–70 Hz
Accepts Wye or Open-Delta Voltage Transformers	■	■	■	■	■
Connectorized® (Quick Disconnect) Available	+	+			

Protection	SEL-400G	SEL-300G	SEL-700G	SEL-700GT	SEL-700GW
21C Compensator Distance		■	+		
21P Phase Mho Distance	■	■			
24 Overexcitation (Volts/Hertz)	■	■	■	+	
25 Synchronism Check	■	+	+	■	
27/59 Under-/Overvoltage	■	■	■	■	
27I/59I Inverse-Time Undervoltage/ Overvoltage	■		■	■	
32 Directional Power	■	■	■	■	
40 Impedance-Based Loss of Field	■	■	■	+	
40 Capability-Based Loss of Field	■				
46 Current Unbalance	■	■	■	+	
46 Harmonic Current Unbalance	■				
49 Thermal Model	■		■	+	
49R Thermal Overload (RTD)	■	■	■	■	■
50 (P,N,G) Overcurrent (Phase, Neutral, Ground)	■	■	■	■	■
50Q Negative-Sequence Overcurrent	■	+	■	■	■
51 (N,G) Time Overcurrent (Neutral, Ground)	■	■	■	■	■
51 (P,Q) Time Overcurrent (Phase, Neg. Seq.)	■	■		■	■
60 Loss of Potential	■	■	■	■	
60 Voltage Balance Loss of Potential	■				
60 (P,N) Independent Split-Phase (Phase, Neutral)	■				
64G 100 Percent Stator Ground	■	■	+		
64G Intermittent Ground Fault Detection	■				
64F Field Ground	■	■	■	+	■
67 (N,G) Directional Overcurrent (Neutral, Ground)	■		■	+	
67Q Negative-Sequence Directional Overcurrent	■			■	
78 Out of Step	■	■	+		
78 Dual Zone (Generator and System) Out of Step With Pole Slip Counters	■				
78VS Vector Shift			■	■	
81 Over-/Underfrequency	■	■	■	■	
81A Accumulated Frequency	■				
81R Rate-of-Change of Frequency	■		■	■	
87 Stator Differential	■	+	+		
Transformer Differential	■				
REF Restricted Earth Fault	■		■	+	
Inadvertent Energization	■	■	■	+	
Flashover Protection	■	*ƒ*	*ƒ*		
Low-Energy Analog (LEA) Current and Voltage Sensors Support			+	+	+

■ Standard feature + Model option *ƒ* May be created using settings

[1]Protects wind collector system apparatus during overcurrent events

Industrial and Commercial Protection

selinc.com/solutions/industrial

SEL power management, protection, automation, and control solutions are hard at work in heavy industries and commercial-scale facilities around the world. These solutions protect low- and medium-voltage equipment and help improve system performance, availability, and process efficiency.

Applications

- Asynchronous (induction) and synchronous motor protection
- Variable-frequency drive protection
- Motor bus transfer systems
- Motor control centers
- Arc-flash mitigation
- Power quality and revenue metering
- Power management and control systems (POWERMAX®)
- Centralized motor management systems (MOTORMAX®)
- Microgrid control systems
- Wide-area protection and remedial action schemes

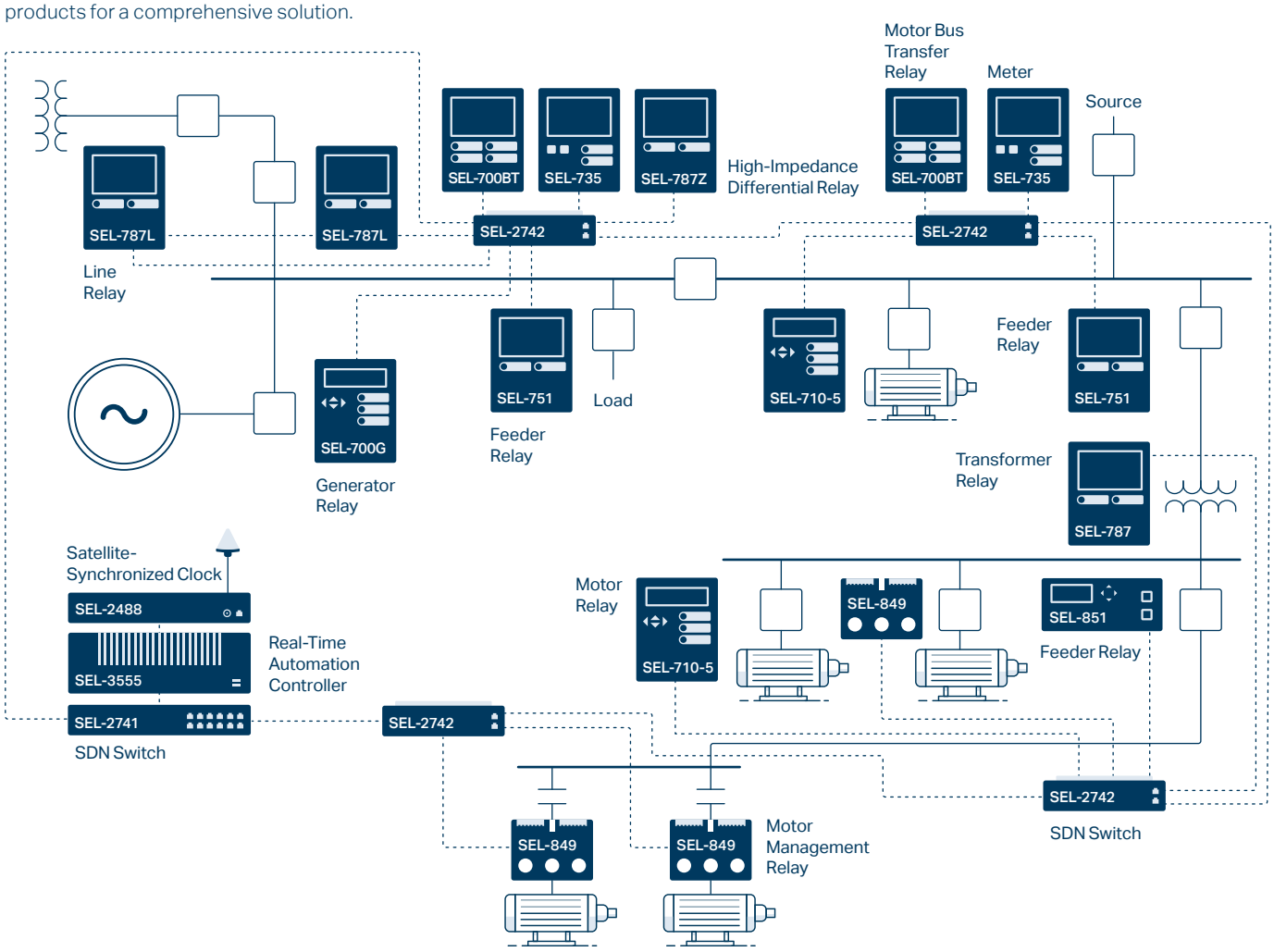
Customer Story

Microgrid Solution Plays Big on Campus

selinc.com/featured-stories/msu

Example System Diagram

Combine SEL's low- and medium-voltage protective relays with other SEL automation, monitoring, and control products for a comprehensive solution.



Webinars

Introducing the SEL-787L Line Current Differential Relay

selinc.com/events/on-demand-webinar/139454

SEL POWERMAX Commercial Microgrids—Sustainable, Economic, and Resilient

selinc.com/events/on-demand-webinar/133374

SEL POWERMAX Power Management and Control System for Industrial Applications (Part 1)

selinc.com/events/on-demand-webinar/132490

Technical Papers

Best Practices for Motor Control Center Protection and Control

selinc.com/api/download/102532

Case Study: Turbine Load-Sharing and Load-Shedding System for an Australian LNG Facility

selinc.com/api/download/128554

Making My Paper Mill Safer: An Arc-Flash Energy Reduction Story

selinc.com/api/download/126387

Case Study: Adaptive Load Shedding in Critical Industrial Facilities

selinc.com/api/download/130119

White Paper

Purpose-Engineered, Active-Defense Cybersecurity for Industrial Control Systems

selinc.com/api/download/121044

Videos

How a Data Center Achieves Utility-Grade Metering

video.selinc.com/detail/videos/case-studies/video/5747812817001

Engineer a Better Network—It Starts With SDN

video.selinc.com/detail/videos/software-defined-networking

SEL-787L Line Current Differential Relay NEW

The SEL-787L is an economical and dependable line current differential protection solution that offers arc-flash protection, fault locating, high-impedance fault detection, and more.

SEL-751 Feeder Protection Relay

The SEL-751 offers feeder protection, an intuitive color touchscreen, fast and secure arc-flash detection, flexible I/O, and advanced communications.

SEL-851 Feeder Protection Relay

The SEL-851 is a compact relay that provides overcurrent, voltage, and arc-flash protection as well as versatile communications.

SEL-700BT Motor Bus Transfer Relay

Ensure motor bus system process continuity by allowing the quick transfer of load to an auxiliary feeder during primary feeder line faults.

SEL-710-5 Motor Protection Relay

Provide protection, including optional arc-flash detection, for a full range of medium-voltage, three-phase induction, and synchronous motors.

SEL-849 Motor Management Relay

Provide current-, voltage-, and thermal-based protection; arc-flash detection; and power metering in low-voltage to medium-voltage motor protection applications.

SEL-700G Generator Protection Relay

Provide standby, emergency, and co-generator protection with an autosynchronizer, flexible I/O, and advanced communications.

SEL-787-2/-3/-4 Transformer Protection Relay

Apply advanced protection and monitoring with flexible communications to two-, three-, and four-terminal transformers.

SEL-587Z High-Impedance Differential Relay

Use the economical SEL-587Z to combine high-impedance analog technology with the advantages of microprocessor technology.

SEL-787Z High-Impedance Differential Relay and SEL-HZM High-Impedance Module

The SEL-787Z combines high-impedance protection principles with advanced numerical technologies to provide high-impedance differential protection. Apply the SEL-787Z and SEL-HZM High-Impedance Module for a comprehensive, single-zone bus-protection solution.

SEL-735 Power Quality and Revenue Meter

SEL meters offer bidirectional, full four-quadrant, and high-accuracy energy metering as well as precise and reliable power quality measurements.

SEL-2600 RTD Module

Measure and transmit data from as many as 12 resistance temperature detector (RTD) inputs and one contact input over a single fiber-optic link.

SEL-2742 Ethernet Switch

The SEL-2742 is a 12-port, DIN-rail mount software-defined networking (SDN) switch. It combines with SEL-5056 Flow Controller software to simplify network engineering and improve LAN security.

SEL-3555 Real-Time Automation Controller (RTAC)

The SEL-3555 provides powerful processing for large-scale automation projects.

SEL-3350 Computing Platform

The SEL-3350 is ideal for limited-space, dedicated embedded applications that require midlevel I/O and computation. It can be configured as a Real-Time Automation Controller (RTAC), as a computer, or with the SEL Blueframe® application platform.

POWERMAX Power Management and Control Systems

For industrial facilities, an SEL POWERMAX system increases process uptime by protecting against blackouts with advanced high-speed protection and control technology. A commercial-scale POWERMAX microgrid control system helps keep the lights on, seamlessly islanding and reconnecting with the bulk electric system.

MOTORMAX Low-Voltage Motor Management and Protection System

MOTORMAX provides comprehensive control, protection, analysis, and monitoring for original equipment manufacturer motor control centers.

Applications	SEL-787L	SEL-751	SEL-851	SEL-700BT	SEL-710-5	SEL-849	SEL-700G	SEL-787-2/-3/-4	SEL-587Z	SEL-787Z
Generator Protection		+					■			
Motor Protection					■	■				
Motor Bus Transfer Protection				■						
Feeder Protection	■	■	■	■		■	+			
Transformer Protection								■		
Bus Differential Protection								■	■	■
Line Current Differential Protection	■									

Protection	SEL-787L	SEL-751	SEL-851	SEL-700BT	SEL-710-5	SEL-849	SEL-700G	SEL-787-2/-3/-4	SEL-587Z	SEL-787Z
24 Overexcitation (Volts/Hertz)							■	+		
27/59 Under-/Overvoltage	+	+	+	■	■	+	■	+		■
32 Directional Power	+	+	+			+	■	+		
37 Underpower					■	+				
46 Current Unbalance				■	■	■	■			
47 Phase Reversal					■	■				
49 Thermal	■	■			■	■	■	■		
49R Thermal Overload (RTD)	+	+		■	+		■			
50 Overcurrent	■	■	■	■	■	■	■	+	■	■
51 Time Overcurrent	■	■	■	■	■	■	■	+	■	■
55 Power Factor	+	+	+		■	+	*ƒ*			
60 Loss of Potential	+	+	+	■	■	+	■			
64F Field Ground							■			
67 (N,G) Directional Overcurrent (Neutral, Ground)	+	+		■			■			
81 Over-/Underfrequency	+	+	+	■	■	+	■	+		

Protection, Continued	SEL-787L	SEL-751	SEL-851	SEL-700BT	SEL-710-5	SEL-849	SEL-700G	SEL-787-2/-3/-4	SEL-587Z	SEL-787Z
87 Current Differential					+		+	■		
87L (P,G,Q) Line Differential	■									
87Z High-Impedance Differential									■	■
REF Restricted Earth Fault							■	+		
Arc-Flash Detection	+	+	+		+	■				+
Separate Neutral Overcurrent	■	■	■	■	■	■	■	+		
Broken Rotor Bar Detection					■					
Low-Energy Analog (LEA) Current and Voltage Sensors Support	+	+			+		+	+		

Instrumentation and Control	SEL-787L	SEL-751	SEL-851	SEL-700BT	SEL-710-5	SEL-849	SEL-700G	SEL-787-2/-3/-4	SEL-587Z	SEL-787Z
Breaker Wear Monitoring	■	■		■	■		■	■		
RTD Inputs	+	+		+	+		+	+		
IEC 61850 Edition 2	+	+	+	+	+		+	+		+
Parallel Redundancy Protocol (PRP)	+	+		+	+	■	+	+		+
DNP3 Serial	+	+	+	+	+	+	+	+		+
DNP3 LAN/WAN	+	+	+	+	+	+	+	+		+
Simple Network Time Protocol (SNTP)	+	+	■	+	+	■	+	+		+
Built-In Web Server	■	■	■	■	+	■	+	■		■
IEEE 1588 Precision Time Protocol (PTP)	+	+		+	+		+	+		+
EtherNet/IP	+	+		+	+	+	+	+		+
Modbus TCP	+	+	■	+	+	+	+	+	■	+
Modbus RTU Outstation	■	■	■	■	■	■	■	■	■	■
Rapid Spanning Tree Protocol (RSTP)	+	+		+	+		+	+		+

■ Standard feature + Model option *ƒ* May be created using settings

Transmission Line Protection and Fault Locating

selinc.com/solutions/transmission

SEL transmission line protective relays provide reliable subcycle line current differential and multizone distance protection. Their fault-locating capabilities allow you to efficiently dispatch line crews to quickly isolate line problems and restore service faster.

Applications

- Time-domain line protection
- Differential protection
- Pilot protection: directional and distance
- Step distance protection
- Single-pole tripping
- Series-compensated lines
- Single- and dual-breaker terminals

Technical Papers

Modern Line Current Differential Protection Solutions

selinc.com/api/download/6390

Transmission Line Protection System for Increasing Power System Requirements

selinc.com/api/download/2603

A Fresh Look at Limits to the Sensitivity of Line Protection

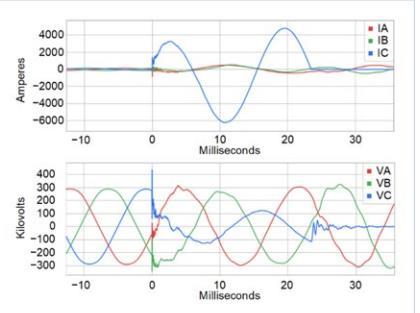
selinc.com/api/download/8505

Series Compensation, Power Swings, and Inverter-Based Sources and Their Impact on Line Current Differential Protection

selinc.com/api/download/21474837052

Speed of Line Protection – Can We Break Free of Phasor Limitations?

selinc.com/api/download/106193



Real-World Event Reports

Field Experiences With Traveling-Wave Protection and Fault Locating

selinc.com/mktg/122973

Webinar

Detecting and Locating a Broken Conductor Before It Converts Into a Fault

selinc.com/events/on-demand-webinar/136022

SEL-T401L Ultra-High-Speed Line Relay

Apply the SEL-T401L, which was built on the field experience of the SEL-T400L, for its unprecedented operating speed and complete suite of primary and backup line protection functions. The SEL-T401L can trip within 1 ms, records events with a 1 MHz sampling rate, locates faults to the nearest tower, and uses line monitoring to detect and locate incipient and recurring faults.

SEL-411L Advanced Line Differential Protection, Automation, and Control System

Apply the SEL-411L for comprehensive line differential protection for up to four terminals; subcycle distance protection; and directional overcurrent protection. Use traveling-wave fault locating to pinpoint faults to the nearest tower span. Broken conductor detection logic can identify line breaks on overhead conductors.

SEL-421 Protection, Automation, and Control System

Apply the SEL-421 for subcycle distance and directional overcurrent protection.

SEL-9L Line Relay NEW

Use the SEL-9L for comprehensive line protection on single- or dual-breaker subtransmission lines. Universal hardware, modern communications and cybersecurity, and flexible firmware options enable you to tailor the relay to your application.

SEL-311L Line Current Differential Protection and Automation System

Use the SEL-311L for comprehensive, easy-to-apply line differential and four-zone distance protection.

SEL-311C Transmission Protection System

Apply the SEL-311C-1 for three-pole distance protection, reclosing, monitoring, and control of breakers on transmission lines. Apply the SEL-311C-2/-3 for single-pole tripping.

SEL-TWFL Dual Traveling-Wave Fault Locator and 12-Channel MHz Recorder NEW

Use the SEL-TWFL alongside existing line protective relays to locate faults and monitor two line terminals at a substation.

SEL-T4287 Traveling-Wave Test System

Test traveling-wave fault locators and line protective relays (e.g., the SEL-T401L and SEL-411L) using the SEL-T4287, a simple and compact secondary pulse injection test set.

Applications	SEL-T401L	SEL-411L	SEL-421	SEL-311C	SEL-311L	SEL-9L
Pilot Protection—Directional	■	■	■	■	■	■
Pilot Protection—Directional and Distance	■	■	■	■	■	■
Differential Protection	■	■			■	
Step Distance Protection	■	■	■	■	■	■
Single-Pole Tripping	■	■	■	■	■	
Series-Compensated Lines	■	+	+			
Dual-Breaker Terminals	■	+	■			■

Major Protection Functions						
Phase Distance—Mho	4	5	5	4	4	4
Ground Distance—Mho	4	5	5	4	4	4
Phase Distance—Quadrilateral	4	5	5	4	4	4
Ground Distance—Quadrilateral	4	5	5			4
Subcycle Distance Operation	■	+	+	■		+
Nondirectional Distance Zone	1					1
Step Distance Timers	5	5	5	4	4	5
Incremental-Quantity Distance	■					
Directional[1]	■	■	■	■	■	■
Incremental-Quantity Directional	■					
Traveling-Wave Directional	■					
POTT	■	■	■	■	■	■
DCB	■	■	■	■	■	■
DCUB	ƒ	■	■	■	■	ƒ
DTT	■	■	■	■	■	■
Line Current Differential		■			■	
Traveling-Wave Line Current Differential	■					
Instantaneous Overcurrent[1]	4	4	4	4	4	6
Inverse-Time Overcurrent[1]	4	10	10	4	4	6
Definite-Time Overcurrent[1]	4	4	4	4	4	6
Switch Onto Fault	■	■	■	■	■	■
Breaker Failure		■	■	■	ƒ	■
Overvoltage	■	■	■	■	■	■
Undervoltage	■	■	■	■	■	■
Frequency		■	■	■	■	■
Thermal		■	■			ƒ
Out of Step	■	■	■	■	■	■

Supervisory Elements	SEL-T401L	SEL-411L	SEL-421	SEL-311C	SEL-311L	SEL-9L
Loss of Potential	■	■	■	■	■	■
Load Encroachment	■	■	■	■	■	■
Power Swing Blocking	■	■	■	■	■	■
Synchronism Check		■	■	■	■	■

Control						
Automatic Reclosing		■	■	■	■	■
SELOGIC® Control Equations	■	■	■	■	■	■
Nonvolatile Latch Control Switches	■	■	■	■	■	■
SELOGIC Remote and Local Control Switches	■	■	■	■	■	■
Programmable Math Operations		■	■			■

Fault Locating, Monitoring, and Recording						
Fault Locating—Single-Ended Impedance	■	■	■	■	■	■
Fault Locating—Multi-Ended Impedance	■	■				■
Fault Locating—Single-Ended Traveling Wave	■					
Fault Locating—Multi-Ended Traveling Wave	■	+				
Broken Conductor Detection		+				
Breaker Wear Monitor		■	■	■	■	
Substation Battery Monitor		■	■	■	■	■
Trip Coil Monitor		ƒ	ƒ	ƒ	ƒ	■
DC Current Circuit Monitoring Outputs						3
Event Recorder (DFR)	■	■	■	■	■	■
Sequential Events Recorder (SER)	■	■	■	■	■	■
High-Resolution (1 MHz) Event Recorder	■					
Metering	■	■	■	■	■	■

■ Standard feature + Model option ƒ May be created using settings

[1]Phase, negative sequence, and zero sequence

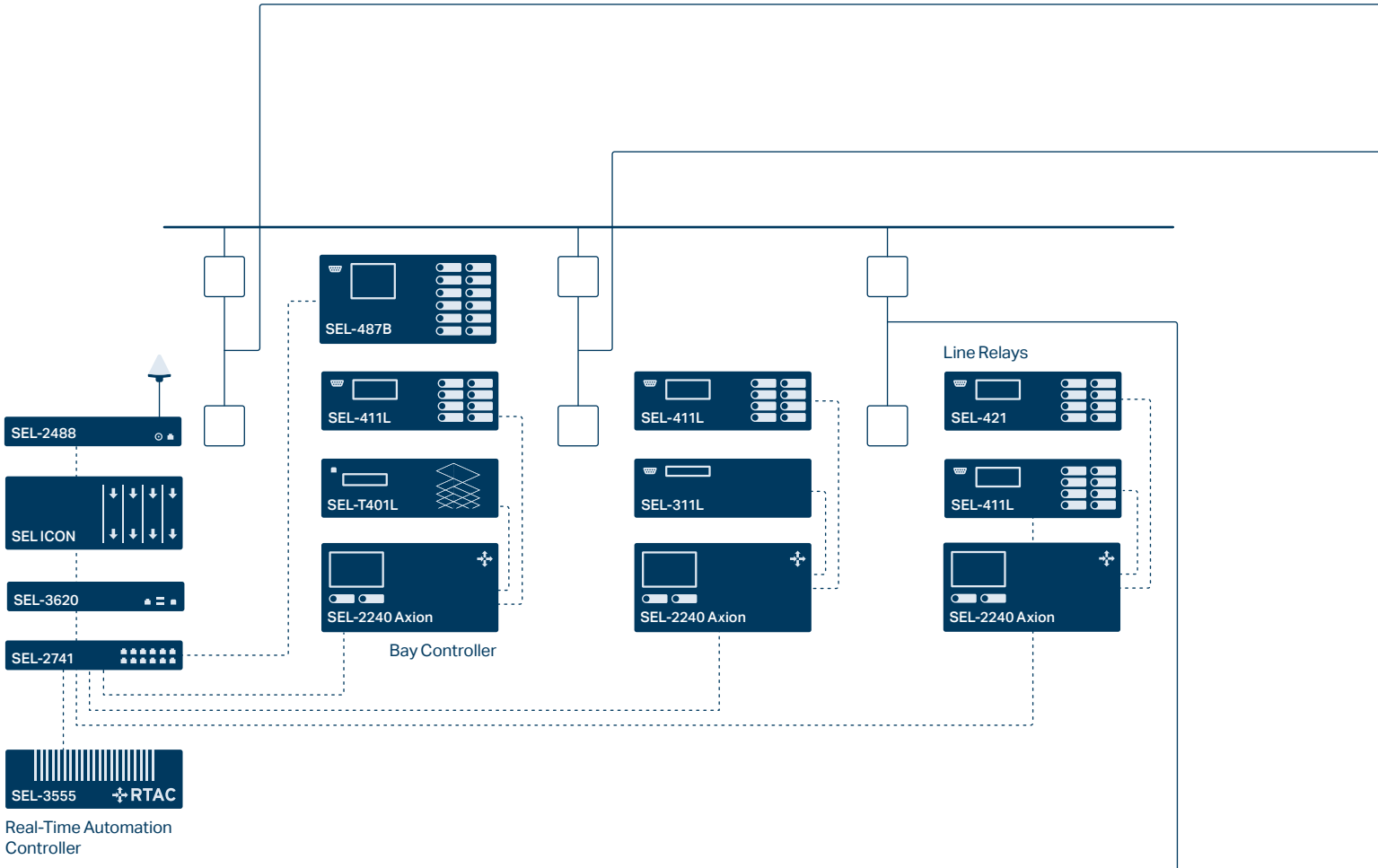
SCADA/HMI Integration and Protocols	SEL-T401L	SEL-411L	SEL-421	SEL-311C	SEL-311L	SEL-9L
SEL ASCII, Fast Meter, and Fast SER	■	■	■	■	■	
DNP3 Serial		■	■	■	■	
DNP3 LAN/WAN	■	■	■	■		■
Synchrophasors (IEEE C37.118)		■	■	■		
IEC 61850		+	+	+	+	+
Parallel Redundancy Protocol (PRP)		■	■	■		■
IEEE 1588 Precision Time Protocol Version 2 (PTPv2)		+	+			+
IEC 61850-9-2 Sampled Values		+	+			+
Time-Domain Link (TiDL®)		+	+			
SEL Fast Time-Domain Values (1 MHz Sampling Rate Streaming)	■					

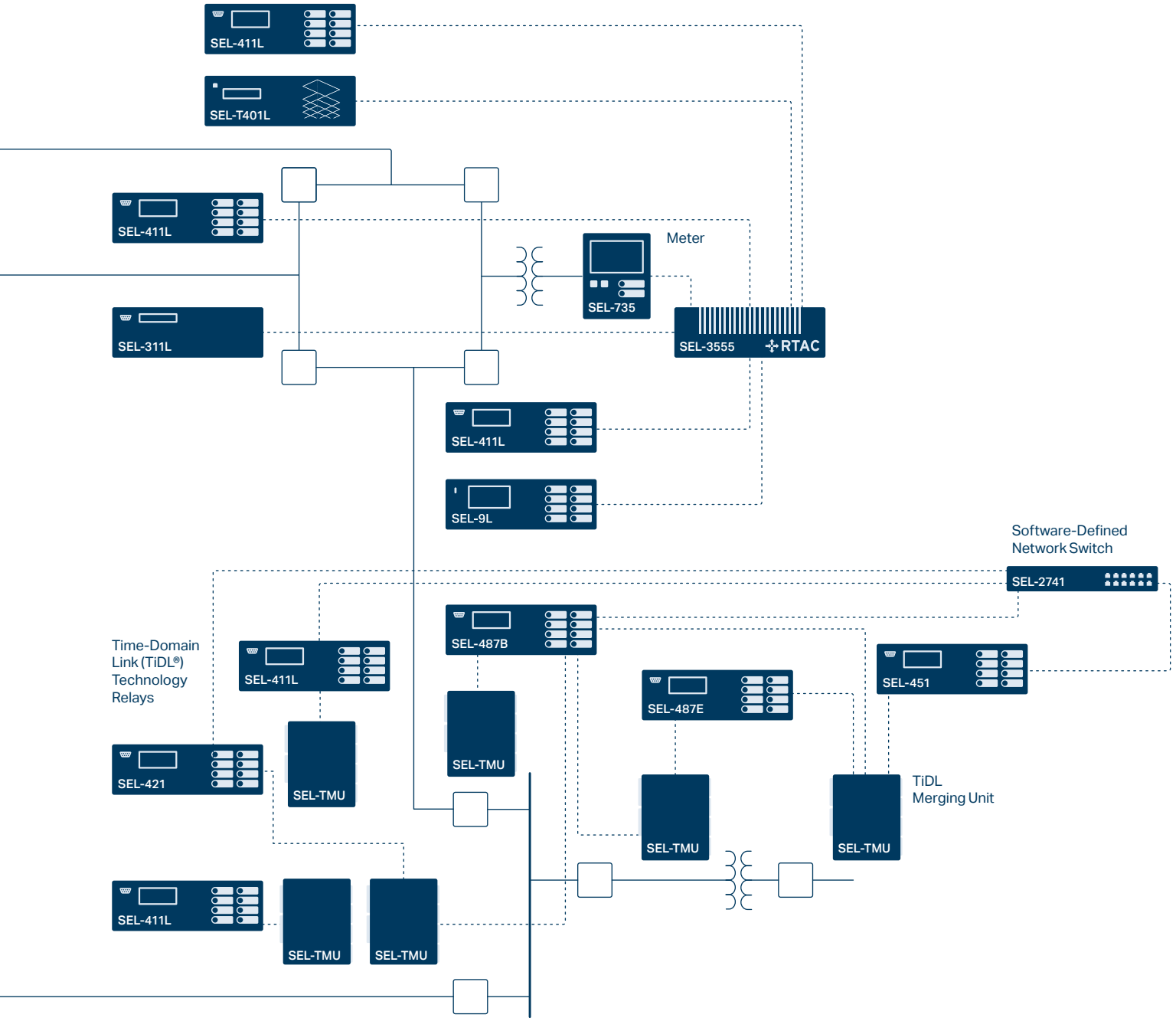
Digital Protection Signaling						
Direct Fiber	■	■		■	■	■
SEL Mirrored Bits®	■	■	■	■	■	■
IEEE C37.94	■	■			■	■

Miscellaneous						
Trip-Rated High-Speed Outputs	■	■	■	■	■	■
Advanced Trip Circuit Monitoring						■
Software-Invertible CT Polarities		■	■			■
Built-In Playback Test	■					
Display Points		■	■	■	■	■
Configurable Targets		■	■	■		■
Front USB-C Port						■
Programable Pushbuttons		12	12			10
Programable Contact Inputs, 24–250 V						■
Programable 1 A/5 A CTs						■
Printable Labels	■	■	■	■		■
Protection With Delta-Connected Voltages				■		

■ Standard feature + Model option

Example System Diagram
Combine SEL transmission protective relays with other SEL automation, monitoring, and control products for a comprehensive solution.




SEL-411L
SEL-T401L
SEL-411L
Meter
SEL-735
SEL-311L
SEL-3555
RTAC
SEL-411L
SEL-9L
Software-Defined
Network Switch
SEL-2741
SEL-487B
Time-Domain
Link (TiDL®)
Technology
Relays
SEL-411L
SEL-451
SEL-487E
SEL-TMU
SEL-421
SEL-TMU
TiDL
Merging Unit
SEL-TMU
SEL-TMU
SEL-411L
SEL-TMU
SEL-TMU

Substation Protection

selinc.com/products/transmission/protection | selinc.com/products/distribution/protection

SEL devices protect, monitor, and control critical assets located in all types of generation, transmission, and distribution substations.

Applications

- Transformer protection and monitoring
- Bus protection
- Breaker failure protection
- Capacitor bank protection
- Digital secondary systems that use Time-Domain Link (TiDL®) or IEC 61850 technologies

Webinars

Protect Multiple Substation Assets Using One Relay: CPC Solutions With the SEL-487E

selinc.com/events/on-demand-webinar/139281

Innovation in IEC 61850 Digital Secondary Systems

selinc.com/events/on-demand-webinar/137779

Technical Papers

Considerations for Using High-Impedance or Low-Impedance Relays for Bus Differential Protection

selinc.com/api/download/5562

Beyond the Nameplate—Selecting Transformer Compensation Settings for Secure Differential Protection

selinc.com/api/download/114458

Beyond the Nameplate: Transformer Compensation Revisited—New Applications, Greater Simplicity

selinc.com/api/download/138123

Performance of IEC 61850 Sampled Values Relays for a Real-World Fault

selinc.com/api/download/137357

Redundant Bus Protection Using High-Impedance Differential Relays

selinc.com/api/download/121745

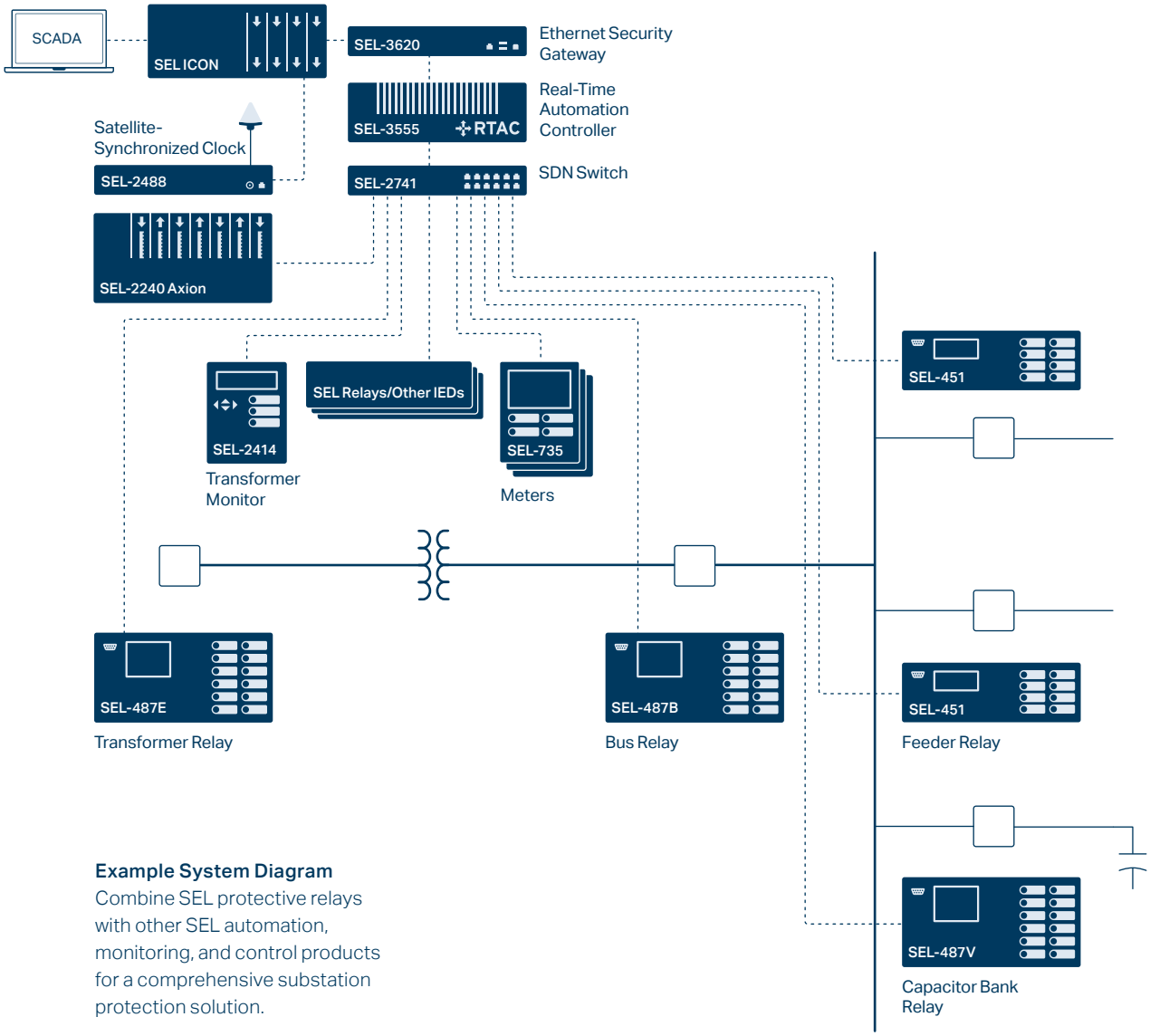
Principles of Shunt Capacitor Bank Application and Protection

selinc.com/api/download/6395

Customer Story

Creating a Better Future: Innovative Substation Modernization in the Philippines

selinc.com/highlights/davao-light



Example System Diagram
Combine SEL protective relays with other SEL automation, monitoring, and control products for a comprehensive substation protection solution.

SEL-352 Breaker Failure Relay

Provide breaker failure protection and breaker control and monitoring with unparalleled flexibility. Point-on-wave opening and closing technology extends breaker life and reduces system transients and restrikes.

SEL-2414 Transformer Monitor

Provide standalone or distributed monitoring and control for new and existing transformers using the optional color touchscreen display.

SEL-787-2/-3/-4 Transformer Protection Relay

Apply advanced protection and monitoring with flexible communications to two-, three-, and four-terminal transformers.

SEL-TMU TiDL Merging Unit

Employ the SEL-TMU for remote data acquisition in substations with Time-Domain Link (TiDL) technology systems. It can share data with up to four SEL-400 series TiDL relays.

SEL-401 Protection, Automation, and Control Merging Unit

Apply merging units in substations with IEC 61850-9-2 Sampled Values (SV) systems. The SEL-401 is a standalone merging unit with phase overcurrent and breaker failure protection. Some SEL SV relays can be configured as merging units to provide local protection that also publishes SV data.

SEL-787Z High-Impedance Differential Relay and SEL-HZM High-Impedance Module

The SEL-787Z combines high-impedance protection principles with advanced numerical technologies to provide high-impedance differential protection. Apply the SEL-787Z and SEL-HZM High-Impedance Module for a comprehensive, single-zone bus-protection solution.

SEL-487B Bus Differential and Breaker Failure Relay

Provide bus differential and breaker failure protection, automation, and control in applications with up to seven terminals per relay. Use multiple SEL-487B relays to expand up to 21 protected terminals for scalable protection and control.

SEL-487E Transformer Protection Relay

Provide high-speed transformer differential protection as well as advanced monitoring, metering, automation, and control. With optional distance, second differential zone, and reclosing functionalities, use the SEL-487E for centralized protection and control applications.

SEL-487V Capacitor Protection and Control System

Protect and control grounded and ungrounded, single- and double-wye capacitor bank configurations.

Transformer Protection and Monitoring

Applications	SEL-487E	SEL-387E	SEL-387	SEL-387A	SEL-787	SEL-787-2X/-21/-2E	SEL-787-3E/-3S/-4X	SEL-587	SEL-2414
Breaker Failure Protection	■	*ƒ*	*ƒ*	*ƒ*	■	■	■	*ƒ*	*ƒ*
Percentage-Restrained Current Differential	■	■	■	■	■	■	■	■	
Number of Differential Zones	1 or 2+	1	1	1	1	1	1	1	
Underfrequency Load Shedding	■	*ƒ*			+	+	+		
Undervoltage Load Shedding	■	*ƒ*			+	+	+		
Three-Phase Current Inputs	6	3	4	2	2	2*	3 or 4	2	2*
Three-Phase Voltage Inputs	2	1			1*	1*	1*		1*

Protection	SEL-487E	SEL-387E	SEL-387	SEL-387A	SEL-787	SEL-787-2X/-21/-2E	SEL-787-3E/-3S/-4X	SEL-587	SEL-2414
21 Phase and Ground Distance	+								
24 Overexcitation (Volts/Hertz)	■	■			+	+	+		
25 Synchronism Check	■						+		
27/59 Under-/Overvoltage	■	■			+	+	+		
32 Directional Power	■				+	+	+		
46 Current Unbalance	■								
49 Equipment Thermal Monitoring	■		+	■	■	■	■		
50FO Flashover Protection	*ƒ*	*ƒ*			*ƒ*	*ƒ*	*ƒ*		
50 (N,G) Overcurrent (Neutral, Ground)	■	■	■	■	■	■	■	■	
50P Phase Overcurrent, 50Q Negative-Sequence Overcurrent	■	■	■	■	■	■	■	■	
51 (N,G) Time Overcurrent (Neutral, Ground)	■	■	■	■	■	■	■	■	
51P Phase Time Overcurrent	■	■	■	■	■	■	■	■	
51Q Negative-Sequence Time Overcurrent	■	■	■	■	■	■	■	■	
67 (P,G,Q) Directional Overcurrent (Phase, Ground, Negative Sequence)	■								
81 Under-/Overfrequency	■	■			+	+	+		
81R Rate-of-Change of Frequency	*ƒ*								
87 Current Differential	■	■	■	■	■	■	■	■	
REF Restricted Earth Fault	■	■	■	+	+	+	■		

Instrumentation and Control	SEL-487E	SEL-387E	SEL-387	SEL-387A	SEL-787	SEL-787-2X/-21/-2E	SEL-787-3E/-3S/-4X	SEL-587	SEL-2414
SELOGIC® Control Equations	■	■	■	■	■	■	■	■	■
Voltage Check on Closing	*ƒ*	*ƒ*			*ƒ*	*ƒ*	*ƒ*		
Transformer Cooling Fan Control	*ƒ*				*ƒ*	*ƒ*	*ƒ*		■
Nonvolatile Latch Control Switches	■	■	■	■	■	■	■		■
SELOGIC Remote Control Switches	■	■	■	■	■	■	■	■	■
SELOGIC Local Control Switches	■	■	■	■	■	■	■		■
Display Points	■	■	■	■	■	■	■		■
Multiple Settings Groups	■	■	■	■	■	■	■		
Substation Battery Monitor	■	■	■	■		+	+		*ƒ*
Breaker Wear Monitor	■	■	■	■		■	■		
Event Report (Multicycle Data)	■	■	■	■	■	■	■	■	■
Sequential Events Recorder	■	■	■	■	■	■	■		■
Instantaneous and Demand Meter	■	■	■	■	■	■	■	■	■
Load and Temperature Profile Report	■				■	■	■		■
RTD (Resistance Temperature Detector) Inputs					+	+	+		+
Built-In Web Server	■	■				+	+		
Software-Invertible Polarities	■								
IEC 60255-Compliant Thermal Model	■								
IEEE C37.118 Synchrophasors	■				■	■	■		
IEC 61850	+	+			+	+	+		+
IEC 61850-9-2 Sampled Values Technology	+								
Simple Network Time Protocol (SNTP)	■				+	+	+		■
Parallel Redundancy Protocol (PRP)	■					+	+		■
IEEE 1588 Precision Time Protocol Version 2 (PTPv2)	+					+	+		■
EtherNet/IP						+	+		
Time-Domain Link (TiDL) Technology	+								
Through-Fault Monitor	■	■	+	■	■	■	■		■
Thermal Model/SEL-2600 RTD Module Communications	■		+	■	■	■	■		■

■ Standard feature + Model option

ƒ May be created using relay elements, device word bits, analog quantities, and timers

Bus Protection

Applications	SEL-487B	SEL-487E	SEL-787Z
Breaker Failure Protection	■	■	■
Bus Differential	■	■	■
Transformer and Machine Current Differential		■	
High-Impedance Bus Differential			■
Low-Impedance Bus Differential	■	■	
Three-Phase Current Inputs	7/10/21‡	6	4
Three-Phase Voltage Inputs	1	2	3

Protection	SEL-487B	SEL-487E	SEL-787Z
27/59 Under-/Overvoltage	■	■	■
46 Current Unbalance	*ƒ*	■	
47 Voltage Unbalance		*ƒ*	
50 (N,G) Overcurrent (Neutral, Ground)		■	■
50P Phase Overcurrent	■	■	■
50Q Negative-Sequence Overcurrent		■	■
51 (N,G) Time Overcurrent (Neutral, Ground)		■	■
51P Phase Time Overcurrent	■	■	■
51Q Negative-Sequence Time Overcurrent		■	■
87 Current Differential	■	■	
87Z High-Impedance Differential			■
Single-Pole Trip/Close	■		
Three-Phase Differential Bus Zones	2/3/6‡	1 or 2+	1
Check Zones	3		

Instrumentation and Control	SEL-487B	SEL-487E	SEL-787Z
79 Automatic Reclosing	*ƒ*	+	
Dynamic Zone Selection	■	■	
SELOGIC Control Equations	■	■	■
Nonvolatile Latch Control Switches	■	■	■
SELOGIC Remote/Local Control Switches	■	■	■
Display Points	■	■	■
Multiple Settings Groups	■	■	■
Substation Battery Monitor	■	■	
Breaker Wear Monitor		■	
Event Report (Multicycle Data)	■	■	■
Sequential Events Recorder	■	■	■
Instantaneous Meter	■	■	■
Demand Meter		■	
Through-Fault Monitor		■	
Software-Invertible Polarities		■	
IEC 60255-Compliant Thermal Model		■	
IEEE C37.118 Synchrophasors		■	
Synchrophasor Real-Time Control		■	
IEC 61850	+	+	+
IEC 61850-9-2 Sampled Values Technology	+	+	
Built-In Web Server	■	■	■
Simple Network Time Protocol (SNTP)	■	■	■
MIRRORED BITS® Communications	■	■	■
Parallel Redundancy Protocol (PRP)	■	■	■
IEEE 1588 Precision Time Protocol Version 2 (PTPv2)	+	+	+
Time-Domain Link (TiDL) Technology	+	+	

Miscellaneous Features	SEL-487B	SEL-487E	SEL-787Z
Connectorized® (Quick Disconnect) Available	+	+	

■ Standard feature + Model option ‡1/2/3 relay application

ƒ May be created using settings

Breaker Failure and Capacitor Bank Protection

Applications	SEL-352	SEL-451	SEL-487B	SEL-487V
Breaker Failure Protection, Number of Three-Phase Breakers	*1*	*2*	*7*	*1*
Bus Differential			■	
Shunt Capacitor Bank Protection		*ƒ*		■
Underfrequency Load Shedding		*ƒ*		*ƒ*
Undervoltage Load Shedding	*ƒ*	*ƒ*	*ƒ*	*ƒ*

Protection	SEL-352	SEL-451	SEL-487B	SEL-487V
25 Synchronism Check	■	■		
27/59 Under-/Overvoltage	■	■	■	■
32/37 Power Elements	■	*ƒ*	*ƒ*	■
46 Current Unbalance	■	*ƒ*	*ƒ*	■
47 Voltage Unbalance		*ƒ*	*ƒ*	*ƒ*
49 Equipment Thermal Monitoring	+	*ƒ*		*ƒ*
50FO Flashover Protection	■	■		■
50 (N,G) Overcurrent (Neutral, Ground)	■	■		■
50P Phase Overcurrent	■	■	■	■
50Q Negative-Sequence Time Overcurrent		■		■
51 (N,G) Time Overcurrent (Neutral, Ground)		■		■
51P Phase Time Overcurrent		■	■	■
51Q Negative-Sequence Time Overcurrent		■		■
60 (N,P) Current Unbalance (Neutral, Phase)				■
67 Directional Overcurrent		■		■
81 Under-/Overfrequency		■		■
81R Rate-of-Change of Frequency				■
87 Current Differential			■	
87V Voltage Differential	■	*ƒ*		■
Single-Pole Trip/Close	■		■	

Instrumentation and Control	SEL-352	SEL-451	SEL-487B	SEL-487V
Open-Pole Detection		*ƒ*	*ƒ*	■
Point-on-Wave (POW) Breaker Control	■			
79 Automatic Reclosing	*ƒ*	■	*ƒ*	*ƒ*
SELOGIC Control Equations	■	■	■	■
Voltage Check on Closing		■		
Nonvolatile Latch Control Switches	■	■	■	■
SELOGIC Remote/Local Control Switches	■	■	■	■
Display Points	■	■	■	■
Multiple Settings Groups	■	■	■	■
Substation Battery Monitor	+	■	■	■
Breaker Wear Monitor	+	■		■
Voltage Sag, Swell, and Interruption (VSSI) Recording		■		■
Event Report (Multicycle Data)	■	■	■	■
Sequential Events Recorder	■	■	■	■
Instantaneous Meter	■	■	■	■
Demand Meter		■		■
Harmonic Metering				■
Software-Invertible Polarities		■		
IEC 60255-Compliant Thermal Model		■		
IEEE C37.118 Synchrophasors		■		■
IEC 61850		+	+	+
IEC 61850-9-2 Sampled Values Technology		+	+	
Built-In Web Server		■	■	■
Simple Network Time Protocol (SNTP)		■	■	■
Parallel Redundancy Protocol (PRP)		■	■	■
IEEE 1588 Precision Time Protocol Version 2 (PTPv2)		+	+	
Time-Domain Link (TiDL) Technology		+	+	
SEL-2600 RTD Module Communications	+	■		■

Miscellaneous Features				
Connectorized (Quick Disconnect) Available	+	+	+	+
Synchrophasor Real-Time Control		■		■

■ Standard feature + Model option

ƒ May be created using relay elements and timers

Distribution Protection and Control

selinc.com/solutions/distribution

The complex demands of distributed generation, renewable resources, and an evolving customer base present challenges to distribution systems everywhere. From protection fundamentals to advanced automation, SEL offers the most reliable and efficient solutions for every section of a utility-, industrial-, or commercial-scale distribution system.

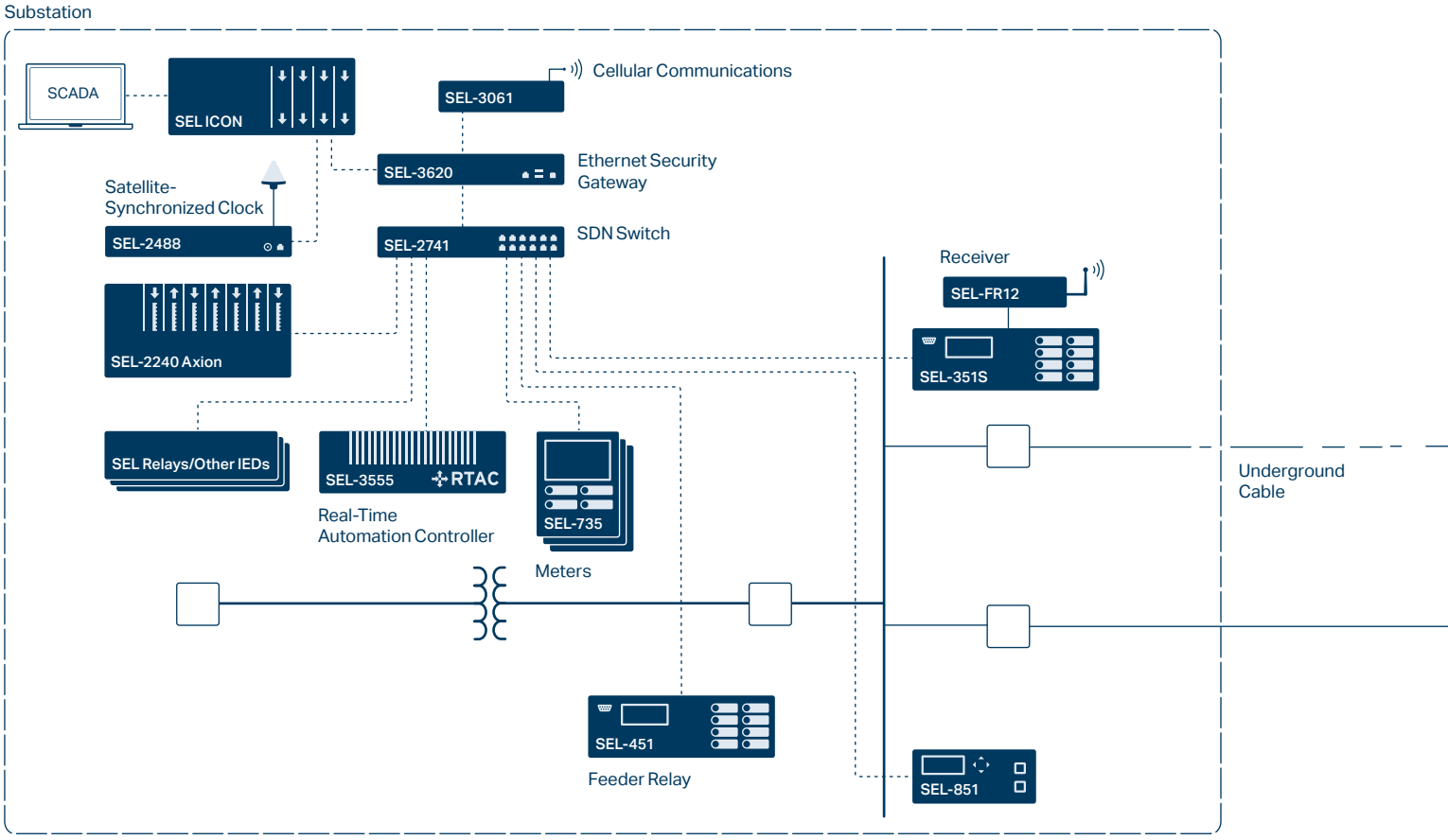
Applications

- Feeder protection
- Transformer protection
- Busbar protection
- Recloser control and protection
- Digital secondary systems
- Arc-flash protection
- Arc Sense™ technology (AST) high-impedance fault detection
- Microgrid control systems (POWERMAX®)
- Distributed generation
- Power quality
- Distribution automation
- Substation automation

Video

SEL-651R—A Better Way to Connect DERs

video.selinc.com/detail/video/6084720804001



Example System Diagram

Combine SEL distribution protection and control products with other SEL automation, monitoring, and wireless communications products for a comprehensive solution.

Webinars

The Next Evolution in FLISR Simplicity: Automatic Configuration With GIS Data

selinc.com/events/on-demand-webinar/138534

Improving Voltage Regulation in Systems With DERs

selinc.com/events/on-demand-webinar/138448

Finding Simplicity in the Complex World of Feeder Protection

selinc.com/events/on-demand-webinar/134425

Technical Papers

Using Existing Distribution Protection and Control Capabilities for Integration of Distributed Energy Resources

selinc.com/api/download/140366

Real-World Troubleshooting With Microprocessor-Based Recloser Controls

selinc.com/api/download/125792

Improving Distribution System Reliability With High-Density Coordination and Automatic System Restoration

selinc.com/api/download/137363

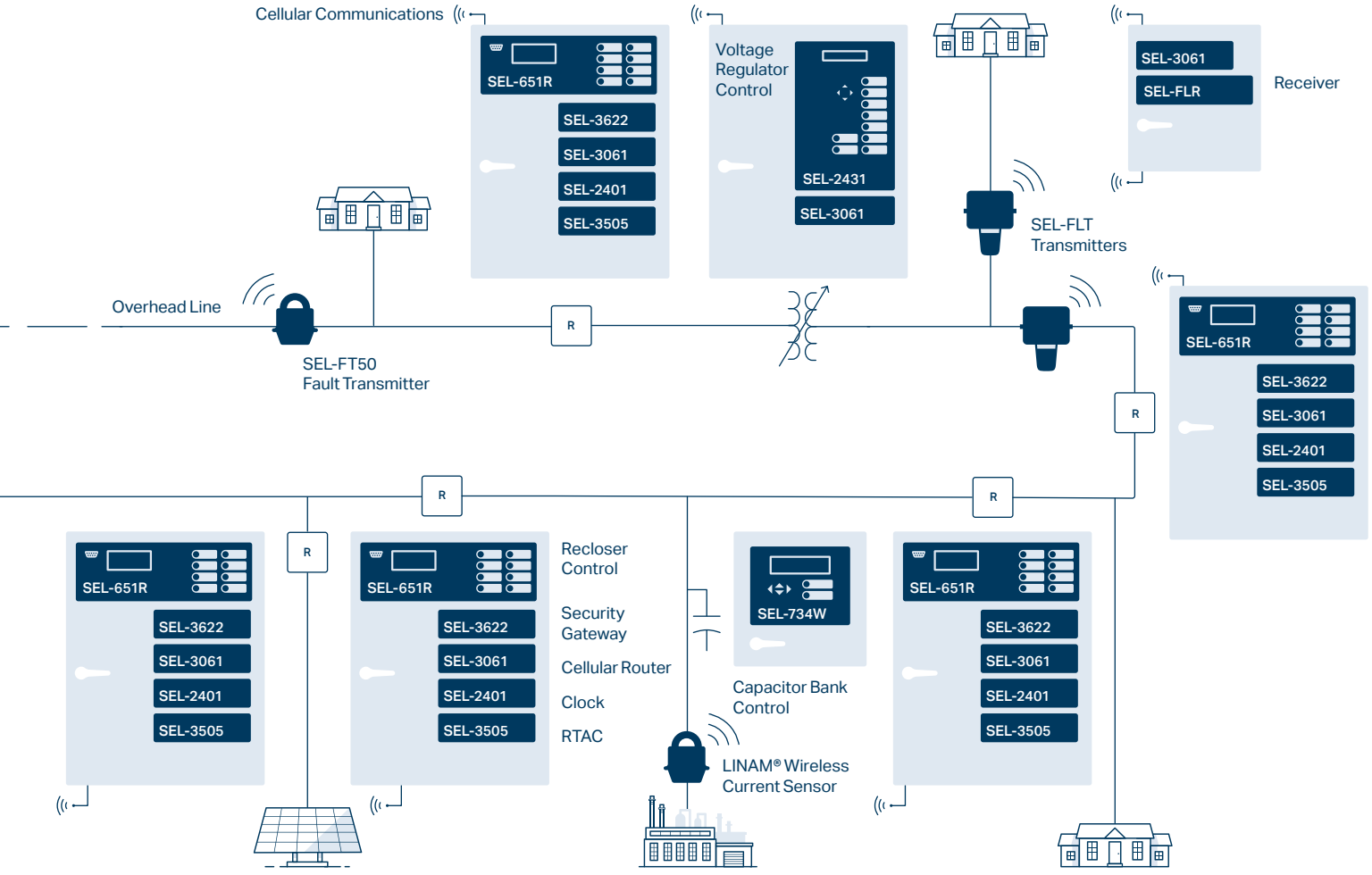
White Papers

Fire Mitigation for Distribution

selinc.com/api/download/126445

Wireless Current Sensing for Improved Distribution Capacitor Bank Control

selinc.com/api/download/130665



SEL-851 Feeder Protection Relay

A compact relay for utility and industrial applications that provides overcurrent, voltage, and arc-flash protection as well as versatile communications.

SEL-751 Feeder Protection Relay

Ideal for industrial and utility feeder protection, offering an intuitive color touchscreen, fast and secure arc-flash detection, flexible I/O, and advanced communications.

SEL-451 Protection, Automation, and Bay Control System

Flexible overcurrent protection with complete substation bay control.

SEL-351 Protection System

Transmission or distribution overcurrent protection, monitoring, and control.

SEL-351A Protection System

An economical solution for distribution feeder protection.

SEL-351S Protection System

Comprehensive feeder and overcurrent protection perfect for industrial and utility feeder applications.

SEL-501 Dual Universal Overcurrent Relay

Two complete and independent groups of protection in one low-cost unit for feeders, buses, transformers, motors, and breakers.

SEL-551/551C Overcurrent/ Reclosing Relay

Distribution protection and control in new and retrofit installations.

SEL Wireless Protection System

SEL-FT50 Fault Transmitter
SEL-RP50 Fault Repeater
SEL-FR12 Fault Receiver

Enhance distribution protection by enabling relays to block reclosing for underground faults, by enabling fast bus tripping, or by coordinating high-density recloser trip blocking.

Applications	SEL-451	SEL-351	SEL-351A	SEL-351S	SEL-851	SEL-751	SEL-751A	SEL-501/501-2	SEL-551/551C
Distribution Feeder Protection	■	■	■	■	■	■	■	■	■
Breaker Failure (BF) Protection	■	■	*ƒ*	■	■	■	■	+	*ƒ*
Generator Intertie Protection	■	■	■	■		+	+		
Synchronism Check (25)	■	■	■	■		+	+		
Underfrequency Load Shedding	*ƒ*	■	■	■	+	■	■		
Undervoltage Load Shedding	*ƒ*	■	■	■	+	+	+		

Protection									
27/59 Under-/Overvoltage	■	■	■	+	+	+	+		
32 Directional Power Elements	■	+		+	+	+	+		
49 IEC Line/Cable Thermal Overload	■					■			
50 (P,N,G,Q) Overcurrent Element (Phase, Neutral, Ground, Negative Sequence)	■	■	■	■	■	■	■	■	■
51 (P,N,G,Q) Time Overcurrent Element (Phase, Neutral, Ground, Negative Sequence)	■	■	■	■	■	■	■	■	■
67 (P,N,Q) Directional Overcurrent (Phase, Neutral, Negative Sequence)	■	■	■	■		+			
78VS Vector Shift						+			
81 Over-/Underfrequency	■	■	■	■	+	■	+		
Separate Neutral Overcurrent	■	■	■	■	■	■	■		■
Load Encroachment Supervision	■	■	■	■		+			
Low-Energy Analog (LEA) Voltage Inputs	+					+			
Directional Sensitive Earth Fault Protection		+	+	+		+			
Pilot Protection Logic	■	■		■					
81R Rate-of-Change of Frequency (df/dt)	■	■	■	■		+	+		
81RF Fast Rate-of-Change of Frequency	*ƒ*					+	+		
Harmonic Blocking	■	■	+	■	■	■			
Arc Sense™ Technology (AST) High-Impedance Fault Detection	+					+			
Arc-Flash Detection					+	+	+		
Phantom Phase Voltage		■	■	■					
Current/Voltage Channels	6/6	4/4	4/4	4/4	4/0 4/3+	4/3 4/5+	4/0 4/5+	6/0	4/0
Complete Two-Breaker Control	■							■	

Instrumentation and Control	SEL-451	SEL-351	SEL-351A	SEL-351S	SEL-851	SEL-751	SEL-751A	SEL-501/501-2	SEL-551/551C
79 Automatic Reclosing	■	■	■	■	■	+	+		■
Fault Locating	■	■	■	■		+			
SELogic® Control Equations With Remote Control Switches	■	■	■	■	■	■	■		■
SELogic Counters	■				■	■	■		
Voltage Check on Closing	■	■	■	■		+	+		
SELogic Nonvolatile Latch	■	■	■	■	■	■	■		+
Nonvolatile Local Control Switches	■	■	+	■	■	■	■		■
Substation Battery Monitor	■	■	■	■		+	+		
Breaker/Recloser Wear Monitor	■	■	■	■		■	■		
Trip Coil Monitor	*ƒ*	*ƒ*	*ƒ*	*ƒ*		*ƒ*	*ƒ*		*ƒ*
Voltage Sag, Swell, and Interruption (VSSI)	■	+		+					
Load/Signal Profile Recorder	■	+		+	■	■	■		
Sequential Events Recorder	■	■	■	■	■	■	■		■
Software-Invertible Polarities	■				■				
IEC 60255-Compliant Thermal Model	■								
DNP3 Level 2 Outstation	■	■	■	■	+	+	+		
Parallel Redundancy Protocol (PRP)	+	■	■	■		+			
IEEE 1588 Precision Time Protocol Version 2 (PTPv2)	+					+			
Time-Domain Link (TiDL®) Technology	+								
IEEE C37.118 Synchrophasors	■	■	■	■		■	■		
Bay Control	■					+			
Ethernet	+	■	■	■	■	+	+		
EtherNet/IP						+			
Built-In Web Server	■				■	■			
IEC 61850	+	+	+	+	+	+	+		
IEC 61850 Edition 2	+				+	+			
IEC 61850-9-2 Sampled Values Technology	+								
Firmware Option With Mirrored Bits® Communications Available	■	■		■	■	■	■		
Simple Network Time Protocol (SNTP)	■	■	■	■	■	+	+		
Harmonic Metering		■	■	■	■				
RMS Metering	■	■	■	■	■	■	■		

■ Standard feature + Model option *ƒ* May be created using settings

SEL-651R Advanced Recloser Control

The SEL-651R provides Automatic Network Reconfiguration and three- and single-phase tripping. It can be used at distributed energy resource (DER) interconnections, for detecting down conductors, and in other distribution automation applications. It is compatible with popular reclosers.

SEL-651RA Recloser Control

The SEL-651RA is a powerful, cost-effective, and flexible recloser control for 14-pin reclosers used in three-phase tripping applications. It can be used at DER interconnections, for detecting down conductors, and in other distribution automation applications. It is compatible with popular reclosers.

SEL-351RS Kestrel® Single-Phase Recloser Control

The SEL-351RS provides integrated logic and communications and comprehensive protection for single-phase applications.

SEL-734B Advanced Monitoring and Control System

The SEL-734B includes low-energy analog inputs and provides advanced monitoring and control capabilities for applications such as capacitor bank control and feeder monitoring.

SEL-734W and LINAM® WCS Capacitor Bank Control and Wireless Current Sensor

This solution is a quick and simple way to provide accurate current-based control for capacitor bank installations and improve power quality.

SEL-2431 Voltage Regulator Control

The SEL-2431 optimizes system voltages and facilitates DER integration by using directional voltage profiles and detailed tap change event reports.

Applications	SEL-351RS Kestrel®	SEL-651R	SEL-651RA
Distribution Feeder Protection	■	■	■
Breaker Failure Protection	*ƒ*	*ƒ*	*ƒ*
Generator Intertie Protection		■	■
Recloser Control	■	■	■
Synchronism Check		■	+
Underfrequency Load Shedding	■	■	■
Undervoltage Load Shedding	■	■	■

Protection			
25 (G,T) Generator/Intertie Synchronism Check		■	■
27/59 Under-/Overvoltage	■	■	■
32 Directional Power Elements	■	■	+
50 (P,N,G,Q) Overcurrent Element (Phase, Neutral, Ground, Negative Sequence)	■	■	■
51 (P,N,G,Q) Time Overcurrent Element (Phase, Neutral, Ground, Negative Sequence)	■	■	■
67 (P,N,Q) Directional Overcurrent (Phase, Neutral, Negative Sequence)		■	■
78VS Vector Shift		■	■
81 Over-/Underfrequency	■	■	■
81R Rate-of-Change of Frequency (df/dt)	■	■	■
81RF Fast Rate-of-Change of Frequency (ROCOF)		■	■
Separate Neutral Overcurrent		■	■
Load-Encroachment Supervision		■	■
Low-Energy Analog (LEA) Voltage Inputs		+	+
Directional Sensitive Earth Fault Protection		■	■
Pilot Protection Logic		*ƒ*	*ƒ*
Harmonic Blocking	■	■	■
Fast Islanding Detection		■	■
Arc Sense Technology (AST) High-Impedance Fault Detection		+	+
Phantom Phase Voltage	■	■	■
Current/Voltage Channels	1/1	4/6	4/1 4/6[+]

Instrumentation and Control	SEL-351RS Kestrel®	SEL-651R	SEL-651RA
79 Automatic Reclosing	■	■	■
Fault Locating	■	■	+
SELOGIC Control Equations With Remote Control Switches	■	■	■
SELOGIC Counters	■	■	■
Voltage Check on Closing	■	■	■
SELOGIC Nonvolatile Latch	■	■	■
Nonvolatile Local Control Switches	■	■	■
Display Points	■	■	■
Breaker/Recloser Wear Monitor	■	■	■
Trip Coil Monitor	*ƒ*	*ƒ*	*ƒ*
Voltage Sag, Swell, and Interruption (VSSI)	■	■	■
Load/Signal Profile Recorder	■	■	■
Sequential Events Recorder	■	■	■
DNP3 Level 2 Outstation	■	■	■
IEEE C37.118 Synchrophasors	■	■	■
IEEE 1547-2018		■	■
Ethernet	■	■	■
IEC 61850	+	+	+
Simple Time Network Protocol (SNTP)	■	■	■
Harmonic Metering	■	■	■
RMS Metering	■	■	■

■ Standard feature + Model option *ƒ* May be created using settings

Fault Indicators, Sensors, and CTs

selinc.com/products/distribution/fault-indicators | selinc.com/products/FIS/accessories

SEL fault indicators and sensors improve reliability by indicating the fault path to speed up the fault location time and reduce outage duration. Suitable for overhead and underground installations, SEL fault indicators and sensors work in a wide range of applications—from overcurrent fault detection to enhancing system protection.

Applications

- Unfused taps
- Long feeders with midline reclosers or sectionalizers
- Overhead-to-underground transitions
- Feeders that experience recurring faults
- Subsurface or pad-mounted transformers
- Switchgear
- Sectionalizing cabinets
- Junction boxes
- Splices

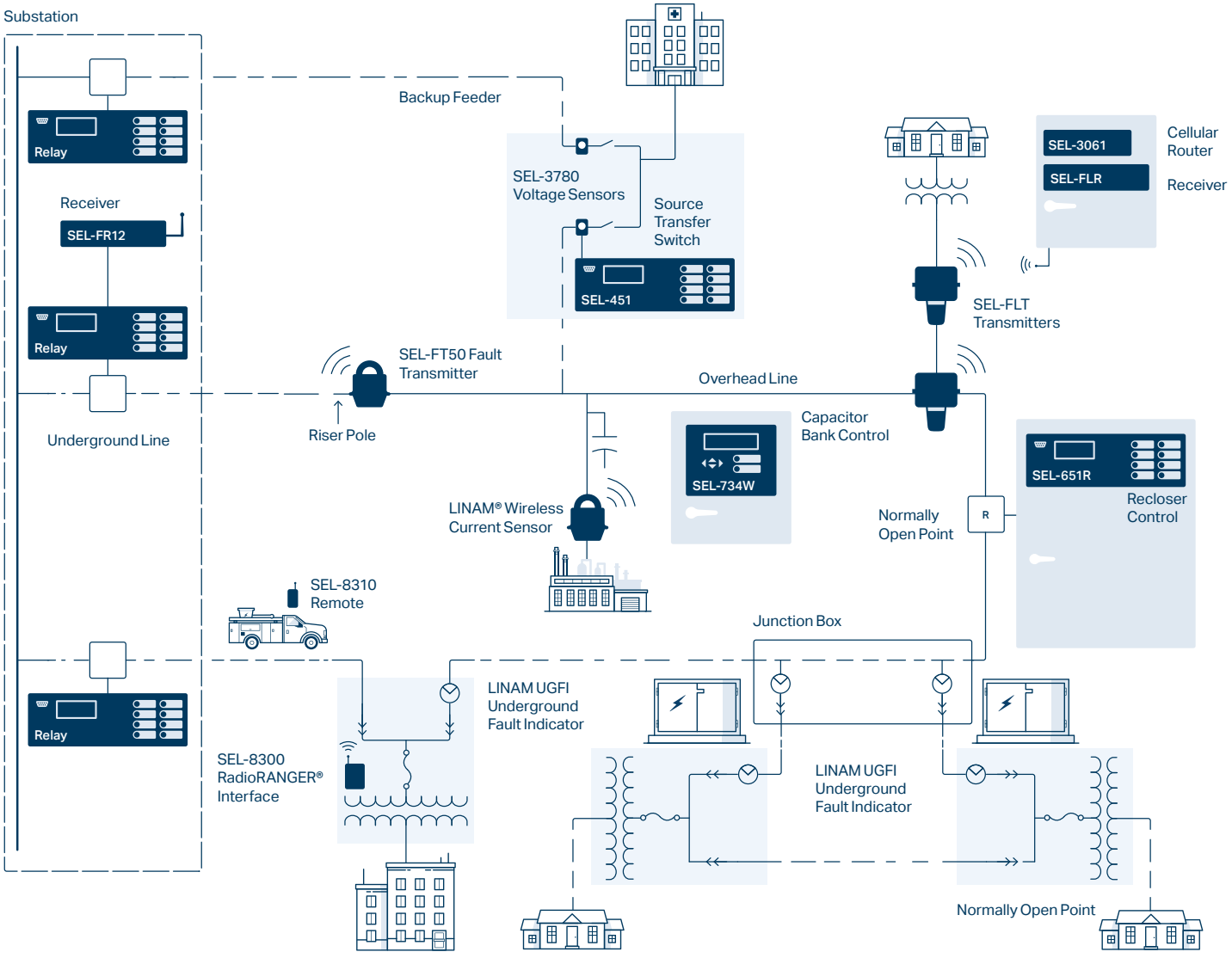
Video

How to Install the AR360 AutoRANGER® Fault Indicator

video.selinc.com/detail/videos/fault-indicators/video/2925549374001

Example System Diagram

Combine SEL fault indicators and sensors with SEL protective relays to enhance protection solutions.



Webinars

A Better Test Point Voltage Sensor for Switchgear

selinc.com/events/on-demand-webinar/135858

Enhance Distribution Protection With the SEL Wireless Protection System

selinc.com/events/webinar/133828

Technical Papers

Emerging Communications and Sensor Technologies That Advance Distribution Automation

selinc.com/api/download/124511

Fast Wind Farm Restoration Using Wireless Fault Sensors to Identify Faulted Segments

selinc.com/api/download/130379

White Papers

Wireless Current Sensing for Improved Distribution Capacitor Bank Control

selinc.com/api/download/130665

Fire Mitigation for Distribution

selinc.com/api/download/126445

SEL-FLT and SEL-FLR Fault and Load Transmitter and Receiver System

Improve overall distribution system reliability with the SEL-FLT and SEL-FLR system, which accurately indicates faults and monitors load. Speed up deployment in pole-mount applications with the system's enclosure.

SEL-AR360 and SEL-AR Overhead AutoRANGER Fault Indicators

Locate momentary and permanent faults in overhead applications. The SEL-AR360 and SEL-AR automatically adjust their trip thresholds to coordinate with the load current in distribution systems.

SEL-ER Overhead Electrostatic Reset Fault Indicator

Provide maintenance-free fault indication with a battery-free design and automatic voltage reset.

SEL Wireless Protection System

Enhance distribution protection by enabling relays to block reclosing for underground faults, by enabling fast bus tripping, or by coordinating high-density recloser trip blocking.

SEL-734W and LINAM® WCS Capacitor Bank Control and Wireless Current Sensor

This solution is a quick and simple way to provide accurate current-based control for capacitor bank installations and improve power quality.

LINAM UGFI Underground Fault Indicator NEW

Reduce outage durations and improve reliability with the LINAM UGFI, featuring line-powered functionality, adjacent phase immunity, and performance that exceeds IEEE 495 standards.

RadioRANGER® Underground Wireless Fault Indication System

Reduce the need to access vaults or open pad-mounted enclosures to retrieve the fault indicator status. Decrease fault-locating time and improve safety.

SEL-TPR Underground Test Point Reset Fault Indicator

Easily install the SEL-TPR on most brands of 200 A or 600 A elbows with capacitive test points. It is ideal for pad-mounted transformer and switchgear applications.

SEL-3780 Test Point Voltage Sensor

Detect system voltage loss on distribution elbows with capacitive test points. The SEL-3780 is part of an economical solution for source transfer schemes.

SEL-PILC Underground Paper-Insulated Lead-Covered Cable Fault Indicator

Apply the SEL-PILC on paper-insulated lead-covered cables. It features a rugged design and can be submerged in up to 15 feet of water.

SEL-MR Manual Reset Fault Indicator

Troubleshoot overhead and underground applications up to 38 kV with this portable, fault-powered manual reset fault indicator.

SEL-VIN Voltage Indicator

Apply the line-powered SEL-VIN to indicate the presence of voltage at or above 2 kV (phase to ground) using a flashing neon lamp. Easily install SEL-VINs on the test point of a 200 A elbow, 600 A T-body, or 600 A basic insulating plug.

SEL-CT Split-Core Current Transformers

Economically add SEL CTs to existing wiring and electrical equipment without interrupting service.

SEL-SCT Submersible Separable-Core Current Transformer

Easily add the SEL-SCT in subsurface vaults where flooding can occur. The separable-core design allows the SEL-SCT to be opened and installed without interrupting the connection.

Metering and Power Monitoring

selinc.com/solutions/metering-solutions | selinc.com/engineering-services/energy-metering

SEL metering products help operators identify power quality issues and improve energy usage in generation, interchange, transmission, distribution, industrial, and commercial applications.

Applications

- Power quality monitoring and troubleshooting
- Usage reporting and billing management system integration
- Load profiling and monitoring

White Paper

Achieve Accurate Metering in Modern Nonsinusoidal Power System Conditions

selinc.com/api/download/123140

Webinars

Advance Power System Awareness With Continuous Waveform Streaming

selinc.com/events/on-demand-webinar/139186

Never Miss an Event: Introducing the SEL-T35 Time-Domain Power Monitor

selinc.com/events/on-demand-webinar/139220

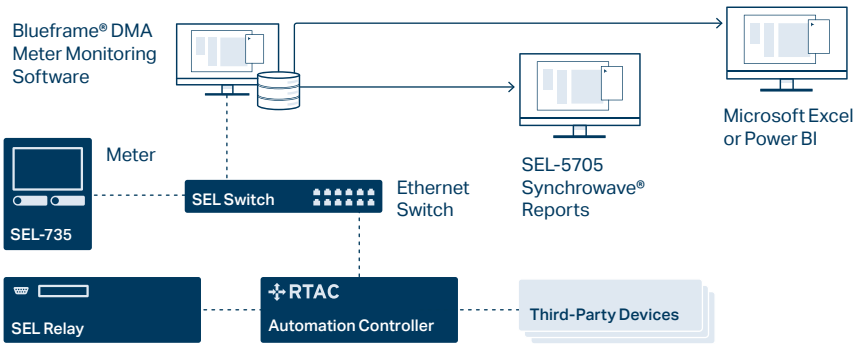
Solutions for Optimizing Energy Metering and Demand Management

selinc.com/events/on-demand-webinar/134511

Customer Story

SEL Meter Helps Data Center Supply High-Quality, Uninterrupted Power

selinc.com/solutions/success-stories/Vantage-Data



Example System Diagram
Combine the SEL-735 with other SEL devices and software for a comprehensive metering data management solution.

SEL-735 Power Quality and Revenue Meter

SEL meters offer bidirectional, full four-quadrant, and high-accuracy energy metering as well as precise and reliable power quality measurements. Multiple mounting and enclosure options and accessories are available; visit selinc.com/products/735.

SEL-5705 Synchrowave® Reports Software

The SEL-735 metering data collected and stored by ACSELERATOR TEAM® SEL-5045 Software allows you to quickly analyze data, identify usage trends, and diagnose system problems.

SEL Data Management and Automation (DMA)—Meter Monitoring

Streamline voltage sag, swell, and interruption (VSSI) and load data profile (LDP) data collection and centralize data storage with the DMA Meter Monitoring application. NEW

SEL-735 Power Quality Options

General	Basic	Intermediate	Advanced
Display	Customizable three-line or single-line display	Customizable three-line or single-line display	One and three-line monochromatic display, or optional customizable 5-inch color touchscreen display
Front Port	ANSI Type II optical port or EIA-232 port	ANSI Type II optical port or EIA-232 port	ANSI Type II optical port or EIA-232 port; Type-C USB*
Memory	128 MB	256 MB	1 GB
Maximum Harmonic Order	15th	63rd	63rd
Interharmonic Quantities	No	No	Yes
Harmonic Angles	No	No	Yes
Power Harmonics	No	No	Yes
Waveform Capture Event Reports			
Samples Per Cycle	16	16, 128	16, 128, 512
Duration (Cycles)	15	15–600	15–600
Number of Events	256	33–6,200	101–10,000
COMTRADE Reports	Yes	Yes	Yes
Wave View Oscillography	No	No	Yes
Load Profile Recorder			
Recorders × Channels	1 × 16	12 × 16	32 × 16
Acquisition Rates	1–120 min	3–59 s, 1–120 min	3–59 s, 1–120 min
Storage Duration for 10-Minute Interval Data			
16 Channels	10 years	20 years	20 years
192 Channels	N/A	1.5 years	9.5 years
512 Channels	N/A	N/A	3.5 years
Voltage Sag, Swell, and Interruption (VSSI) Recorder			
Typical Number of Summary Events	260	260	600
Number of Detailed Rows	60,000	60,000	130,000
Minimum Disturbance Duration	1/4 cycle	1/4 cycle	1/4 cycle
Sampling Rate	4 samples/cycle–1 sample/day, adaptive	4 samples/cycle–1 sample/day, adaptive	4 samples/cycle–1 sample/day, adaptive
Sequential Events Recorder (SER)			
Number of Events	>80,000	>80,000	>80,000
Number of Channels Monitored	≤72	≤72	≤72
IEC 61000-4-30 Power Quality Compliance			
150/180-Cycle, 10-Minute, 2-Hour Aggregation	N/A	Class A	Class A
Flicker	N/A	Class A (10 min, 2 hr updates)	Class A (1 min, 10 min, 2 hr updates)
Voltage Harmonics	Class A	Class A	Class A
Harmonic Currents	Class A	Class A	Class A

*Optional feature

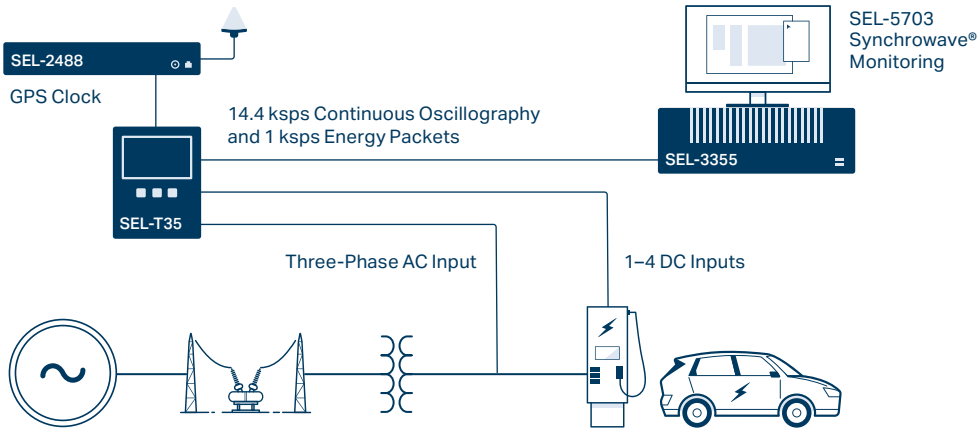
Power Monitoring

SEL power monitoring products allow operators to observe their systems in real time to detect system events and expedite root-cause analysis. They sample voltage and current and send data to SEL Synchrowave software for visualization. The SEL-735 samples at 3 ksps, and the SEL-T35 samples at 14.4 ksps.

Related Material

Capture every disturbance with continuous waveform recording.

selinc.com/api/download/138703



Build a comprehensive power data monitoring solution by combining the SEL-T35 with other SEL devices and software.

SEL-T35 Time-Domain Power Monitor NEW

Stream high-precision ac and dc voltage and current measurements to Synchrowave software for wide-area, real-time data analysis. This data stream also includes energy packets calculated every millisecond, providing energy measurements independent of frequency and phase angles.

Stream voltage and current data at 14.4 kilosamples per second (ksps) and energy calculations at 1 ksps. An integrated ride-through pack ensures that you never miss a disturbance during short-duration outages.

SEL-5703 Synchrowave Monitoring

Calculate and monitor power quality values in real-time using high-rate point-on-wave streaming data. Using the SEL-T35, provides harmonics up to the 63rd, voltage and current rms values, and power calculations, as well as a custom calculation engine and monitoring for Sub-Synchronous Oscillation (SSO) and voltage and current thresholds. Harmonic values calculated by SEL-5703 can be used in IEEE 519 compliance reports.

Automation

selinc.com/products/automation/operations | selinc.com/engineering-services/automation

Increase system reliability and operation efficiency using SEL automation and computing platforms, which offer scalable and modular solutions for data concentration, protocol conversion, and more. SEL automation solutions allow you to implement a broad set of functionalities or choose a subset and add more capabilities over time.

Applications

- Remote terminal unit replacement
- Automated data collection
- Digital fault recording systems
- Network device auditing
- Power management and control systems (POWERMAX®)
- Distributed energy resource integration
- Automatic fault location, isolation, and service restoration
- Bay control
- Phasor measurement unit
- Continuous waveform recording and streaming

Customer Stories

System-Wide Automation Solution Prolongs Life of Existing Relays

selinc.com/solutions/success-stories/system-wide-automation

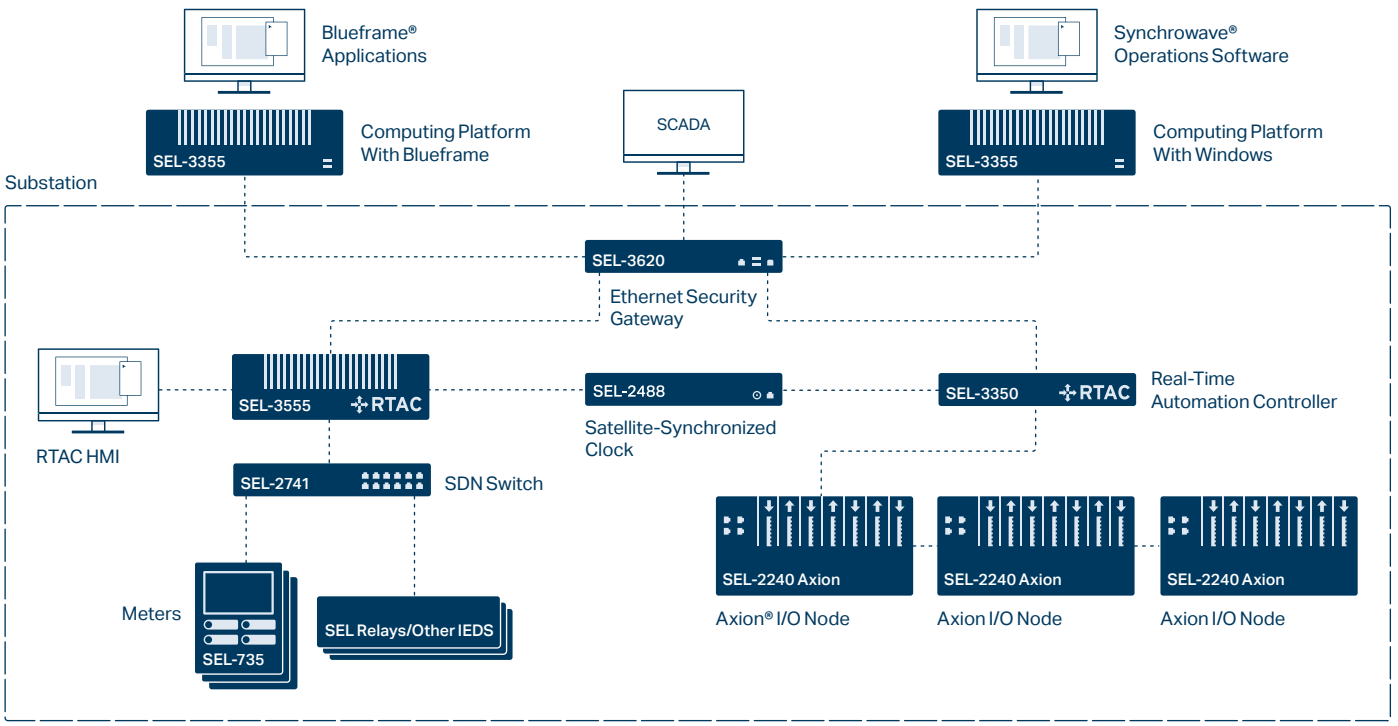
A System of Robust Reliability for the Water and Wastewater Industry

selinc.com/solutions/success-stories/brunswick

Automation News

selinc.com/products/automation/news

Example System Diagram
Combine SEL automation and computing platforms with SEL protective relays and software for a comprehensive solution.



Webinars

Innovating DFR Solutions—Continuous Oscillography, Asset Monitoring, and More
selinc.com/events/webinar/138498

RTAC and Axion® Advancements for RTU and Substation Gateway Applications
selinc.com/events/on-demand-webinar/137925

Managing DERs With RTAC Grid Connect
selinc.com/events/on-demand-webinar/138107

Software-Based Password Rotation With DMA Credential Management
selinc.com/events/on-demand-webinar/137643

Technical Papers

Simplifying Compliance: An Integrated Approach to Meeting NERC PRC-002 and PRC-005 Requirements
selinc.com/api/download/130034

New Advancements in Solar Grid Controllers
selinc.com/api/download/130047

Wind Farm Volt/VAR Control Using a Real-Time Automation Controller
selinc.com/api/download/99167

White Paper

Using Defense in Depth to Safely Present SCADA Data for Read-Only and Corporate Reporting
selinc.com/api/download/120437

Related Materials

SEL Advanced Digital Fault Recorder (DFR) Solutions
selinc.com/api/download/122510

POWERMAX Solutions
selinc.com/api/download/106293

Capture Every Disturbance With Continuous Waveform Recording
selinc.com/api/download/138703

SEL-3350 Computing Platform

The SEL-3350 is a cost-effective model ideal for applications that require midlevel I/O and computation. It can be deployed as an RTAC, an industrial computer running a Microsoft Windows or Linux OS, or a Blueframe application platform.

SEL-3355 Computing Platform

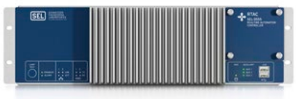
The SEL-3355 is a server-class computing platform built to withstand harsh environments in utility substations and industrial control and automation systems. It can be deployed as an industrial computer running a Microsoft Windows or Linux OS or as a Blueframe application platform.

SEL-3360S/3360E Compact Computing Platform

These models match the performance, ruggedness, and configuration flexibility of the SEL-3355 and are ideal for surface- or panel-mount applications. They can be deployed as industrial computers running a Microsoft Windows or Linux OS or as Blueframe application platforms.

3530-4 Real-Time Automation Controller

The SEL-3530-4 is ideal for concentrating information from relays in one central location and converting between protocols to send information to and from SCADA systems.



SEL-3555 Real-Time Automation Controller

The SEL-3555 provides powerful processing for large-scale automation projects.

SEL-3560E/3560S Real-Time Automation Controller

These RTACs offer powerful processing for large-scale automation projects in a compact form factor.

SEL-2240 Axion®

The Axion is a fully integrated, modular I/O and control solution for utility and industrial applications. With its new 7-inch color touchscreen display option, the Axion can be applied as a bay controller, providing comprehensive monitoring and reliable control of substation bays.

SEL-3505/3505-3 Real-Time Automation Controller

These RTACs offer powerful automation, reporting, and control for low-voltage, limited-space applications.

SEL-3390 PCIe Adapter Cards

SEL-3390E4 Network Adapter Card
SEL-3390S8 Serial Adapter Card
SEL-3390T Time and Ethernet Adapter Card

These expansion cards let you add ports and connectivity to SEL and other industrial automation and computing platforms and may also be used in non-SEL computers.

SEL-2411 Programmable Automation Controller

The SEL-2411 provides flexible I/O for automatic control, SCADA, station integration, remote monitoring, and plant control systems.

SEL-2411P Pump Automation Controller

The SEL-2411P is a standalone, preconfigured, SCADA-ready system for control and monitoring of water and wastewater pump applications.

SEL-2414 Transformer Monitor

The SEL-2414 provides standalone or distributed monitoring and control for new and existing transformers using the optional color touchscreen display.

SEL-2440 DPAC Discrete Programmable Automation Controller

The SEL-2440 offers utility-grade I/O, powerful processing, flexible communications, and microsecond timing.

SEL RTAC HMI

The SEL RTAC HMI offers an easy way to visualize data to monitor and control your system.

SEL Blueframe

SEL Blueframe Application Platform

Scalable and flexible, SEL Blueframe provides a secure operational technology (OT) platform for installing applications and for managing and exchanging data between supported applications.

Distribution Management System (DMS) Application Suite

The DMS suite includes a FLISR (fault location, isolation, and service restoration) application package, which reduces customer outages, improves reliability metrics, and provides rapid fault detection and system restoration.

Data Management and Automation (DMA) Application Suite

DMA applications automatically collect, store, and manage device-specific information to simplify day-to-day management of a system of devices and to support compliance. Applications include:

- Disturbance Monitoring—Collect oscillography and Sequence of Events data.
- Configuration Monitoring—Collect configuration and property data.
- Credential Management—Initiate device credential rotation and central storage.
- Custom Monitoring—Collect specific device files or command results.
- Meter Monitoring—Collect LDP and VSSI reports from SEL devices. NEW

Applications	SEL-3355	SEL-3360E	SEL-3360S	SEL-3350	SEL-3555	SEL-3560E	SEL-3560S	SEL-3530-4	SEL-2240	SEL-3505/3505-3	SEL-3533	SEL-2411	SEL-2411P	SEL-2414	SEL-2440
Collect, Scale Meter Data	+/#	+/#	+/#	+/#	■	■	■	■	■	■	■	■	■	■	
Condition Monitoring				■	■	■	■	■	■	■	■				
IED Report/Event Collection	+	+	+	■	■	■	■	■	■	■	■				
Distributed Fault Recording				+	■	■	■		■						
Collect Targets, Contact Input Status, Fault Location	#	#	#	+	■	■	■	■	■	■	■				
Enable Fiber-Optic Links	+	+		+	+	+		■	■	■	■	■	■	■	■
Control Through IED Outputs				■	■	■	■	■	■	■	■	■	■	■	■
IRIG-B Client Time Synchronization	■	■	■	■	■	■	■	■	■	■	+	■	■	■	■
IRIG-B Server Time Distribution	+	+		■	■	■	■	■	■	■	+				
Transparent "Port Switch"	#	#	#	+	■	■	■	■	■	■	■	■	■	■	■
Windows/Linux Applications in Harsh Environments	+/#	+/#	+/#	+/#											
Running Multiple Applications Simultaneously	■	■	■	■											
Installing Third-Party Software	+	+	+	+											
Security Appliance to Help Satisfy NERC CIP Requirements	#	#	#	+/#	■	■	■	■	■	■	■				
Network Monitoring and Intrusion Detection	#	#	#	#	+										
Virtualization Server	+/#	+/#	+/#												
Engineering Access Point	+/#	+/#	+/#	+/#	■	■	■	■	■	■	■				
IRIG-B Time Distribution and Network Time Protocol (NTP) Conversion	+	+		■	■	■	■	■	■	■	+				
Video Surveillance Control and Archiving/Physical Security Monitoring and Notification	#	#	#	#											
HMI															
Web-Based HMI	#	#	#	+	+	+	+	+	+		+				
Touchscreen Display	+/#	+/#	+/#	+/#					+			+		+	
LCD Display												■	■	■	
Concentrate IED Data For:															
Distributed Control System (DCS)				+	■	■	■	■	■	■	■				
SCADA Master or Remote Terminal Unit (RTU)				+	■	■	■	■	■	■	■				
Remote Third-Party HMI				+	■	■	■	■	■	■	■				
Features															
Protocol Redundancy (DNP3 and IEC 60870-5-101/104 Server)				+	■	■	■	■	■	■	■				
Primary and Standby LAN Support				+	■	■	■	■	■	■	■	■	■	■	■
Optoisolated Inputs/Programmable Outputs				+	■[1]	■[1]	■[1]	■	+	+	■[1]	+	+	+	+
IEC 61131 Logic Engine				+	■	■	■	■	■	■	■				
Cybersecurity Management				+	■	■	■	■	■	■	■				
Real-Time Operating System				+	■	■	■	■	■	■	■	■	■	■	■

■ Standard feature + Model option #Third-party software required [1]Alarm contact only

Hardware	SEL-3355	SEL-3360E	SEL-3360S	SEL-3350	SEL-3555	SEL-3560E	SEL-3560S	SEL-3530-4	SEL-2240	SEL-3505/3505-3	SEL-3533	SEL-2411	SEL-2411P	SEL-2414	SEL-2440
Intel Xeon Quad-Core 64-Bit CPU	■	■	■		■	■	■								
Intel Atom Quad-Core 64-Bit CPU				■											
Power PC Single-Core CPU								■	■	■					
Maximum Error-Correcting Code (ECC) RAM (GB)	64	64	64	8	64	64	64	1	1	0.5					
Supports 3 Independent Displays With Digital Audio	■	■	■	■	■	■	■								
Analog Audio Ports: Line In, Line Out, Microphone	■	■	■												
4 Rear and 2 Front USB 3.1 Ports	■	■	■		■	■	■								
4 Rear USB 2.0 Ports and 2 Front USB 3.1 Ports				■											
Front RJ45 Ethernet Ports				1											
Rear Ethernet Ports	2	2	2	4	2	2	2	2	2	2					
Fiber-Optic Rear Ethernet Ports				+				+	+	+					
Additional Ethernet Ports, Copper RJ45, or Fiber-Optic SFP	8	4			8	4									
EIA-232 Serial Ports	2	2	2		2	2	2								
EIA-232/422/485 Serial Ports				16	6	6		4	4	4/3					
Additional EIA-232/422/485 Serial Ports	24	12		32	18	6									
IRIG-B Input (on COM1)	■	■	■		■	■	■								
IRIG-B Input and Output (BNC and Serial)	+	+		■	+	+		■	■	■					
19" Rack Mount	■			■	■			■	■			+	+	+	+
Panel Mount	+			+	+			+	+			+	+	+	+
Wall Mount		■	■			■	■								
Conduction Cooled Wall Mount		+	+			+	+								
PCI/PCIe Expansion Slots	5	2			3	1									
Solid-State Drives (2.5" SATA, 32 GB–2 TB Drive Options)	4	2	2	2	4	2	2								
High-Voltage 125–250 Vdc, 120–240 Vac Power Supply	■	■	+	■	■	■	+	■	■			■	■	■	■
Medium-Voltage 48–125 Vdc, 120 Vac Power Supply				■				■				■	■	■	■
Low-Voltage 48 Vdc Power Supply	■	■	+		■	■	+								
Low-Voltage 24–48 Vdc Power Supply				■						+					
12–24 Vdc Power Supply										■					
12 Vdc Power Supply			■				■								
External Power Supply			+				+								
Secondary Power Supply	+		+		+		+								
Hot-Swappable Power Supplies	■		■	+	■		■								
Alarm Contact, Alarm LED, Watchdog	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Configurable Universal Control Input				■											
Programmable Auxiliary Bicolor LEDs	3	3	3	4	3	3	3								
Intel Active Management Technology (AMT) v11.8	■	■	■												
Infineon Trusted Platform Module (TPM) v2.0 (Hardware)	■	■	■	■	■	■	■								

■ Standard feature + Model option

Supported Operating Systems and Software	SEL-3355	SEL-3360E	SEL-3360S	SEL-3350	SEL-3555	SEL-3560E	SEL-3560S	SEL-3530-4	SEL-2240	SEL-3505/3505-3	SEL-3533	SEL-2411	SEL-2411P	SEL-2414	SEL-2440
SEL Real-Time Automation Controller (RTAC)				+	■	■	■	■	+	■	■				
SEL Blueframe Operating System	+	+	+	+											
SEL Software	+	+	+	+											
Microsoft Windows IoT Enterprise LTSC	+	+	+	+											
Microsoft Windows Server Standard	+	+	+	+											
Linux (SUSE, Red Hat Enterprise, Ubuntu, etc.) or VMware ESXi	‡	‡	‡	‡											
McAfee Whitelist Antivirus	+	+	+	+											
SEL-5815 PRP Driver for Windows	+	+	+	+											
Network															
Telnet				+	■	■	■	■	■	■	■	■	■	■	■
Secure Shell (SSH)				+	■	■	■	■	■	■	■				
SMTP/Email Notification				+	■	■	■	■	■	■	■				
FTP Server												■	■	■	■
DNP3 LAN/WAN Client/Server				+	■	■	■	■	■	■	■	+	■	+	+
Modbus TCP				+	■	■	■	■	■	■	■	■	■	■	■
IEC 61850 MMS Client/Server				+	+	+	+	+	+	+	+	+		+	+
IEC 61850 GOOSE				+	+	+	+	+	+	+	+	+		+	+
IEC 60870-5-104 Client/Server				+	■	■	■	■	■	■	■				
IEEE C37.118 Client/Server				+	■	■	■	■	■	■	■				
Flex Parse				+	■	■	■	■	■	■	■				
FTP/SFTP Client/Server				+	■	■	■	■	■	■	■				
SNMP Client/Server				+	■	■	■	■	■	■	■				
Lightweight Directory Access Protocol (LDAP)				+	■	■	■	■	■	■	■				
EtherCAT®				+	■	■	■	■	■		■				
EtherNet/IP				+	■	■	■	■	■	■	■				
Precision Time Protocol (PTP)				+	■	■	■	■	■	■	■	■		■	■
Network Time Protocol (NTP)				+	■	■	■	■	■	■	■				
Simple Network Time Protocol (SNTP)				+	■	■	■	■	■	■	■	■	■	■	■
Parallel Redundancy Protocol (PRP)				+	■	■	■	■	■	■	■	■	■	■	■
OPC UA Client/Server				+	+	+	+								
MQTT Client				+	■	■	■	■	■	■	■				
Serial Port Protocols															
SEL Mirrored Bits® Communications				■	■	■	■	■	■	■	■	■	■	■	■
DNP3 Server				+	■	■	■	■	■	■	■	+	■	+	+
Modbus RTU Binary Client/Server				+	■	■	■	■	■	■	■	■	■	■	■
IEC 60870-5-101 Client/Server				+	■	■	■	■	■	■	■				
LG 8979 Client/Server				+	■	■	■	■	■	■	■				
SES-92 Server				+	■	■	■	■	■	■	■				
DNP3 Client/Server				+	■	■	■	■	■	■	■				
CP 2179 Client				+	■	■	■	■	■	■	■				
SEL Fast Messages, Interleaved With ASCII Client/Server				+	■	■	■	■	■	■	■				
SEL Synchrophasors Client				*ƒ*	*ƒ*	*ƒ*	*ƒ*	*ƒ*	*ƒ*	*ƒ*	*ƒ*				
IEC 60870-5 101 Client/Server				+	■	■	■	■	■	■	■				
CDC Type 2 Client/ Server				+	■	■	■	■	■	■	■				
ASCII Flex Parse				+	■	■	■	■	■	■	■				

■ Standard feature + Model option ‡ Supported for customer installation *ƒ* May be created using settings

WAN and LAN Networks

selinc.com/products/communications/wide-area-network | selinc.com/products/communications/local-area-networks

SEL devices combine the connectivity, performance, cybersecurity, and ruggedness required for WAN and LAN applications.

Applications

- Teleprotection systems
- Operational technology (OT) networking
- OT software-defined networking (SDN)
- Analog leased-line service migration
- IT/OT convergence
- IEC 61850 digital secondary systems
- Special protection systems
- Microgrids
- Distributed renewables
- Remedial action schemes
- Facility-related control systems
- NERC CIP
- Land mobile radio (LMR) systems

Webinars

Best Practices for Successful IT/OT Network Convergence
selinc.com/events/webinar/128773

Redefining Ethernet Performance With Software-Defined Networking
selinc.com/events/webinar/130273

Stay TDM or Move to Packet? Do Both With the SEL ICON®
selinc.com/events/on-demand-webinar/138942

Automate SDN Configuration With RTAC and IEC 61850 Files
selinc.com/events/on-demand-webinar/137644

Technical Papers

Using Software-Defined Networking to Build Modern, Secure IEC 61850-Based Substation Automation Systems
selinc.com/api/download/130126

Deterministic Communications for Protection Applications Over Packet-Based Wide-Area Networks
selinc.com/api/download/121072

Taking Full Control of Your Process Bus LAN Using New Ethernet Packet Transport Technologies
selinc.com/api/download/119756

SDN News

selinc.com/products/sdn/news

ICON News

selinc.com/products/icon/news

Solutions Page

OT Software-Defined Networking
selinc.com/solutions/ot-sdn

Customer Stories

Belgium Integrates Offshore Wind Power Into European Grid
selinc.com/featured-stories/elia

A Modern WAN—Simple, Economical, Elegant
selinc.com/solutions/success-stories/a-modern-wan

Defending Critical Substation Communications in Slovenia
selinc.com/highlights/eles

Creating a Better Future: Innovative Substation Modernization in the Philippines
selinc.com/highlights/davao-light

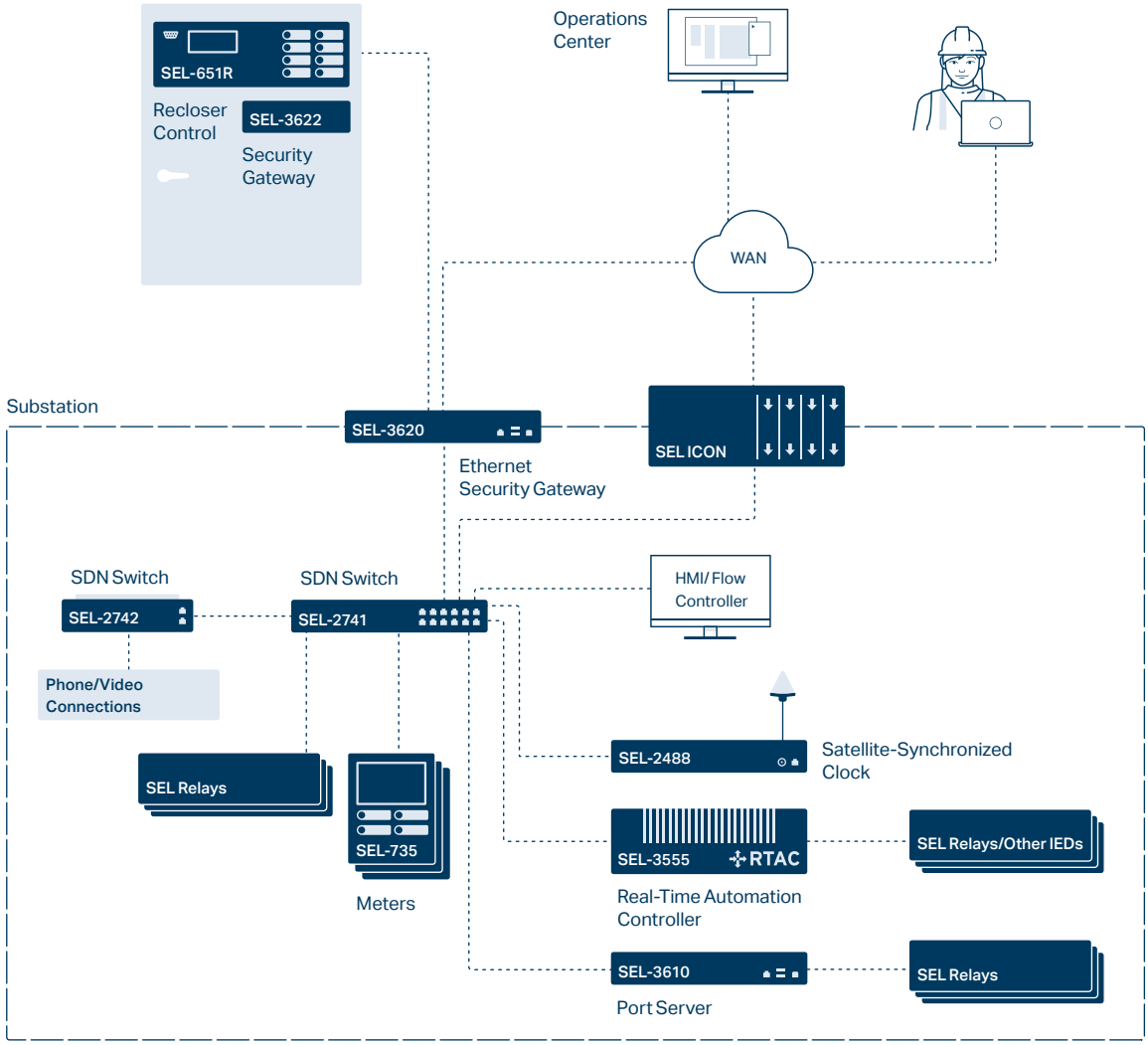
White Papers

Software-Defined Networking Changes the Paradigm for Mission-Critical Operational Technology Networks
selinc.com/api/download/118416

Simplifying NERC CIP Compliance With SEL SDN
selinc.com/api/download/130206

Video

OT Software-Defined Networking: Purpose Engineered for Critical Infrastructure
video.selinc.com/detail/video/1726869976932833649



Example System Diagram
Combine SEL LAN and WAN devices with other SEL protection, automation, and control products for a comprehensive solution.

SEL ICON® Integrated Communications Optical Network

The ICON is a WAN multiplexer optimized for industrial and utility applications. By combining time-division multiplexing (TDM) and Ethernet transport options with a comprehensive range of data interfaces, the ICON makes it easy to migrate legacy network technologies to a packet-based solution.

SEL-2731 Ethernet Switch NEW

The SEL-2731 is an OT SDN and Rapid Spanning Tree Protocol (RSTP) managed Ethernet switch that is optimized for OT environments, supporting critical infrastructure applications.

SEL-2741 Ethernet Switch

The SEL-2741 Ethernet Switch is a 24-port SDN deny-by-default, zero trust, multilayer local-area network Ethernet switch designed to perform reliably in the toughest environmental conditions commonly found in critical infrastructure.

SEL-2740S Software-Defined Network Switch

The SEL-2740S is the industry's first field-hardened SDN-enabled switch and improves cybersecurity and Ethernet performance in mission-critical applications.

SEL-2742 Ethernet Switch

The SEL-2742 is a 12-port, DIN-rail mount SDN switch for industrial environments. It combines with SEL-5056 Software-Defined Network Flow Controller software to simplify network engineering and improve LAN security.

SEL-3620 Ethernet Security Gateway or SEL-3622 Security Gateway

The gateways each function as a router, VPN endpoint, and firewall device. They can provide secure and proxy user access for serial- and Ethernet-based IEDs.

SEL-2730M Managed or SEL-2730U Unmanaged 24-Port Ethernet Switch

These switches let you build reliable, safe Ethernet networks in electrical substations, plants, and other mission-critical sites.

SEL-3610 Port Server

The SEL-3610 increases the number of serial ports available to communications processors and computers and allows serial products to communicate securely through Ethernet networks.

SEL-2725 Five-Port Ethernet Switch

The SEL-2725 allows you to easily connect devices to Ethernet networks.

Applications	SEL ICON	SEL-3620	SEL-3622	SEL-3610	SEL-2725	SEL-2730M	SEL-2731	SEL-2740S	SEL-2741	SEL-2742
SONET WAN	■									
Ethernet LAN	■	■	■	■	■	■	■	■	■	■
E1 and T1 Transport	■									
Precise Time Distribution	■	■	■	■			■	■	■	■
Engineering Access Control		■	■	■			■[1]	■[1]	■[1]	■[1]
Connect Multiple Wired-Ethernet Devices to Network	■				■	■	■	■	■	■
Convert Wired 10/100BASE-T Ethernet to Fiber-Optic 100BASE-FX Ethernet	■	■	■	■	■	■	■	■	■	■
Convert Serial Links to Ethernet Links		■	■	■						
Features										
Cryptography (Encryption and Authentication)		■	■	■						
User-Based Accounts	■	■	■	■		■	■[2]	■[2]	■[2]	■[2]
Centralized Authentication Via Lightweight Directory Access Protocol (LDAP)	■[3]	■	■	■		■	■[2]	■[2]	■[2]	■[2]
Centralized Authentication Via Remote Authentication Dial-In User Service (RADIUS)		■	■	■		■				
Deny-by-Default Firewall		■	■				■[4]	■[4]	■[4]	■[4]
Import/Export Configuration Files	■	■	■	■		■	■[2]	■[2]	■[2]	■[2]
VPN		■	■							
Syslog Logging	■	■	■	■		■	■	■	■	■
Network Management System (NMS) Software	■					■	■	■	■	■
GPS Receiver	■									
Real-Time Latency Monitor	■									
Spanning Tree Protocol (STP)	■	■	■	■		■	■			
Rapid Spanning Tree Protocol (RSTP)	■					■	■			
Multiple Spanning Tree Protocol (MSTP)	■									
VLANs	■	■	■	■		■	■	■	■	■
Ethernet Class of Service (CoS)	■					■	■	■	■	■
Ethernet Ports, Connector	**Quantities**									
Copper 10BASE, RJ45	0–8[5]	3	3	3	3 or 4	0–20		0–20		2–8
Copper 10/100BASE, RJ45	0–8[5]	3	3	3	3 or 4	0–20	0–24	0–20	0–24	2–8
Fiber-Optic 100BASE, LC	0–8[5]	2	2	2	1 or 2	0–16	0–24	0–20	0–24	0–6
Copper 1000BASE, LC	0–8[5]					4	0–8	0–4	0–24	0–4
Fiber-Optic 1000BASE, LC	4[6]/0–8[7]					0–4	0–8	0–4	0–24	0–4
Small Form-Factor Pluggable (SFP) Cages	4[6]/0–8[7,8]					4	0–24		0–24	

[1]Communication management for engineering access.

[2]SEL-5056 Software-Defined Network Flow Controller software provides centralized authentication, user-based accounts, and import/export configuration files.

[3]SEL-5052 Server Network Management System (NMS) Software provides LDAP centralized authentication for the ICON.

[4]Deny-by-default network access control.

[5]SEL ICON has the option to support up to 16 Ethernet Bridging Access Modules with 4 copper and 4 SFP ports.

[6]SEL-8022-01 Enhanced Protected Line Module supports 2 fiber-optic Gigabit interfaces.

[7]SEL-8036-01 Ethernet Bridging Access Module supports 4 fiber-optic 100BASE-FX/Gigabit interfaces.

[8]SEL ICON uses SFP cages for SONET and GigE fiber-optic interfaces.

Wireless Communications

selinc.com/products/communications/wireless-communications

Wireless communications extend networks in areas where wired communications networks are not available or are cost-prohibitive. SEL wireless devices use radio signals to communicate and send data over the air, eliminating the need for traditional cabling.

Applications

- Cellular router for remote connectivity
- Serial radio for protection schemes

Technical Paper

Expanding Protection and Control Communications Networks With Wireless Radio Links

selinc.com/api/download/121073

Video

Communication Made Easy Over Difficult Terrain

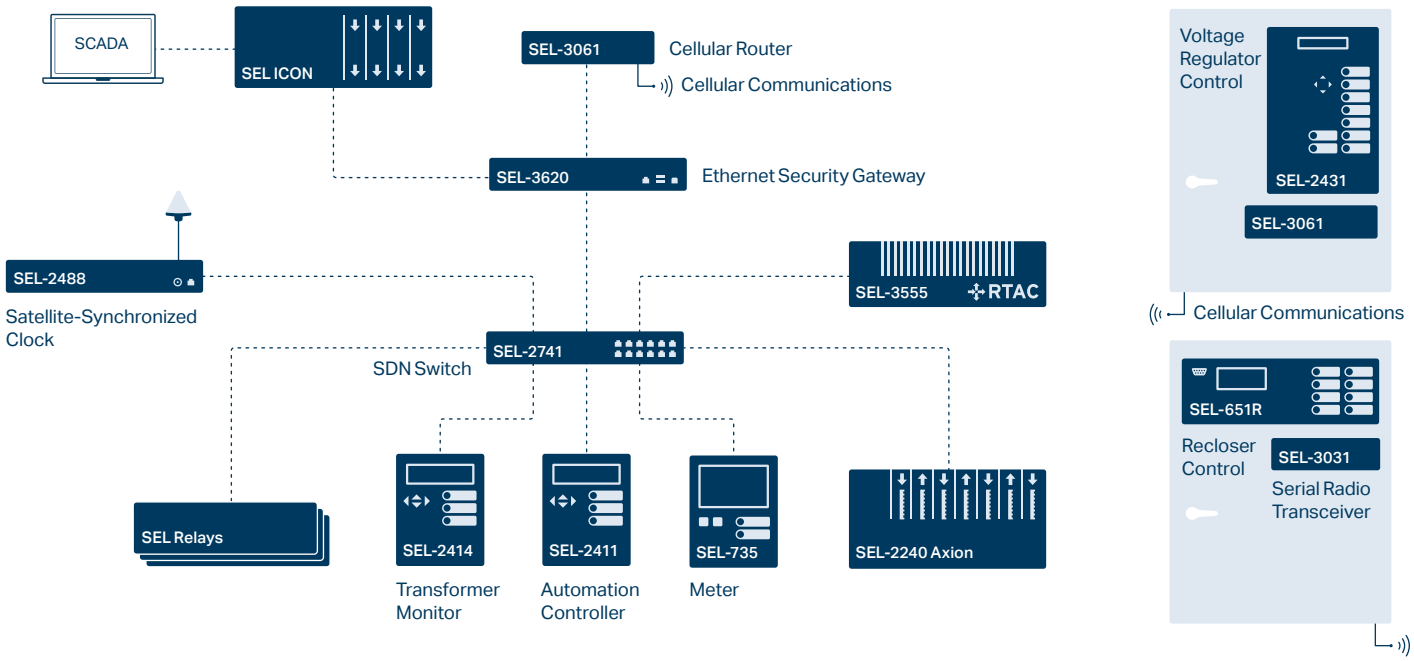
video.selinc.com/detail/video/767833630001

Customer Story

SCADA System Sheds Light on Texas Utility's Power System

selinc.com/solutions/success-stories/scada-in-texas

Example System Diagram
Combine SEL wireless communications devices with SEL protection, automation, and control products for a comprehensive solution.

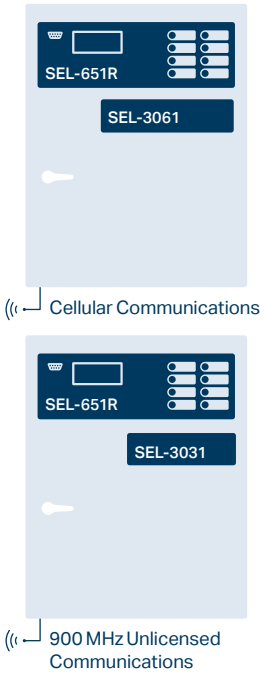


SEL-3031 Serial Radio Transceiver

The SEL-3031 is a 900 MHz ISM serial data radio that supports point-to-point (P2P) and point-to-multipoint (P2MP) operational modes. In P2P mode, the SEL-3031 supports three serial data ports in one radio channel.

SEL-3061 Cellular Router

The SEL-3061 provides secure, remote access for devices using public cellular radio networks. It supports 4G LTE and 3G cellular technologies.



Applications	SEL-3031	SEL-3061
Wireless Communications for SCADA	■	■
High-Speed Teleprotection	■	
Distribution Automation	■	■
Wireless Communications for Synchrophasor Data	■	■
Substation-to-Substation Communications Link		■
Wireless Communications for Distributed Generation	■	■
Permanent Wireless Cable Replacement	■	■
Remote Engineering Access	■	■
Short-Range Engineering Access	■	■
LAN Extension		■
Wireless Backhaul Communications for Fault and Load Transmitters		■

Features		
915 MHz ISM Band (License-Free)	■	
Serial Communication	■	■
Ethernet Communication		■
Low Latency for Teleprotection	■	
Compatible With SEL Mirrored Bits® Communications	■	
Compatible With Modbus	■	■
Compatible With DNP3 and Typical Byte-Oriented Protocols	■	■
Encryption	*ƒ*	■
Point-to-Multipoint Capability	■	
Cellular Capability		■
EIA-232 Port (Quantity)	3	1
Wired EIA-485 Port	+	
High Maximum Throughput (1 Mbps or Greater)		■
Device Status LEDs	■	■
Visible Link Quality Indicator		■

Setup Method		
USB Port	■	
Secure Web Interface Via Ethernet Port		■
Wireless Configuration	■	■
Simple Network Management Protocol (SNMP)		■

■ Standard feature + Model option

ƒ With SEL-3044 Encryption Card option

Precise Time

selinc.com/products/precise-time/satellite-clocks

SEL precise timing solutions keep power system devices time-synchronized within a microsecond, satisfying demanding applications, like synchrophasors, Sampled Values, and traveling-wave fault locating, and ensuring that your event reports have accurate timestamps.

Applications

- Electrical substations
- Generation facilities
- Control centers
- Industrial facilities
- Manufacturing
- Military bases
- Transportation systems
- Land mobile radio (LMR) systems
- Emergency services

Technical Papers

Understanding the Impact of Time Inaccuracy on Synchrophasors, Traveling-Wave Fault Locating, and Line Current Differential Protection

selinc.com/api/download/138657

It's About Time—Considerations and Requirements for DSS and Line Current Differential Applications

selinc.com/api/download/138274

Using Wide-Area Precise Time Distribution to Increase Dependability and Security of Substation Time Synchronization

selinc.com/api/download/136425

SEL-2488 Satellite-Synchronized Network Clock

The SEL-2488 receives multiple input time signals and distributes precise time via 10 MHz frequency, IRIG-B, NTP, and PTP outputs with ±40 ns accuracy.

SEL-2407® Satellite-Synchronized Clock

The SEL-2407 is a half-rack satellite clock with a time display that provides IRIG-B outputs with ±100 ns accuracy.

SEL-2401 Satellite-Synchronized Clock

The SEL-2401 is a compact satellite clock that provides an IRIG-B output with ±100 ns accuracy.

SEL-3400 IRIG-B Distribution Module

The SEL-3400 verifies two IRIG-B inputs and distributes demodulated IRIG-B output for up to 240 devices.

SEL-3405 High-Accuracy IRIG-B Fiber-Optic Transceiver

SEL-3405 transceivers send delay-compensated demodulated IRIG-B signals up to 4 km (2.5 mi).

SEL-9524 GNSS Antenna

The SEL-9524 is a rugged and reliable antenna for GNSS devices in critical infrastructure applications.

SEL-3401 Digital Clock

The SEL-3401 provides a highly visible time display for use anywhere there are time-critical functions set by IRIG-B synchronization signals.

SEL-9929 Satellite-Synchronized Clock Display Kit

The SEL-9929 kit includes a satellite-synchronized clock, a large digital clock display, and all accessories.

SEL ICON® Integrated Communications Optical Network

The ICON provides precise time distribution over WANs, with an accuracy of 1 µs with a variety of input and output protocols.

Applications	SEL-2401	SEL-2407®	SEL-3400	SEL-3401	SEL ICON®	SEL-2488
Time Source for Substation and Industrial Applications	■	■	■		■	■
Digital Secondary Systems (Sampled Values)					■	■
Time Source for Phasor Measurement Unit (IEEE C37.118.1-2011 Synchrophasors)	■	■	■		■	■
Time Source for Recloser	■					
Time Source for Line Current Differential Protection, Traveling-Wave Fault Locating, and Time-Synchronized Event Reporting	■	■	■		■	■
Network Time Synchronization Applications Using the Network Time Protocol (NTP)						■

Time Sources and Time Distribution						
Demodulated IRIG-B Outputs (Quantity)	1	6	12	4*	4	9
Modulated IRIG-B Outputs (Quantity)		1				up to 4
Optional 10 MHz Frequency Outputs (Quantity)						6
GPS Satellite Tracking	■	■			■	■
GLONASS Satellite Tracking (Verification Only)						■
Satellite Signal Verification						■
Demodulated IRIG-B Input			■	■	■	
Synchronized Pulse Output	■	■			■	■
NTP Server						■
IEEE 1588-2008 Precision Time Protocol (PTP) Input (With ITU-T G.8275.1 Telecom Profile)					+	+
IEEE 1588-2008 PTP Output (With IEEE C37.238-2011/2017 Power System and IEC/IEEE 61850-9-3:2016 Power Utility Automation Profiles)					+	+

Features						
Large, 76.2 mm (3.0 in) Tall LED Display for Long-Distance Viewing (61 m [200 ft])				■		
14 mm (0.56 in) Tall Display		■	■			■
Rack-Mount Hardware		■	■	+	■	■
Panel-Mount or Wall-Mount Hardware		■	+	■	■	+
Universal Power Supply		■	■			
Dual, Redundant, Hot-Swappable Power Supplies (High-Voltage or Low-Voltage)					■	■
Power Over Ethernet (PoE) Power Sourcing Equipment (PSE)					■	
Parallel Redundancy Protocol (PRP) and Ethernet Failover Support						■
Secure Web Interface for Configuration						■
Serial Ports for Configuration	■	■				
User-Based Accounts					■	■
TCXO Holdover	■	■			■	■
OCXO, DOCXO, or Rubidium High-Stability Holdover						+
Cable Delay Compensation			■		■	■[1]
IEEE C37.90 and IEC 60255 Surge and Environmental Standards Compliance	■	■	■	■	■	■

Accuracy						
Average Accuracy (ns)	±100	±100				±40
Peak Accuracy (ns)	±500	±500			±1,000	±100

■ Standard feature + Model option/accessory [1]SEL-2488 includes antenna cable delay compensation

Transceivers and Adapters

selinc.com/products/communications/transceivers

Many SEL devices come with standard or optional fiber-optic communications ports. Transceivers convert between copper and fiber optics or between other communications interface standards.

Applications

- Single- or multimode fiber
- Distances ranging from 1 m (3.28 ft) to 110 km (68.35 mi)

Related Material

Fiber-Optic Products and Applications

selinc.com/api/download/2848

Connector and Optics	SEL-2800	SEL-2810	SEL-2812	SEL-9220	SEL-2814	SEL-2815	SEL-2820	SEL-2824	SEL-2829	SEL-2830	SEL-2831	SEL-2894
V-Pin, 650 nm Wavelength	■	■					■					
ST, 850 nm Wavelength			■	■	■	■		■				■
ST, 1,300 nm Wavelength									■	■		
ST, 1,550 nm Wavelength											■	
Fiber Compatibility												
200 µm Core Multimode Fiber (SEL-C805)	■	■	■	■	■	■	■	■				
50 or 62.5 µm Core Multimode Fiber (SEL-C807, SEL-C808)			■	■	■	■		■				■
9 µm Core Single-Mode Fiber (SEL-C809)									■	■	■	
Electrical Features												
EIA-232 Asynchronous Serial Data	■	■	■		■	■			■	■		■
EIA-485 Asynchronous Serial Data				■			■	■				
DTE/DCE Switch					■	■			■	■	■	
IRIG-B Transfer With Data		■	■	■								
Hardware Flow Control Lines With Data					■			■				
Power From Electrical Port Pins	■	■	■	■	■	■			■	■	■	■
External Power Jack or Terminals					■		■	■				
Distances												
Minimum (metric)	1 m	1 m	1 m	1 m	1 m	2 km	1 m	1 m	1 m	16 km	16 km	1 m
Minimum (U.S.)	3.28 ft	3.28 ft	3.28 ft	3.28 ft	3.28 ft	1.24 mi	3.28 ft	3.28 ft	3.28 ft	9.94 mi	9.94 mi	3.28 ft
Maximum (metric)	500 m	500 m	4 km	4 km	4 km	15 km	500 m	4 km	23 km	80 km	110 km	2 km
Maximum (U.S.)	0.3 mi	0.3 mi	2.48 mi	2.48 mi	2.48 mi	9.3 mi	0.3 mi	2.48 mi	14.3 mi	49.7 mi	68.3 mi	1.2 mi

■ Standard feature

SEL-2800/2815 Fiber-Optic Transceivers

Improve safety, signal integrity, and reliability of EIA-232 communications by using multimode SEL-2800 or SEL-2815 transceivers instead of wire.

SEL-2810/2812/2814 Fiber-Optic Transceivers

Use EIA-232 multimode fiber-optic transceivers instead of wire. The SEL-2810 and SEL-2812 support IRIG-B time signals, while the SEL-2814 works with hardware flow control signals.

SEL-2829/2830/2831 Single-Mode Fiber-Optic Transceivers/Modems

Apply the SEL-2829, SEL-2830, or SEL-2831 to use two optical fibers instead of wire to transfer bidirectional serial data.

SEL-2820/2824 Multimode Fiber-Optic EIA-485 Transceivers

Apply an SEL-2820 or SEL-2824 to safely add isolated segments to multidrop and point-to-point EIA-485 networks.

SEL-2890 Ethernet Transceiver

Add Ethernet connectivity to an SEL device using its EIA-232 serial port with the SEL-2890.

SEL-9220 Fiber-Optic Adapter for SEL-300 Series Relays

Convert the EIA-485 port of an SEL-300 series relay to a point-to-point fiber-optic port with the SEL-9220.

SEL-2894 Interface Converter

Apply the SEL-2894 to transfer SEL Mirrored Bits® communications via an IEEE C37.94 fiber-optic link through a communications multiplexer.

SEL-2886 EIA-232 to EIA-485 Interface Converter

Connect EIA-232 devices to an EIA-485 network with SEL-2886 converters.

Cables

selinc.com/products/cables

SEL manufactures high-quality cables for connecting a variety of devices. Each cable is quality-tested to ensure reliability and proper operation. Choose the cable types and lengths to match your applications using the SEL-5801 Cable Selector program.

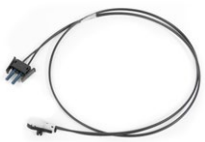
Applications

- GPS and radio antenna connections and IRIG-B time distribution
- Serial communications over long distances without risk of electromagnetic interference
- Adaption and connection to USB ports

Software

SEL-5801 Cable Selector

selinc.com/software/downloads/?filter=SEL-5801



SEL-C804 Multimode Arc-Flash Detection Fiber-Optic Cable

Use SEL-C804 cables with SEL-751 and SEL-851 Feeder Protection Relays and with SEL-710-5 Motor Protection Relays.

SEL-C805 200 µm Multimode Fiber-Optic Cable

Connect V-pin or ST ports with SEL-C805 cable assemblies.

SEL-C807 62.5/200 µm Multimode Fiber-Optic Cable

Use SEL-C807 cable assemblies to connect ST or LC ports.

SEL-C808 62.5/125 µm Multimode Fiber-Optic Cable

Connect ST, SC, or LC ports with SEL-C808 cable assemblies.

SEL-C809 9 µm Single-Mode Fiber-Optic Cables

Use SEL-C809 cable assemblies to connect ST, SC, or LC ports.

Category 5e Ethernet

Apply high-quality, shielded twisted-pair (STP) Category 5e Ethernet cables for copper Ethernet connections.

Coaxial Cables

Use SEL Coaxial Cables for GPS and radio antenna connections and IRIG-B time distribution.

USB Serial Cables

Add a 1.8 m (6 ft) or 4.6 m (15 ft) EIA-232 serial port cable to a PC USB port to communicate with SEL relays and other devices with EIA-232 serial ports.

Electrical Data Cables

Apply SEL Electrical Data Cables to reliably connect SEL products and other devices, including relays, information processors, computers, I/O modules, meters, clocks, and modems.

Connector	SEL-C804	SEL-C805Z	SEL-C805D	SEL-C805G	SEL-C807Z	SEL-C807G	SEL-C808Z	SEL-C808P	SEL-C808G	SEL-C809Z	SEL-C809P	SEL-C809G
V-Pin	■	■	■	■								
ST	■	■	■	■	■	■	■	■	■	■	■	■
LC					■	■	■	■	■	■	■	■
SC							■	■	■	■	■	■

Fiber Diameter (Core/Outer)												
1,000 µm	■											
200 µm		■	■	■								
62.5/200 µm					■	■						
62.5/125 µm							■	■	■			
9/125 µm										■	■	■

Wavelength												
650 nm (Multimode)		■	■	■								
850 nm (Multimode)		■	■	■	■	■	■	■	■			
1,300 nm (Multimode)					■	■	■	■	■			
1,300–1,550 nm (Single-Mode)										■	■	■

Fiber Count												
Simplex (1 Fiber)	■	■			■		■	■		■	■	
Duplex (2 Fibers)	■	■	■	■	■	■	■	■	■	■	■	■
Quad (4 Fibers)			■	■		■			■			

Cable Ratings												
Riser-Rated (OFNR)		■	■		■		■		■	■		■
Plenum-Rated (OFNP)								■			■	
Water-Blocked			■									
Waterproof				■		■			■			■

Jacket Material	SEL-C804	SEL-C805Z	SEL-C805D	SEL-C805G	SEL-C807Z	SEL-C807G	SEL-C808Z	SEL-C808P	SEL-C808G	SEL-C809Z	SEL-C809P	SEL-C809G
Polyvinyl Chloride (PVC)		■	■		■		■	■	■	■	■	■
Polyethylene (PE)	■			■		■						

Termination Kits												
V-Pin Termination Kit	■	■	■	■								
ST Termination Kit	■	■	■	■	■	■						
LC, ST, and SC Termination Kit							■	■	■	■	■	■

Options												
Bulk (No Connectors)	■	■	■	■	■	■	■	■	■	■	■	■
Pulling Loop			■	■		■			■			

Fiber-Optic Compatibility												
SEL-2800/2810/2820		■	■	■								
SEL-2812/2814/2815/ 2824/3405/9220		■	■	■	■	■	■	■	■			
SEL-2829/2830					■	■	■	■	■	■	■	■
SEL-2831										■	■	■
SEL-751/751A/710-5 Arc-Flash Detection	■											
Multimode Fiber-Optic Ethernet					■	■	■	■	■			
Single-Mode Fiber-Optic Ethernet										■	■	■

■ Standard feature

Remote I/O

selinc.com/products/distribution/protection/remote-i-o

Remote I/O modules transfer data from remote locations over fiber and expand the I/O of SEL relays, automation controllers, and other devices without modification to the control panel face.

Applications

- Provide additional I/O for SEL protective relays and information processors
- Save wiring via I/O multiplexing
- Implement teleprotection
- Improve safety with optical fiber

Case Study

Remote I/O Modules Enable DC Substation Transfer Trip for Expanding Denver Light Rail System

selinc.com/api/download/2723

SEL-2505/2506/2507 Remote I/O Module

Connect a remote I/O module to a fiber-optic port or transceiver on a protective relay to add digital I/O. Or, wire the module I/O to relay I/O to add SEL Mirrored Bits® teleprotection.

SEL-2515/2516 Remote I/O Module

Connect these remote I/O modules, which are suitable for use in automation systems, to SEL information processors to easily expand inputs and outputs.

SEL-2595 Teleprotection Terminal

Use the SEL-2595 to securely transfer teleprotection signals through a high-speed IEEE C37.94 optical-fiber interface.

Number of I/O Channels	SEL-2505	SEL-2506	SEL-2507	SEL-2515	SEL-2516	SEL-2595
Digital Inputs (DI) Base	8	8	8	8	8	8
DI Maximum	8	8	8	8	8	8
Digital Outputs (DO) Base	8	8		8	8	8
High-Speed DO Base			8			
DO Maximum	8	8	8	8	8	8
Serial Communications Protocols						
SEL Mirrored Bits Communications	■	■	■			
SEL Fast Messages				■	■	
IEEE C37.94						■
Mounting						
Surface/Wall Mount	■			■		
Rack Mount	■	■	■	■	■	■

■ Standard feature

Annunciation and Notification

selinc.com/products/automation/operations/annunciation

Annunciation and notification devices provide local and remote notification to improve situational awareness, efficiency, and safety. They display alarm conditions, and their communications ports enable integration with relays and control systems.

SEL-2522 Alarm Panel

Apply the SEL-2522 with up to 36 inputs to easily view the status of alarms and operating events.

SEL-2523 Annunciator Panel

Provide local and remote notifications with the SEL-2523, which includes programmable logic and up to four communications ports.

SEL-2533 Annunciator

Use the compact, ten-window SEL-2533 to provide local and remote annunciation.

Applications	SEL-2522	SEL-2523	SEL-2533
Local Visual Indication	■	■	■
Remote Visual Indication		■	■
Local Audible Indication	■	■	■
Remote Audible Indication	■	■	■
Telephone Dial-Out Messages		■	■
Local SELOGIC® Control Equations and Time Tagging		■	■

Mounting and Labeling			
Rack Mount	+	+	
Panel Mount	+	+	■
User-Defined Slide-In Labels	■	■	■

Inputs, Outputs, and HMI	SEL-2522	SEL-2523	SEL-2533
General-Purpose Digital Inputs	36	42	14*
Acknowledge, Reset, Test Digital Inputs	3	6	4*
General-Purpose Digital Outputs	1	11	14*
Alarm Digital Output	1	1	1
General Display LEDs/Windows	36	36	10
Enabled LED	1	1	1
Pushbuttons	3	4	4
Base Serial Ports		1	1
Optional Multimode Fiber-Optic Serial Port		1	1
Optional Additional EIA-232 or EIA-485 Port		1	1
IRIG-B Time Input		1	1
ISA Annunciation Alarm Sequence Choices	2	8	8

Serial Communications Protocols			
SEL MIRRORED BITS® Communications		■	■
SEL Fast Messages		■	■
Send SEL Messenger Points		■	■
Modbus RTU		■	■
DNP3 Level 2 Outstation		+	+

■ Standard feature + Model option

Software

selinc.com/software/downloads | selinc.com/products/compass

SEL software products help automate and control power systems, optimize device configuration, configure secure operational technology (OT) networks, and collect and visualize power system data.

SEL Compass® keeps software applications and relay configuration drivers up to date and includes SEL instruction manuals, application guides, hardware drivers, and more.

Webinars

Streamline Data Collection and Fleet Management With DMA on Blueframe®

selinc.com/events/on-demand-webinar/138573

The Next Evolution in FLISR Simplicity: Automatic Configuration With GIS Data

selinc.com/events/on-demand-webinar/138534

Preventing PT Failures and Locating Generation Loss With Synchrowave® Operations

selinc.com/events/on-demand-webinar/136575

Advance Power System Awareness With Continuous Waveform Streaming

selinc.com/events/on-demand-webinar/139186

Automate SDN Configuration With RTAC and IEC 61850 Files

selinc.com/events/on-demand-webinar/137644

Collect and Visualize Metering Data With Next-Generation Software

selinc.com/events/on-demand-webinar/138791

Case Study

Real-Time Operational Use Cases for Time-Synchronized Measurements With Synchrowave Operations

selinc.com/api/download/134864

Software Product	Configuration	Automation	Visualization and Analysis
ACSELERATOR QuickSet® SEL-5030 Software	■		
SEL Grid Configurator	■		
ACSELERATOR Architect® SEL-5032 Software	■		
ACSELERATOR RTAC® SEL-5033 Software	■		
ACSELERATOR Diagram Builder™ SEL-5035 Software	■		
ACSELERATOR® Bay Screen Builder SEL-5036 Software	■		
SEL-5056 Software-Defined Network Flow Controller	■	■	■
SEL-5051/5052 Client/Server Network Management System (NMS) Software	■		■
SEL Data Management and Automation (DMA) Blueframe Application Suite		■	
SEL Distribution Management System (DMS) Blueframe Application Suite		■	
SEL-5057 SDN Application Suite—Flow Auditor			■
SEL-5231 Configuration API	■		
SEL-5073 SYNCHROWAVE Phasor Data Concentrator (PDC) Software		■	
SEL-5601-2 SYNCHROWAVE Event Software			■
SEL-5702 Synchrowave Operations Software			■
SEL-5703 Synchrowave Monitoring			■
SEL-5705 Synchrowave Reports			■

Example System Diagram
Use SEL software solutions to optimize the configuration and management of SEL devices and networks, provide advanced automation and data collection capabilities, and offer robust tools for data visualization and analysis.

ACSELERATOR QuickSet

Included with supported products

QuickSet is a tool to configure, commission, and manage devices for power system protection, control, metering, and monitoring.

SEL Grid Configurator

Included with supported products

Grid Configurator makes creating, managing, and deploying settings more efficient with its spreadsheet-style editor, protection visualization, comprehensive reporting, custom filters, and multiple-device settings management.

ACSELERATOR Architect

Included with supported products

Architect streamlines the configuration and documentation of IEC 61850 messages, controls, and reports.

ACSELERATOR RTAC

Included with SEL RTAC purchase

ACSELERATOR RTAC is an intuitive, easy-to-use application designed to configure the SEL Real-Time Automation Controller (RTAC) family of products, including the SEL-2240 Axion®.

ACSELERATOR Diagram Builder

Included with RTAC HMI purchase

Diagram Builder enables the creation and management of HMI visualization projects for the SEL RTACs in your system.

Bay Screen Builder

Included with QuickSet and ACSELERATOR RTAC

Bay Screen Builder, which works with QuickSet and ACSELERATOR RTAC, enables the custom creation of bay screens for SEL devices with touchscreen displays.

Software-Defined Network Flow Controller

Included with SEL software-defined networking (SDN) switch purchase

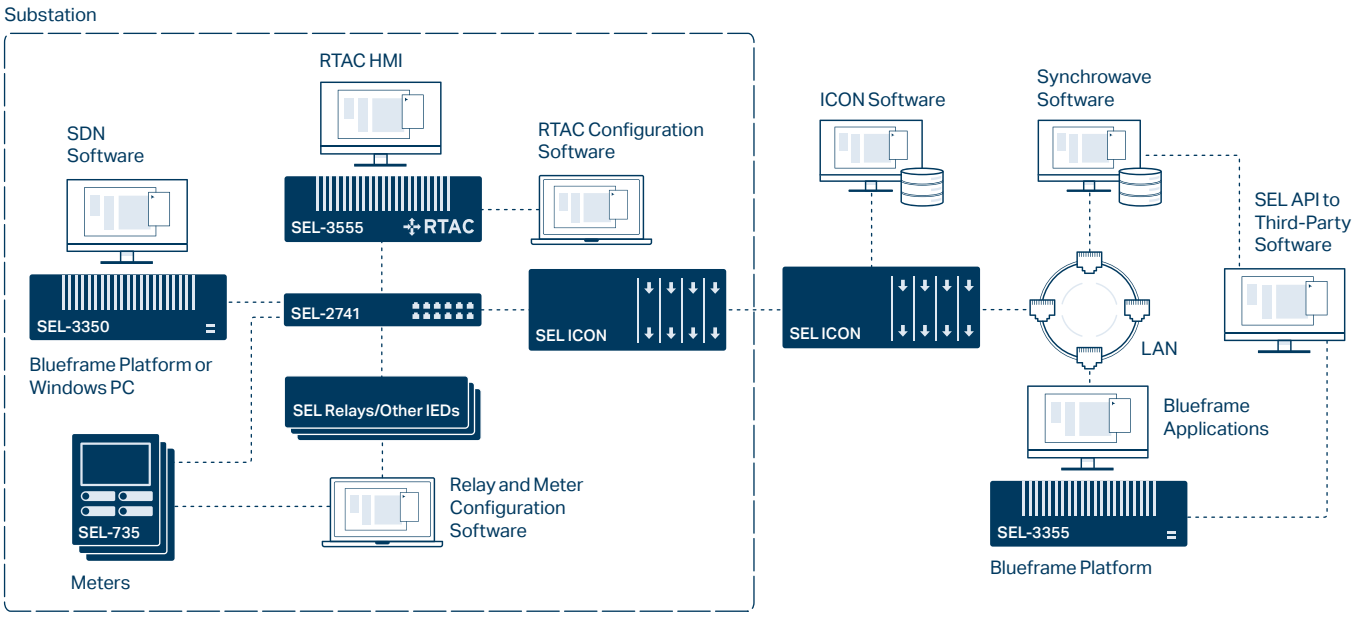
The Flow Controller is the central interface for the commissioning, configuration, and monitoring of all SEL SDN-enabled Ethernet switches.

Client/Server Network Management System (NMS)

The SEL ICON® Client/Server NMS Software helps maintain a secure, reliable, and efficient communications infrastructure.

SDN Application Suite

The SDN Application Suite includes Flow Auditor, which operates with SEL-5056 to provide safe, nondisruptive audits and documentation of conversations between hosts on your critical infrastructure network.



SEL Blueframe Application Platform

Scalable and flexible, SEL Blueframe provides a secure OT platform for installing applications and for managing and exchanging data between supported applications.

Data Management and Automation (DMA) Blueframe Application Suite

SEL DMA applications automatically collect, store, and manage device-specific information to simplify day-to-day management of a system of devices and to support compliance efforts.

Distribution Management System (DMS) Blueframe Application Suite

The DMS suite includes a FLISR (fault location, isolation, and service restoration) application package, which reduces customer outages, improves reliability metrics, and provides rapid fault detection and system restoration.

SEL Configuration API

This API provides an integrated approach to managing SEL device configuration data, offering read/write access to device identification information, connection parameters, passwords, and settings stored in the ACSELERATOR Database.

SYNCHROWAVE PDC

SYNCHROWAVE PDC provides synchrophasor aggregation and time alignment for downstream applications and inter-entity data sharing.

SYNCHROWAVE Event

SYNCHROWAVE Event displays SEL relay event reports and other device data to assist with event analysis.

Synchrowave Reports

Synchrowave Reports simplifies metering and power quality data reporting by analyzing stored metering data and automatically delivering scheduled reports by email.

Synchrowave Operations

Synchrowave Operations increases grid safety and reliability through situational awareness with high-resolution time-series data, real-time analytics, and geographical information system (GIS) location information.

Synchrowave Monitoring

Synchrowave Monitoring brings synchrophasor data and relay event reports together into one place so engineers can analyze both the high-level system impact of an event and the detailed oscillography data.

SEL RTAC HMI

The SEL RTAC HMI offers an easy way to visualize data to monitor and control your system.

Accessories and Tools

SEL-9501 or SEL-9502 Contact Arc Suppressor

Decrease maintenance costs, increase contact reliability, and reduce destructive dc circuit overvoltages with the self-powered SEL-9501/9502 arc suppressors.

SEL-4520 Arc-Flash Test Module

Use the SEL-4520 to conveniently test the operation of arc-flash detection relays installed in metal-clad and metal-enclosed switchgear.

SEL-4388 Mirrored Bits® Tester

Accelerate commissioning and bench testing of SEL Mirrored Bits links and improve training, maintenance, and cable identification with the SEL-4388.

SEL-9510 Control Switch Module

Use the SEL-9510 where independent local control is needed. High-visibility status indication and arc-suppressed contacts are ideal for breaker control.

SEL-2126 Fiber-Optic Transfer Switch

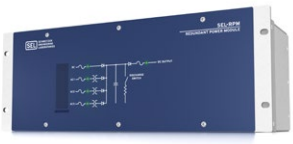
Apply the SEL-2126 to simply reroute any communications protocol carried on the IEEE C37.94 fiber-optic interface standard without moving fiber connectors and without changing communications equipment programming.

SEL-2652 Trip Coil Monitor

Verify circuit breaker or lockout relay trip coil and trip circuit continuity with the SEL-2652.

SEL-2902 RJ45 to DB-9 Adapter Panel NEW

Easily retrofit RJ45 ports to DB-9 connectors using the SEL-2902 adapter panel. The SEL-2902 allows you to retain existing serial cables and transceivers when upgrading from an SEL-3530 Real-Time Automation Controller (RTAC) or SEL-2020/2030/2032 Communications Processor to an SEL-3300 series computing platform.



SEL-RPM Redundant Power Module

Use the SEL-RPM to combine as many as three ac sources and one dc source to provide a single reliable dc output (unregulated 125 Vdc). Large energy storage capacitors provide ride-through capability when all input sources are lost.

SEL-9321 Low-Voltage DC Power Supply or SEL-9322 15 VDC Power Supply

Provide low-voltage dc power from station battery or ac sources for communications devices and accessories with SEL-9321 and SEL-9322 power supplies.

Custom Panels and Enclosures

selinc.com/solutions/custom-panels-enclosures

SEL designs, manufactures, tests, and delivers custom protection, control, and metering panels, control cabinets, retrofit doors, and enclosures. We integrate multiple pieces of equipment (from SEL and other manufacturers) into a single assembly or kit, enabling one-stop shopping for parts and labor with a quick turnaround time. Our experts will work with you to understand your requirements and challenges and provide innovative, economical solutions built to stringent SEL quality standards.

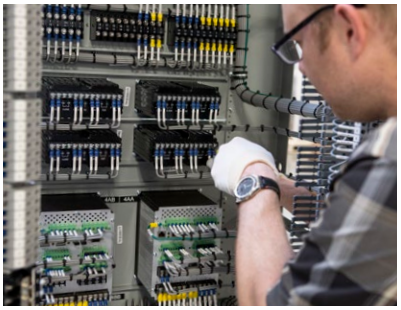
Customer Stories

Partnership and Panels Improve Infrastructure

selinc.com/highlights/rayburn-electric

Distribution Modernization in Kentucky

selinc.com/featured-stories/lge-ku



Complete Panel and Enclosure Solutions

SEL custom panel and enclosure solutions come with the following options and services:

- Consulting, engineering design, and field services.
- Panel and assembly manufacturing and testing in our in-house UL508A-certified panel shop.
- Protection, automation, and control equipment manufacturing.
- Easily extractable assemblies for all SEL-700 and SEL-2400 series products.
- Standard cabinet design for indoor and outdoor applications, including stainless steel, mild steel, aluminum, fiberglass, and polycarbonate enclosures.
- Enclosures, racks, bezels, plates, portables, swing panels, and doors.
- Seismic- and UL-certified cabinets for distribution and automation in adverse environmental conditions.

Complete Design, Manufacturing, Testing, and Commissioning

To exactly meet your needs, we offer complete panel and enclosure solutions, from design through commissioning. We test the final implementation of every product or system before it ships, reducing your overall project costs and engineering time. This testing makes commissioning easier and faster.

Field Services

SEL provides complete installation services during any project phase, from demolition and wiring to testing and commissioning. SEL teams have extensive safety training and provide the same level of quality customers have come to expect from SEL manufacturing and other services.

Available field services include:

- Demolition, retrofit, and upgrade of existing relay panels.
- Installation, integration, and wiring of new relay panels.
- Commissioning and testing support.
- Automation and control system installation.
- SCADA installation.
- Arc-flash solutions.
- GPS and Yagi antenna installation.
- NEMA box and electric panel installation.
- Cable installation for yard equipment through existing conduits.

Direct-Replacement Assemblies

selinc.com/products/7250 | selinc.com/products/7251

Streamline retrofit projects with SEL direct-replacement assemblies for motor, generator, transformer, feeder, and metering applications. These complete, preassembled retrofit kits are designed to closely match the features, form-factor, and terminal blocks of specific legacy digital and electromechanical relays. Direct-replacement assemblies combine field-proven SEL relays with specialized mounting plates, interposing terminal blocks, and other hardware to ensure quick, seamless, and cost-effective upgrades.

Simplify Installation and Configuration

Direct-replacement assemblies deliver an installation experience that is easy, fast, and error-free. The physical installation work for most digital direct-replacement assemblies can typically be completed within an hour. Each assembly fits the existing panel opening and mounting holes. Terminal block arrangements and wiring designations closely match legacy products, and SEL provides wiring labels with all retrofit kits.

Electromechanical direct-replacement assemblies are designed to replace sets of three electromechanical relays aligned horizontally on the same panel with a digital relay and test switch(es). Installation can typically be completed within just a few hours with the removal of the panel dividers between the old relays and the addition of power supply connections.

Minimize Engineering Work

Eliminate time-intensive and costly engineering tasks, such as revising drawings and diagrams. All assembly kits include wiring diagrams, so existing documentation for your system is not required for installation.

Partner With SEL on a Turnkey Solution

We offer complete design, installation, and commissioning services for retrofit projects, saving you time and reducing costs.

Manufacturers we offer direct-replacement assemblies for include:

- GE
- Westinghouse
- Cutler-Hammer
- Eaton
- Square D
- ABB
- Siemens
- Schneider Electric

Engineering Services

selinc.com/engineering-services | esinfo@selinc.com

With a history of successful partnerships spanning a variety of industries throughout the world, SEL Engineering Services helps you see your project through from concept to completion. Our broad menu of services includes electrical, civil, and structural engineering; substation design and drafting; automation and protection services; cybersecurity assessments; quality assurance; field services; and much more.

Our local teams provide consulting services and specialized solutions for projects of any scale, from asset modernization programs to complete substation builds and from microgrids to nationwide power systems. And because we invent and manufacture the hardware; construct world-class panels; manage procurement and construction; install, test, and commission systems; and offer ongoing support long after the project enters service, SEL offers an unmatched level of efficiency, responsiveness, and value.

Featured Services and Solutions

Engineering, Procurement, and Construction Management (EPCM)

SEL Engineering Services performs conceptual design and evaluation, detailed substation design, procurement, and construction management. By combining civil, structural, electrical, and P&C engineering services with comprehensive project management, we ensure a well-defined scope of work, effective budgeting, and a schedule you can rely on.

Power Management and Microgrid Control Solutions

POWERMAX® Power Management and Control Systems intelligently balance generation and load at subcycle speeds to maintain grid stability, prevent widespread outages, and reduce energy costs. These solutions are designed for a variety of applications, including industrial power management systems, remedial action schemes for utilities, and microgrid control systems for commercial, military, and mobile microgrids.

Cybersecurity Services

Our cybersecurity specialists offer an array of products and services to help you develop more secure networks for your operational technology (OT) systems. They provide site vulnerability assessments, comprehensive mitigation strategies, and streamlined solutions for maintaining regulatory compliance and managing system security.

Additional Offerings

- NERC CIP compliance
- Substation engineering services
- SCADA systems and substation HMIs
- Distribution network automation
- Wide-area monitoring systems (WAMS)
- Arc-flash solutions
- Remote terminal unit (RTU) replacements
- Digital fault recording (DFR) systems
- System modeling and studies
- Design and drafting services
- Civil engineering services

Ordering and Customer Support

selinc.com/support | +1.509.338.3838

Online Configuration and Ordering

Configure products to meet your exact application needs and order them online with an SEL account. Once logged in, select "Configure and Order" on a product webpage to choose from available model options, including items like power supply voltages, inputs and outputs, communications ports and protocols, and conformal coating. Save individual products to your cart, create projects to house specific product orders, and request a quote—all online. For products that do not require configuration or have been identified as common product configurations, select "Popular Models" on a product webpage to quickly and easily find the model you want.

Ordering Support

Our sales representatives and customer service teams are always happy to answer questions and help configure the right SEL solution for your application. Visit selinc.com/support for regional sales contact information.

Popular Models

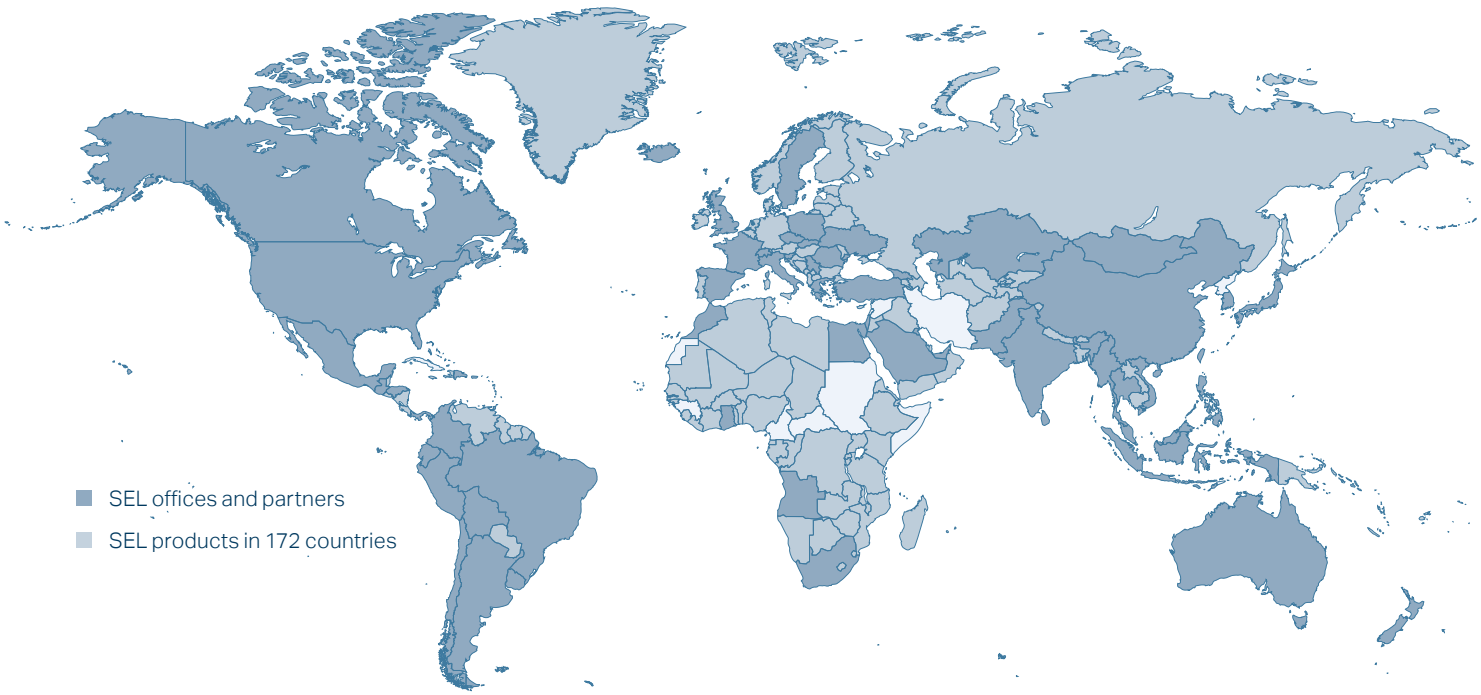
The Popular Models program makes selecting and ordering SEL products simple, fast, and convenient. SEL popular models are products preconfigured for popular applications and available for many SEL devices. Specific popular models may ship from stock. When available, the popular model configurations are displayed on the related SEL product webpage, where you can also view their technical details and popular applications. You can order these models directly from SEL or through your SEL sales representative.

Local Support. Global Expertise.

Whether it's grid modernization in the Philippines or an ambitious offshore wind integration project in Belgium, our global engineering experts have helped projects in regions like yours succeed. And with local support from technical staff in your region, you can count on us to help your successes continue.

Scan to find a customer support representative in your area.

selinc.com/support



Education and Training

selinc.com/selu

Online Technical Resources

Get access to secure product information, configure and order products, and register for trainings with an SEL account. Head to selinc.com and click "Login" at the top right corner of your screen. You'll be able to:

- Access secure product information, like application guides and instruction manuals.
- Watch recorded webinars.
- View on-demand virtual presentations.
- Register for seminars, SEL University courses, and other educational offerings.

Schweitzer Drive Podcast

Our "Schweitzer Drive" podcast explores what goes on between the generation of electricity and the light switch. In each episode, SEL President Dave Whitehead talks with the entrepreneurs, innovators, and experts who are inventing the future of electric power. Visit selinc.com/schweitzerdrive to listen.

SEL University

Learn about power system fundamentals, the physics of power system protection, and advanced product applications with courses from SEL University. Gain Professional Development Hours (PDHs) and the confidence to install and commission SEL protection, automation, cybersecurity, and control products. Our training formats include eLearning courses as well as in-person and virtual courses that are taught by the same engineers who design SEL equipment and solutions, support customers, and author industry publications. Our power system experts have trained tens of thousands of industry professionals worldwide to help them meet the technical challenges of integrating digital technologies into their expanding power system infrastructure.

SEL University covers topics such as:

- Introduction to SEL relays.
- Cybersecurity and securing operational technologies (OT) networks.
- SEL Real-Time Automation Controller (RTAC) applications.
- Protecting power systems for engineers.

See available courses and register at selinc.com/selu.

Technical Papers, Webinars, and Videos

SEL power system experts have authored more than 1,000 technical papers, hosted hundreds of webinars, and developed dozens of support videos. They are dedicated to teaching about how our technologies solve complex power system challenges and about how we partner with our customers to solve tough problems. Head to selinc.com to access our library of educational material, including these trending and top five downloaded technical papers:

Trending Technical Papers

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selinc.com/api/download/138745

Grid-Parallel and Islanding Operation Challenges of a Large Battery Energy Storage System at Cape Cod
selinc.com/api/download/138273

Case Study: Implementing a Zero-Touch Deployment Methodology Using SDN to Improve the Security, Reliability, and Engineering of Substation Automation Systems in Slovenia
selinc.com/api/download/138803

Solving Complex Feeder Protection Challenges and Reducing Wildfire Risks With Remote Measurements
selinc.com/api/download/138149

Performance of IEC 61850 Sampled Values Relays for a Real-World Fault
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Review of Ground Fault Protection Methods for Grounded, Ungrounded, and Compensated Distribution Systems
selinc.com/api/download/2604

Considerations for Using High-Impedance or Low-Impedance Relays for Bus Differential Protection
selinc.com/api/download/5562

Fundamentals and Advancements in Generator Synchronizing Systems
selinc.com/api/download/9145

Bookstore

Visit the SEL bookstore at selinc.com/bookstore for textbooks and focused technical paper anthologies, like the following:

- Modern Solutions for Protection, Control, and Monitoring of Electric Power Systems
- Synchronous Generator Protection and Control
- Line Current Differential Protection
- Locating Faults and Protecting Lines at the Speed of Light

Modern Solutions for Protection, Control, and Monitoring of Electric Power Systems offers a comprehensive reflection of technologies developed by SEL engineers and spans topics of interest to people working in protection, control, communications, regulation, education, and design.

Online you'll also find these books written by Stanley E. Zocholl, an SEL Distinguished Engineer and IEEE Life Fellow:

- Analyzing and Applying Current Transformers
- AC Motor Protection

Index

SCHWEITZER ENGINEERING LABORATORIES

2350 NE Hopkins Court, Pullman, WA 99163 USA

+1.509.332.1890 | info@selinc.com | selinc.com

385-0080 | 20250210

Please address purchase orders to:
Schweitzer Engineering Laboratories, Inc.
2350 NE Hopkins Court
Pullman, WA 99163

Reference this quote number and send purchase orders to:

Business Email michele@mkireps.com

Created Date	2/24/2025	Quote Number	00427955
Account Name	Colorado River Commission of Nevada	Expiration Date	4/25/2025
Sold To Contact	Shae Pelkowski	Prepared By	Michele Newberry
Sold To Contact Email	spelkowski@crc.nv.gov	Sold To Sales Channel	Matzinger-Keegan
		Business Email	michele@mkireps.com

Line No.	Part Number	Description	Sales Price	Quantity	Total Price
1	587#XJKK	SEL-587-0, -1 Current Differential Relay	USD 2,816.64	1.00	USD 2,816.64
2	387E#3FN3	SEL-387E Current Differential and Voltage Relay	USD 8,570.81	1.00	USD 8,570.81
3	3350#CRB1	SEL-3350 Automation Controller	USD 8,351.46	1.00	USD 8,351.46
4	2902#LE5E	SEL-2902 RJ45 to DB-9 Adapter Panel	USD 401.70	1.00	USD 401.70
5	2440#C2HD	SEL-2440 Discrete Programmable Automation Controller (DPAC)	USD 1,855.75	2.00	USD 3,711.50
6	C273A#NDN4	SEL-C273A Serial Cable (RS-232, DTE-DTE, DB9 M/DB9 M, IRIG-B, Hardware Flow Control)	USD 48.37	2.00	USD 96.74
7	C273A#F447	SEL-C273A Serial Cable (RS-232, DTE-DTE, DB9 M/DB9 M, IRIG-B, Hardware Flow Control)	USD 58.42	4.00	USD 233.68
8	8130-01	1000BASE-LX SFP Transceiver (1310 nm, Single-Mode, 10 km)	USD 218.00	2.00	USD 436.00

Grand Total USD 24,618.53

Lead Time

Lead times are confirmed upon receipt of a complete purchase order and can be subject to change due to special circumstances.
Lead times do not include delivery times.

Typical Lead Times
Ship-from-stock products: 2 business days
All other products: 4–10 business days
Faulted-circuit indicators and sensors: Confirmed at time of ordere.

End User

All submitted purchase orders must contain valid and complete end-user information, including full address. Incomplete or invalid information may delay the processing of the purchase order.

Freight

Prices include ground freight prepaid within the 48 contiguous United States via SEL's preferred carrier. Buyers may request expedited delivery service at their expense by submitting a collect account or by including added charges to their invoice. Orders with multiple items may be shipped from multiple locations and may arrive in more than one delivery.

Manuals

Equipment manuals are provided free on CD with relays. If a hard copy manual is required, this should be specified at the time of order as a separate line item and may be subject to freight charges.

Warranty

SEL is pleased to offer our 10-Year Product Warranty. Please visit https://selinc.com/company/quality/. Third-party products included in this Quote are not covered by SEL's warranty. SEL will pass on the original manufacturer warranty to the buyer if possible.

Payment Terms

Net 30 or per the approved credit terms with SEL. SEL may require additional credit information or prepayment prior to acceptance of a purchase order if credit terms have not been established or are insufficient to cover this purchase.

Quote Terms

Prices are based on quoted quantities and may change if quantities change. Prices do not include sales tax.

Information within this quotation is for your evaluation purposes only. Disclosure of this information outside of your company is prohibited.

Purchase order modifications or cancellations may result in additional fees and adjustment to delivery schedule. To prevent delays, please carefully review the part number descriptions listed in the above table to ensure ordering options will meet requirements.

SEL values your right to privacy, and uses personal data provided to SEL only for our legitimate business interests. More information may be found at the SEL Privacy Policy. You may exercise your rights related to your personal data by contacting the SEL Data Protection Officer at data_protection@selinc.com.

All sales are subject to the attached SEL Sales Terms, available on SEL's website (https://www.selinc.com/termsandconditions/unitedstates) and incorporated herein by reference unless Buyer and SEL has a Master Agreement or signed negotiated terms on file.

Part Number	Description	Part Options
587#XJKK	SEL-587-0, -1 Current Differential Relay	587#XJKK (0587002X5X1) Firmware -- Standard Conformal Coat -- No Power Supply; Control Input Voltage -- 48/125 Vdc or 125 Vac; 48 Vdc Communications Protocol -- Standard Secondary Input Current -- 5 A Phase Packaging -- Horizontal Rack Mount Communications Port -- EIA-232 Front and Rear Port
		387E#3FN3 (0387E013X5HXX22) Firmware -- Standard Chassis and IO Board -- 3U, No Additional I/O, Requires Ethernet Option Power Supply -- 48/125 Vdc or 125 Vac Secondary Input Voltage -- 300 Vac Maximum (Wye or Delta) Secondary Input Current -- 5 A Phase

387E#3FN3	SEL-387E Current Differential and Voltage Relay	Mounting -- Horizontal Rack Mount Conformal Coat -- None Control Input Voltage -- 48 Vdc Communications Protocol -- Serial SEL ASCII, SEL Fast Message, and DNP3 Level 2 Slave with Two 10/100BASE-T Ethernet Ports, and SEL ASCII Via Telnet DMA Bundle -- No
3350#CRB1	SEL-3350 Automation Co[illegible]	Processor -- Intel Atom x5-E3940 Quad Core, 1.6 GHz RAM -- 8 GB Operating System -- SEL Real-Time Automation Controller (RTAC) Client Access License -- None Conformal Coat -- None Chassis and Mounting -- Horizo[illegible]l 1U Rack Mount Power Supply A -- 48-125 Vd[illegible]or 110-120 Vac Power Supply B -- None SSD Slot 1 -- SLC 32 GB Ind[illegible]tri[illegible] Grade SSD SSD Slot 2 -- None Expansion Slot 1[illegible] None Expansion Slot 2 --[illegible]one Rear Ethe[illegible]net P[illegible]t Co[illegible]gurati[illegible] -- 2 RJ-45 10/100/1000 Mbps, 2 SFP Fiber Rear E[illegible]ernet Po[illegible] 1 -- RJ[illegible] Rear E[illegible]rnet [illegible]ort 2 -- RJ45 R[illegible] Ethe[illegible]t Port 3 -- SFP Dust Cover Re[illegible]r [illegible]hernet[illegible]ort 4 -- SFP Dust Cover Web Hu[illegible]n Machine Interface (HMI) -- No Audit [illegible]tilities -- No IEC [illegible]50 MMS Client and File Services -- No IEC 61850 MMS Server and File Services -- No IE[illegible]61850 Goose -- No EtherNet/IP -- No Grid Connect -- No Grid Connect 5 MW -- No Horizon SVPplus -- No Horizon Power System Model -- No Dynamic Disturbance Recorder -- No Meter Report Trend Recorder -- No Report Generator/Email Client -- Yes FTP Sync -- No FileIO -- Yes Continuous Recording -- No Condition Monitoring -- No OPC UA Server -- No OPC UA Client -- No OT SDN Flow Controller -- No DMA Bundle -- No DMA Disturbance Monitoring -- No DMA Configuration Monitoring -- No DMA Credential Management -- No DMA Custom Monitoring -- No DMA Meter Monitoring -- No DMA Number of Resources (Bundles of 10) -- None DMS FLISR -- No FLISR Feeder Quantity -- N/A Protocol Services -- No Protocol Service Data Point Level -- Level 0 SEL Compass -- No SEL-5030 AcSELerator QuickSet -- No

		SEL-5033 ACSELERATOR RTAC -- No SEL-5601-2 Synchrowave Event -- No SEL-5073 Synchrowave Phasor Data Concentrator -- No SEL-5815 PRP Driver for Windows -- No McAfee - Embedded Control -- No
2902#LE5E	SEL-2902 RJ45 to DB-9 Adapter Panel	Mounting -- Adjustable Rack Mount
2440#C2HD	SEL-2440 Discrete Programmable Automation Controller (DPAC)	2440#C2HD (24402H12C6311630) Mounting -- Horizontal Rack Mount I/O -- 32 DI / 10 Fast High-Current DO Wetting Voltage -- 48 Vdc/Vac Serial Port 2 -- EIA-232 Ethernet Connection -- Dual Copper 10/100BASE-T IEC 61850 -- No Conformal Coat -- No
C273A#NDN4	SEL-C273A Serial Cable (RS-232, DTE-DTE, DB9 M/DB9 M, IRIG-B, Hardware Flow Control)	C273A#NDN4 (C273A-010) Length (ft) -- ft (10)
C273A#F447	SEL-C273A Serial Cable (RS-232, DTE-DTE, DB9 M/DB9 M, IRIG-B, Hardware Flow Control)	C273A#F[illegible] (C[illegible]73A-[illegible]5) Length[illegible]) -- ft (2
8130-01	1000BASE-LX SFP Transceiver (1310 nm, Single-Mode, 10 km)	

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM E
FOR MEETING OF AUGUST 12, 2025

SUBJECT: For Possible Action: Approve Contract No. ES-25-SEL between the successful bidder, SEL Engineering Services, Inc., and the Colorado River Commission of Nevada, pursuant to Bid Solicitation No. 69CRC-S3216, for High Voltage Systems Engineering Services, in an amount not to exceed $1,200,000, with the contract ending July 31, 2029.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: Staff recommend the Commission approve the contract and authorize the Executive Director to sign the contract on behalf of the Commission.
FISCAL IMPACT: Contract not to exceed $1,200,000.

STAFF COMMENTS AND BACKGROUND:

A. Power Delivery Group's Six Year Project Plan

The Colorado River Commission of Nevada's (Commission) Power Delivery Group (PDG) operates an electrical system that delivers power to the Southern Nevada Water Authority (SNWA), including major municipalities in Southern Nevada, for water pumping and wastewater treatment. This system supplies the energy required to transport water throughout much of the Las Vegas Valley.

Since the late 1990s, the PDG has been constructing and expanding this electrical system to support SNWA operations. Today, the system includes 27 high-voltage substations, with three additional substations expected to be completed within the next two years. It also comprises various underground and overhead transmission lines—32 miles currently in service, with an additional 10 miles projected for completion by the end of 2025. The infrastructure is increasingly stressed by the intensifying summer temperatures in the Las Vegas Valley.

B. Industry Practice and Purpose for Contracts

In the utility industry, it is standard practice to engage external firms for maintenance and testing, especially for highly specialized or labor-intensive work. The PDG seeks to broaden its contractor base to foster competition and create opportunities for additional qualified firms to deliver specialized services.

C. Background of Bid/Procurement

On March 7, 2025, Bid Solicitation No. 69CRC-S3216 was posted in NVEPro. Solicitations were sent to 24 registered vendors, and the deadline for submission was 2:00 p.m. on April 10, 2025. Six proposals were received. The evaluation committee reviewed the submissions and selected the proposal from SEL Engineering Services, Inc. as the most responsive and qualified.

D. Proposed Contract

The proposed contract with SEL Engineering Services, Inc. is focused on construction and repair services, with a term ending July 31, 2029, and a total not-to-exceed amount of $1,200,000. This is

an enabling contract, allowing the Commission to issue purchase orders for specific scopes of work with individually negotiated costs.

E. Staff's Recommendation

Staff recommend the Commission approve Contract No. ES-25-SEL and authorize the Executive Director to sign the contract.

RFP# 69CRC-S3216

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

A Contract Between the State of Nevada
Acting by and Through its

Agency Name:	**Colorado River Commission of Nevada**
Address:	**100 N. City Pkwy, Suite 1100**
City, State, Zip Code:	**Las Vegas, Nevada 89106**
Contact:	**Shae Pelkowski**
Phone:	**702-376-9997**
Email:	**spelkowski@crc.nv.gov**

and

Contractor Name:	**SEL Engineering Services, Inc.**
Address:	**2350 NE Hopkins Court**
City, State, Zip Code:	**Pullman, Washington 99163**
Contact:	**Contracts and Legal**
Phone:	**509-339-5465**
Email:	**selcontracts@selinc.com**

WHEREAS, NRS 333.700(8)(b) authorizes state departments and agencies to contract for any work of construction or major repairs of state buildings without approval from the Board of Examiners, if the contracting process is controlled by the rules of competitive bidding;

WHEREAS, the Colorado River Commission of Nevada, pursuant to NRS 538.161, represents and acts for the State of Nevada in negotiation and execution of contracts for the use, planning, development or ownership of any facilities for the generation or transmission of electricity for the greatest possible benefit to this State; and

WHEREAS, it is deemed that the service of Contractor is both necessary and in the best interests of the State of Nevada.

NOW, THEREFORE, in consideration of the aforesaid premises, the parties mutually agree as follows:

1. **DEFINITIONS**.

A. "State" – means the State of Nevada and any State agency identified herein, its officers, employees and immune contractors as defined in NRS 41.0307.

B. "Contracting Agency" – means the State agency identified above.

C. "Contractor" – means the person or entity identified above that performs services for the State under the terms and conditions set forth in this Contract.

D. "Fiscal Year" – means the period beginning July 1st and ending June 30th of the following year.

E. "Contract" – Unless the context otherwise requires, "Contract" means this document entitled Contract for Services of Independent Contractor and all Attachments or Incorporated Documents.

F. "Contract for Independent Contractor" – means this document entitled Contract for Services of Independent Contractor exclusive of any Attachments or Incorporated Documents.

2. **CONTRACT TERM.** This Contract shall be effective as noted below, unless sooner terminated by either party as specified in *Section 9, Contract Termination*.

Effective from:	August 12, 2025	To:	July 31, 2029

3. **NOTICE**. All communications, including notices, required or permitted to be given under this Contract shall be in writing and directed to the parties at the addresses stated above. Notices may be given: (i) by delivery in person; (ii) by a nationally recognized next-day courier service, return receipt requested; (iii) email; or (iv) by certified mail, return receipt requested.

4. **INCORPORATED DOCUMENTS**. The parties agree that this Contract, inclusive of the following attachments, specifically describes the scope of work. This Contract incorporates the following attachments in descending order of constructive precedence:

ATTACHMENT AA:	SCOPE OF WORK
ATTACHMENT BB:	INSURANCE SCHEDULE
ATTACHMENT CC:	STATE SOLICITATION # 69CRC-S3216
ATTACHMENT DD:	VENDOR PROPOSAL

Any provision, term or condition of an Attachment that contradicts the terms of this Contract for Independent Contractor, or that would change the obligations of the State under this Contract for Independent Contractor, shall be void and unenforceable.

5. **CONSIDERATION**. The parties agree that Contractor will provide the services specified in *Section 5, Incorporated Documents* at a price as noted below:

$ agreed	per	Purchase Order
Total Contract Not to Exceed:	$1,200,000	

The State does not agree to reimburse Contractor for expenses unless otherwise specified in the incorporated attachments. Any intervening end to a biennial appropriation period shall be deemed an automatic renewal (not changing the overall Contract term) or a termination as the result of legislative appropriation may require.

6. **ASSENT**. The parties agree that the terms and conditions listed on incorporated attachments of this Contract are also specifically a part of this Contract and are limited only by their respective order of precedence and any limitations specified.

7. **BILLING SUBMISSION: TIMELINESS**. The parties agree that timeliness of billing is of the essence to the Contract and recognize that the State is on a Fiscal Year. All billings for dates of service prior to July 1 must be submitted to the State no later than the first Friday in August of the same calendar year. A billing submitted after the first Friday in August, which forces the State to process the billing as a stale claim pursuant to NRS 353.097, will subject Contractor to an administrative fee not to exceed one hundred dollars ($100.00). The parties hereby agree this is a reasonable estimate of the additional costs to the State of processing the billing as a stale claim and that this amount will be deducted from the stale claim payment due to Contractor. The State will pay Contractor's billing within 45 days from receiving a correct and timely billing.

8. **INSPECTION & AUDIT**.

A. Books and Records. Contractor agrees to keep and maintain under generally accepted accounting principles (GAAP) full, true and complete records, contracts, books, and documents as are necessary to fully disclose to the State or

United States Government, or their authorized representatives, upon audits or reviews, sufficient information to determine compliance with all State and federal regulations and statutes.

B. Inspection & Audit. Contractor agrees that the relevant books, records (written, electronic, computer related or otherwise), including, without limitation, relevant accounting procedures and practices of Contractor or its subcontractors shall be subject, at any reasonable time, to inspection, examination, review, and audit at the headquarters location of Contractor where such records may be found, with or without notice by the State Auditor, the relevant State agency or its contracted examiners, the department of Administration, Budget Division, the Nevada State Attorney General's Office or its Fraud Control Units, the state Legislative Auditor, and with regard to any federal funding, the relevant federal agency, the Comptroller General, the General Accounting Office, the Office of the Inspector General, or any of their authorized representatives. All subcontracts shall reflect the requirements of this Section. The State shall not have access to Contractor's composition of fixed overhead rates or lump sums, the financial make up of payroll burdens nor to any costs expressed as a percentage of direct labor costs. The State will sign a non-disclosure agreement to protect any confidential information of Contractor prior to conducting an audit provided such information is confidential under Nevada law.

C. Period of Retention. All books, records, reports, and statements relevant to this Contract must be retained a minimum three (3) years, and for five (5) years if any federal funds are used pursuant to the Contract. The retention period runs from the date of payment for the relevant services by the State, or from the date of termination of the Contract, whichever is later. Retention time shall be extended when an audit is scheduled or in progress for a period reasonably necessary to complete an audit and/or to complete any administrative and judicial litigation which may ensue.

9. **CONTRACT TERMINATION**.

A. Termination Without Cause. Regardless of any terms to the contrary, this Contract may be terminated upon written notice by mutual consent of both parties. The State unilaterally may terminate this contract without cause by giving not less than thirty (30) days' prior written notice in the manner specified in *Section 3, Notice*. If this Contract is unilaterally terminated by the State, Contractor shall use its best efforts to minimize cost to the State and Contractor will not be paid for any cost that Contractor could have reasonably avoided, and the State shall pay Contractor for all non-cancellable obligations, expense incurred, and close out costs.

B. State Termination for Non-Appropriation. The continuation of this Contract beyond the current biennium is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the State Legislature and/or federal sources. The State may terminate this Contract, and Contractor waives claims(s) for damages related to such termination, effective immediately upon receipt of written notice (or any date specified therein) if for any reason the contracting Agency's funding from State and/or federal sources is not appropriated or is withdrawn, limited, or impaired. Such waiver shall not apply to unpaid amounts for services provided.

C. Termination with Cause for Breach. A breach may be declared with or without termination. A notice of breach and termination shall specify the date of termination of the Contract, which shall not be sooner than the expiration of the Time to Correct, if applicable, allowed under subsection 9D. This Contract may be terminated by either party upon written notice of breach to the other party on the following grounds:

1) If Contractor fails to provide or satisfactorily perform any of the conditions, work, deliverables or services called for by this Contract within the time requirements specified in this Contract or within any granted extension of those time requirements; or

2) If any state, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the services required by this Contract is for any reason denied, revoked, debarred, excluded, terminated, suspended due to Contractor's breach, lapsed, or not renewed; or

3) If either Party becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the Bankruptcy Court; or

4) If the State materially breaches any material duty under this Contract and any such breach impairs Contractor's ability to perform; or

5) If it is found by the State that any quid pro quo or gratuities in the form of money, services, entertainment, gifts, or otherwise were offered or given by Contractor, or any agent or representative of Contractor, to any officer or employee of the State of Nevada with a view toward securing a contract or securing favorable treatment with respect to awarding, extending, amending, or making any determination with respect to the performing of such contract; or

6) If it is found by the State that Contractor has failed to disclose any material conflict of interest relative to the performance of this Contract; or

7) If the State fails to pay Contractor in accordance with this Contract.

D. Time to Correct. Unless the breach is not curable, or unless circumstances do not permit an opportunity to cure, termination upon declared breach may be exercised only after service of formal written notice as specified in *Section 3, Notice*, and the subsequent failure of the breaching party within fifteen (15) calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared breach has been corrected or commencement of such correction is underway. Upon a notice of breach, the time to correct and the time for termination of this Contract upon breach under subsection 9C, above, shall run concurrently, unless the notice expressly states otherwise.

E. Winding Up Affairs Upon Termination. In the event of termination of this Contract for any reason, the parties agree that the provisions of this Section survive termination:

1) The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Contract;

2) Contractor shall execute any documents and take any actions necessary to effectuate an assignment of this Contract if so requested by the Contracting Agency;

3) Contractor shall preserve, protect and promptly deliver into State possession all proprietary information provided by the State in accordance with *Section 20, State Ownership of Proprietary Information*.

10. **REMEDIES**. Except as otherwise provided for by law or this Contract, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, actual damages, and to a prevailing party reasonable attorneys' fees and costs. For purposes of an award of attorneys' fees to either party, the parties stipulate and agree that a reasonable hourly rate of attorneys' fees shall be three hundred dollars ($300.00) per hour. The State may set off consideration against any unpaid obligation of Contractor to any State agency in accordance with NRS 353C.190. In the event that Contractor voluntarily or involuntarily becomes subject to the jurisdiction of the Bankruptcy Court, the State may set off consideration against any unpaid obligation of Contractor to the State or its agencies, to the extent allowed by bankruptcy law, without regard to whether the procedures of NRS 353C.190 have been utilized.

11. **LIMITED LIABILITY**. The State will not waive and intends to assert available NRS Chapter 41 liability limitations in all cases. Neither party shall have any liability or responsibility for or with respect to consequential, special, indirect, incidental, exemplary, or punitive damages, claims, losses, or liabilities, in all cases, regardless of the foreseeability thereof or having been advised of the possibility of any thereof. Contract liability of both parties shall not be subject to punitive damages. Damages for any State breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to Contractor, for the Fiscal Year budget in existence at the time of the breach. Contractor's maximum aggregate liability under or with respect to this Contract, from any cause and based on any theory whatsoever, other than Third-Party claims indemnified by Contractor hereunder and Contractor's (including parties under its control) gross negligence, fraud, willful misconduct, and/or breach of confidentiality provisions, shall not exceed $2,000,000. Contractor's maximum aggregate liability for Third-Party Claims shall not exceed Five Million Dollars ($5,000,000). This Section 11 shall survive the expiration or termination of this Contract.

12. **FORCE MAJEURE**. Neither party shall be deemed to be in violation of this Contract if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including without limitation, earthquakes, floods, winds, or storms. In such an event the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of the Contract after the intervening cause ceases.

13. **INDEMNIFICATION AND DEFENSE**. To the fullest extent permitted by law, Contractor shall defend, not excluding the State's right to participate, all claims brought against the State by a third party ("Third-Party Claims") and indemnify and hold the State harmless for liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, (collectively "Damages") resulting from Third-Party Claims to the extent that such Third-Party Claims and Damages are arising out of any breach of the obligations of Contractor under this Contract, or any alleged negligent or willful acts or omissions of Contractor, its officers, employees and agents. Contractor's obligation to indemnify the State shall apply except for Third-Party Claims arising from the State's own negligence or willful misconduct. Contractor waives any rights of subrogation against the State.

    a. **Assumption of Defense.** Regarding Contractor's defense obligation: (a) Contractor shall assume the defense of a Third-Party Claim through counsel chosen by Contractor; and (b) the State shall: (i) give prompt written notice of the Third-Party Claim to Contractor; (ii) provide reasonable assistance to Contractor in the defense of the Third-Party Claim; (iii) mitigate damages related to the Third-Party Claim; and (iv) give Contractor full control of all aspects of defense of the Third-Party Claim, including settlement, except as otherwise provided herein. Contractor shall obtain written consent from the State before settling the Third-Party Claim if the proposed settlement requires action by the State or contains an admission of liability or wrongdoing by the State. The State may, at its sole option and expense, participate in the defense of such Third-Party Claim with counsel chosen by the State.

    b. Additionally, if the Third-Party Claim against the State is not covered by Contractor's insurance policy maintained pursuant to this Contract, then Contractor shall: (a) bear all costs of defense; provided, however, if the State is determined to be liable for the Third-Party Claim, then: (i) the State shall reimburse Contractor for the costs of defense in proportion to the State's liability, as determined by the trier of fact or agreed to in a written settlement between Contractor and the State; and (ii) Contractor's duty to defend shall cease to the extent that the State is found to have been liable; and (b) pay Damages in proportion to Contractor's liability, as determined by the trier of fact or agreed to in a written settlement between Contractor and the State.

    c. **Exclusive Remedy.** The indemnity provided by Contractor herein shall be the State's exclusive remedy for Third-Party Claims and resulting Damages.

14. **REPRESENTATIONS REGARDING INDEPENDENT CONTRACTOR STATUS**. Contractor represents that it is an independent contractor, as defined in NRS 333.700(2) and 616A.255, warrants that it will perform all work under this contract as an independent contractor, and warrants that the State of Nevada will not incur any employment liability by reason of this Contract or the work to be performed under this Contract. To the extent the State incurs any employment liability for the work under this Contract; Contractor will reimburse the State for that liability.

15. **INSURANCE SCHEDULE.** Unless expressly waived in writing by the State, Contractor must carry policies of insurance and pay all taxes and fees incident hereunto. Policies shall meet the terms and conditions as specified within this Contract along with the additional limits and provisions as described in *Attachment BB*, incorporated hereto by attachment. The State shall have no liability except as specifically provided in the Contract.

    Contractor shall not commence work before Contractor has provided the required evidence of insurance to the Contracting Agency. The State's approval of any changes to insurance coverage during the course of performance shall constitute an ongoing condition subsequent to this Contract. Any failure of the State to timely approve shall not constitute a waiver of the condition.

    A. Insurance Coverage. Contractor shall, at Contractor's sole expense, procure, maintain and keep in force for the duration of the Contract insurance conforming to the minimum limits as specified in *Attachment BB*, incorporated hereto by attachment. Unless specifically stated herein or otherwise agreed to by the State, the required insurance shall be in effect prior to the commencement of work by Contractor and shall continue in force as appropriate until:

        1) Final acceptance by the State of the completion of this Contract; or
        2) Such time as the insurance is no longer required by the State under the terms of this Contract; whichever occurs later.

        Any insurance or self-insurance available to the State shall be in excess of and non-contributing with, any insurance required from Contractor. Contractor's insurance policies shall apply on a primary basis. Until such time as the insurance is no longer required by the State, Contractor shall provide the State with renewal or replacement evidence

of insurance no less than thirty (30) days before the expiration or replacement of the required insurance. If at any time during the period when insurance is required by the Contract, an insurer or surety shall fail to comply with the requirements of this Contract, as soon as Contractor has knowledge of any such failure, Contractor shall immediately notify the State and immediately replace such insurance or bond with an insurer meeting the requirements.

B. General Requirements.

1) Additional Insured: By endorsement to the general liability insurance policy, the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 shall be named as additional insureds for all liability arising from the Contract.

2) Waiver of Subrogation: Each insurance policy shall provide for a waiver of subrogation against the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 for losses arising from work/materials/equipment performed or provided by or on behalf of Contractor.

3) Cross Liability: All required liability policies shall provide cross-liability coverage as would be achieved under the standard ISO separation of insureds clause.

4) Deductibles and Self-Insured Retentions: Insurance maintained by Contractor shall apply on a first dollar basis without application of a deductible or self-insured retention unless otherwise specifically agreed to by the State. Such approval shall not relieve Contractor from the obligation to pay any deductible or self-insured retention. Any deductible or self-insured retention shall be the responsibility of Contractor.

5) Policy Cancellation: Except for ten (10) days' notice for non-payment of premiums, each insurance policy shall be endorsed to state that without thirty (30) days prior written notice to the State of Nevada, c/o Contracting Agency, the policy shall not be canceled, non-renewed or coverage and/or limits reduced or materially altered, and shall provide that notices required by this Section shall be sent by certified mail to the address shown on page one (1) of this contract.

6) Approved Insurer: Each insurance policy shall be:

a) Issued by insurance companies authorized to do business in the State of Nevada or eligible surplus lines insurers acceptable to the State and having agents in Nevada upon whom service of process may be made; and

b) Currently rated by A.M. Best as "A-VII" or better.

C. Evidence of Insurance.

Prior to the start of any work, Contractor must provide the following documents to the contracting State agency:

1) Certificate of Insurance: The Acord 25 Certificate of Insurance form or a form substantially similar must be submitted to the State to evidence the insurance policies and coverages required of Contractor. The certificate must name the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 as the certificate holder. The certificate should be signed by a person authorized by the insurer to bind coverage on its behalf. The State project/Contract number; description and Contract effective dates shall be noted on the certificate, and upon renewal of the policies listed, Contractor shall furnish the State with replacement certificates as described within *Section 15A, Insurance Coverage*.

Mail all required insurance documents to the State Contracting Agency identified on Page one of the Contract.

2) Additional Insured Endorsement: An Additional Insured Endorsement (CG 20 10 11 85 or CG 20 26 11 85), signed by an authorized insurance company representative, must be submitted to the State to evidence the endorsement of the State as an additional insured per *Section 15B, General Requirements*.

3) Schedule of Underlying Insurance Policies: If Umbrella or Excess policy is evidenced to comply with minimum limits, a copy of the underlying Schedule from the Umbrella or Excess insurance policy may be required.

4) Review and Approval: Documents specified above must be submitted for review and approval by the State prior to the commencement of work by Contractor. Neither approval by the State nor failure to disapprove the insurance furnished by Contractor shall relieve Contractor of Contractor's full responsibility to provide the insurance required by this Contract. Compliance with the insurance requirements of this Contract shall not be construed to be sufficient to protect Contractor or its subcontractors, employees or agents from liability while performing under this Contract.

16. **COMPLIANCE WITH LEGAL OBLIGATIONS.** Contractor shall procure and maintain for the duration of this Contract any state, county, city or federal license, authorization, waiver, permit qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the services required by this Contract. Contractor shall provide proof of its compliance upon request of the Contracting Agency. Contractor will be responsible to pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are the responsibility of Contractor in accordance with NRS 361.157 and NRS 361.159. Contractor agrees to be responsible for payment of any such government obligations not paid by its subcontractors during performance of this Contract. Contractor's quoted prices do not include sales, use, value added nor similar taxes which will be added as a separate line item to the invoice for the rate(s) applicable at the time of invoicing.

17. **WAIVER OF BREACH**. Failure to declare a breach or the actual waiver of any particular breach of the Contract or its material or nonmaterial terms by either party shall not operate as a waiver by such party of any of its rights or remedies as to any other breach.

18. **SEVERABILITY.** If any provision contained in this Contract is held to be unenforceable by a court of law or equity, this Contract shall be construed as if such provision did not exist and the non-enforceability of such provision shall not be held to render any other provision or provisions of this Contract unenforceable.

19. **ASSIGNMENT/DELEGATION.** To the extent that any assignment of any right under this Contract changes the duty of either party, increases the burden or risk involved, impairs the chances of obtaining the performance of this Contract, attempts to operate as a novation, or includes a waiver or abrogation of any defense to payment by State, such offending portion of the assignment shall be void, and shall be a breach of this Contract. Contractor shall neither assign, transfer nor delegate any rights, obligations nor duties under this Contract without the prior written consent of the State.

20. **STATE OWNERSHIP OF PROPRIETARY INFORMATION**. Any data or information provided by the State to Contractor and any documents or materials provided by the State to Contractor in the course of this Contract ("State Materials") shall be and remain the exclusive property of the State and all such State Materials shall be delivered into State possession by Contractor upon receipt by Contractor of the State's written request to return the State Materials.

21. **PUBLIC RECORDS**. Pursuant to NRS 239.010, information or documents received from Contractor may be open to public inspection and copying. The State has a legal obligation to disclose such information unless a particular record is made confidential by law or a common law balancing of interests. Contractor may label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 333.333, provided that Contractor thereby agrees to indemnify and defend the State for honoring such a designation. The failure to so label any document that is released by the State shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

22. **CONFIDENTIALITY**. Contractor shall keep confidential all information, in whatever form, produced, prepared, observed or received by Contractor to the extent that such information is confidential by law or otherwise required by this Contract. Subject to Nevada's public records law (NRS 239), Contracting Agency shall keep confidential all information, in whatever form, produced, prepared, observed or received by Contracting Agency to the extent that such information is marked as proprietary or confidential and is confidential by law.

23. **FEDERAL FUNDING**. In the event federal funds are used for payment of all or part of this Contract, Contractor agrees to comply with all applicable federal laws, regulations and executive orders, including, without limitation the following:

A. Contractor certifies, by signing this Contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency. This certification is made pursuant to Executive Orders 12549 and 12689 and Federal Acquisition Regulation subpart 9.4, and any relevant program-specific regulations. This provision shall be required of every subcontractor receiving any payment in whole or in part from federal funds.

B. Contractor and its subcontracts shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1990 (P.L. 101-136), 42 U.S.C. 12101, as amended, and regulations adopted thereunder, including 28 C.F.R. Section 35, inclusive, and any relevant program-specific regulations.

C. Contractor and it subcontractors shall comply with the requirements of the Civil Rights Act of 1964 (P.L. 88-352), as amended, the Rehabilitation Act of 1973 (P.L. 93-112), as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or offeror for employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition (including AIDS and AIDS-related conditions.)

24. **LOBBYING**. The parties agree, whether expressly prohibited by federal law, or otherwise, that no funding associated with this Contract will be used for any purpose associated with or related to lobbying or influencing or attempting to lobby or influence for any purpose the following:

A. Any federal, state, county or local agency, legislature, commission, council or board;

B. Any federal, state, county or local legislator, commission member, council member, board member, or other elected official; or

C. Any officer or employee of any federal, state, county or local agency; legislature, commission, council or board.

25. **GENERAL WARRANTY**. Contractor warrants that all services, deliverables, and/or work products under this Contract shall be completed in a workmanlike manner consistent with standards in the trade, profession, or industry; shall conform to or exceed the specifications set forth in the incorporated attachments; and shall be fit for the specified purpose, of good quality, with no material defects. Contractor shall reperform (or, at Contractor's option, pay a third party to reperform) any defective services at no cost upon receipt of notice detailing the defect(s) within two (2) years of performance of the original services. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER STATUTORY, EXPRESS, VERBAL, OR IMPLIED (INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE AND WARRANTIES ARISING FROM COURSE OF DEALING OR PERFORMANCE OR USAGE OF TRADE).

26. **PROPER AUTHORITY**. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract. Contractor acknowledges that as required by statute or regulation this Contract is effective only for the period of time specified in the Contract. Any services performed by Contractor before this Contract is effective or after it ceases to be effective are performed at the sole risk of Contractor.

27. **DISCLOSURES REGARDING CURRENT OR FORMER STATE EMPLOYEES**. For the purpose of State compliance with NRS 333.705, Contractor represents and warrants that if Contractor, or any employee of Contractor who will be performing services under this Contract, is a current employee of the State or was employed by the State within the preceding 24 months, Contractor has disclosed the identity of such persons, and the services that each such person will perform, to the Contracting Agency.

28. **ASSIGNMENT OF ANTITRUST CLAIMS**. Contractor irrevocably assigns to the State any claim for relief or cause of action which Contractor now has or which may accrue to Contractor in the future by reason of any violation of State of Nevada or federal antitrust laws in connection with any services provided under this Contract.

29. **GOVERNING LAW: JURISDICTION**. This Contract and the rights and obligations of the parties hereto shall be governed by, and construed according to, the laws of the State of Nevada, without giving effect to any principle of conflict-of-law that would require the application of the law of any other jurisdiction. The parties consent to the exclusive jurisdiction of and venue in the state District Court, Clark County, Nevada for enforcement of this Contract, and consent to personal jurisdiction in such court for any action or proceeding arising out of this Contract.

30. **INTELLECTUAL PROPERTY**. Contractor retains all its intellectual property rights. All documents, designs, drawings, plans, specifications, and other work product (collectively "Work Product") prepared by Contractor in performing the project shall not be deemed "works made for hire" for the State. To the extent that any such Work Product prepared by Contractor while performing the project is integrated into the project, Contractor hereby grants the State a perpetual, worldwide, non-exclusive, non-transferable, personal, revocable, limited license to use, copy and modify such Work Product for internal business purposes only. Contractor's Work Product and/or designs for other projects shall not be used for any purpose except the applicable project without first obtaining Contractor's written consent. The State agrees to indemnify, defend and hold harmless Contractor and all related parties from and against any unauthorized use or reuse of

Work Product furnished by Contractor, and any changes made by the State or others relating to design documents produced by Contractor.

31. **ENTIRE CONTRACT AND MODIFICATION**. This Contract and its integrated attachment(s) constitute the entire agreement of the parties and as such are intended to be the complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Contract specifically displays a mutual intent to amend a particular part of this Contract, general conflicts in language between any such attachment and this Contract shall be construed consistent with the terms of this Contract. Unless otherwise expressly authorized by the terms of this Contract, no modification or amendment to this Contract shall be binding upon the parties unless the same is in writing and signed by the respective parties hereto and approved by the Office of the Attorney General. This Contract, and any amendments, may be executed in counterparts.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be signed and intend to be legally bound thereby.

SEL Engineering Services, Inc.

DocuSigned by:
Jeremy Nickels
CCC617F84DC94E9...

7/31/2025	Vice President of Finance - SEL Inc., as sole shareholder of SEL Engineering Services, Inc.
Name: Jeremy Nickels — Date	Title

Colorado River Commission of Nevada

	Executive Director
Eric Witkoski — Date	Title

Approved as to form by:

Office of the Attorney General

On:

Michelle Briggs, Special Counsel	Date

Attachment A A
Scope of Work

COLORADO RIVER COMMISSION OF NEVADA

High Voltage System Engineering Services

SCOPE OF WORK

MARCH 2025

REVISION 0

Revisions

REVISION	DESCRIPTION	DATE
0	INITIAL ISSUE	03/06/2025

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01 00 00 – GENERAL REQUIREMENTS

01 11 00 - SUMMARY OF WORK

1. **Objective**
    a. The Colorado River Commission of Nevada (CRCNV, Owner) Power Delivery Group (PDG) is looking for qualified substation and transmission line engineering services contractors for requesting engineering support services from the Contractor on an as requested basis.
2. **Scope of Work**
    a. NRS 333.700(8)(b) authorizes state departments and agencies to contract for any work of construction or major repairs of state buildings without approval from the Board of Examiners if the contracting process is controlled by the rules of competitive bidding.
    b. The Colorado River Commission of Nevada, pursuant to NRS 538.161, negotiates and contracts for the planning, development or ownership of any facilities for the generation or transmission of electricity for the greatest possible benefit to this State.
    c. This scope of work covers the ability to use a contractor for the purpose of maintaining the Colorado River Commission of Nevada's high voltage transmission and substation public works assets.
    d. The services to be performed by the vendor consist of engineering, drafting, and analysis, as may be required from time to time, for (1) the routine operation and maintenance of a high voltage transmission and distribution system, or (2) the upgrade, repair or extension of a high voltage transmission and distribution system.
    e. Contractor should be willing and capable of providing at a minimum the following services:
        i. General
            1. Preparation of designs and specifications for replacement, repair, modification, upgrade or extension projects;

2. Large scale multi discipline work to assist in Capital project development and execution for new facilities to the system.
3. Preparation of cost estimates for incorporation in CRCNV budgeting processes for future execution of work.
4. Drawing support to assist with field marks, new drawing creation, moving to new drawing management systems, etc.

ii. Substation
   1. Operations and maintenance related projects such as breaker replacements, relay replacements, SCADA I/O upgrades and replacements, etc.
   2. Preparation of spill prevention and counter control plans for substation oil containing equipment;

iii. Transmission
   1. Operations and maintenance related projects such as OPGW fiber replacement, re-conductoring, structure analysis and replacement, etc.
   2. Preparation of right-of-way encroachment analysis, including phase-to-phase clearance requirements from planned third party transmission lines.
   3. Preparation of transmission structure re-location designs;

iv. Distribution
   1. Preparation of right-of-way encroachment analysis, including phase-to-phase clearance requirements from planned third party distribution lines.
   2. New or updated distribution drop designs, structure analysis and recommendations, etc.
   3. Preparation of distribution structure re-location designs;

v. Networking and Automation
   1. Supervisory and data acquisition control system programming
      a. Survalent SCADA System
      b. SEL Relay and SCADA Aggregation System
      c. Legacy ABB Relaying
      d. Legacy Schneider Modicon PLC System

e. Legacy Wonderware SCADA System

2. Communication system planning and analysis, including preparation of microwave signal interference studies.
3. Networking upgrade designs, switch replacements and upgrades, SONET ring upgrade designs, etc.

vi. System Coordination and Protection

1. Preparation of fault duty studies, relay coordination studies, load flow studies and other similar type system studies needed to effectively monitor and control the electric system;
2. Analysis of fault data and relay target data to identify the causes of various relay operations;
3. Preparation of relay settings for various relay types, line, transformer, feeder, etc.

vii. Studies and Strategic Planning

1. Preparation of standard operating procedures, preventative maintenance programs, site security reviews and emergency response plans;

3. Required Deliverables

a. Determined during project planning phase and to be included in contractor proposal, examples below:

i. Plan Drawings
ii. Plan and Profile Drawings
iii. Schematics
iv. Wiring Diagrams
v. Detail Drawings
vi. Cable Schedules
vii. Bill of Materials
viii. Surveying Documents
ix. Reports
x. Relay Settings and networking configuration files in applicable file format

4. Work by Owner

a. The CRCNV will perform all switching at substation facilities in support of the Work by the Contractor.
b. The CRCNV will provide reasonable access to the transmission and distribution facilities, 7:00 a.m. to 5:00 p.m., Monday through Thursday during periods which work has been scheduled.
c. The CRCNV, subject to availability, may provide a designated area for Contractor's use to store tools, equipment and materials as indicated in a written Purchase Order.
d. The CRCNV will provide drawings and technical data related to its transmission and distribution system to the Contractor as necessary in order for the Contractor to perform the Work. Copies of documents obtained pursuant to this Contract shall be returned to the CRCNV upon termination of this Contract.

Attachment BB
Insurance Schedule

ATTACHMENT BB

INSURANCE SCHEDULE

Consultant and sub-consultants shall procure and maintain until all of their obligations have been discharged, including any warranty periods under this Contract are satisfied, insurance against claims for injury to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Consultant, his agents, representatives, employees or sub-consultants.

A. MINIMUM SCOPE AND LIMITS OF INSURANCE - Consultant shall provide coverage with limits of liability not less than those stated below. An excess liability policy or umbrella liability policy may be used to meet the minimum liability requirements provided that the coverage is written on a "following form" basis.

1. Commercial General Liability – Occurrence Form. Policy shall include bodily injury, property damage, broad form contractual liability and XCU coverage.

General Aggregate	$2,000,000
Products – Completed Operations Aggregate	$1,000,000
Personal and Advertising Injury	$1,000,000
Each Occurrence	$1,000,000

a. The policy shall be endorsed to include the following additional insured language: "The State of Nevada, Colorado River Commission of Nevada, shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Consultant".

b. Consultant's sub-consultants shall be subject to the same minimum requirements identified above.

2. Automobile Liability

Bodily injury and property damage for any owned, hired, and non-owned vehicles used in the performance of this Contract.

Combined Single Limit (CSL)	$1,000,000

a. The policy shall be endorsed to include the following additional insured language: "The State of Nevada, Colorado River Commission of Nevada, shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Consultant, including automobiles owned, leased, hired or borrowed by the Consultant".

b. Consultant's sub-consultants shall be subject to the same minimum requirements identified in this section.

3. Worker's Compensation and Employers' Liability

Workers' Compensation Statutory

Employers' Liability

Each Accident	$100,000
Disease – Each Employee	$100,000
Disease – Policy Limit	$500,000

a. Policy shall contain a waiver of subrogation against the State of Nevada.

b. Consultant's sub-consultants shall be subject to the same minimum requirements identified in this section.

c. This requirement shall not apply when a contractor or subcontractor is exempt under N.R.S., AND when such contractor or subcontractor executes the appropriate sole proprietor waiver form.

4. Professional Liability (Errors and Omissions Liability)

Each Claim	$1,000,000
Annual Aggregate	$2,000,000

a. In the event that any professional liability insurance required by this Contract is written on a claims-made basis, Consultant warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of two (2) years beginning at the time work under this Contract is completed.

b. Policy shall contain a waiver of subrogation against the State of Nevada.

B. ADDITIONAL INSURANCE REQUIREMENTS: The policies shall include, or be endorsed to include, the following provisions:

1. On insurance policies where the State of Nevada is named as an additional insured, the State shall be an additional insured to the full limits of liability purchased by the Consultant even if those limits of liability are in excess of those required by this Contract.

2. The Consultant's insurance coverage shall be primary insurance and non-contributory with respect to all other available sources.

C. NOTICE OF CANCELLATION: Contractor shall for each insurance policy required by the insurance provisions of this Contract shall not be suspended, voided or canceled except after providing thirty (30) days prior written notice been given to the State, except when cancellation is for non-payment of premium, then ten (10) days prior notice may be given. Such notice shall be sent directly to (Gina Goodman at 100 N. City Pkwy, Ste 1100, Las Vegas, NV 89106). Should contractor fail to provide State timely notice, contractor will be considered in breach and subject to cure provisions set forth within this contract.

D. ACCEPTABILITY OF INSURERS: Insurance is to be placed with insurers duly licensed or authorized to do business in the state of Nevada and with an "A.M. Best" rating of not less than A-VII. The State in no way warrants that the above-required minimum insurer rating is sufficient to protect the Consultant from potential insurer insolvency.

E. VERIFICATION OF COVERAGE: Consultant shall furnish the State with certificates of insurance (ACORD form or equivalent approved by the State) as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

All certificates and any required endorsements are to be received and approved by the State before work commences. Each insurance policy required by this Contract must be in effect at or prior to commencement of work under this Contract and remain in effect for the duration of the project. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of contract.

All certificates required by this Contract shall be sent directly to (Gina Goodman at 100 N. City Pkwy, Ste 1100, Las Vegas, NV 89106). The State project/contract number and project description shall be noted on the certificate of insurance.

F. SUBCONSULTANTS: All required sub-consultants' certificates and endorsements are to be received and approved by the State before work commences. All insurance coverages for sub-consultants shall be subject to the minimum requirements identified above, unless otherwise specified in this Contract.

G. APPROVAL: Any modification or variation from the insurance requirements in this Contract shall be made by the State Attorney General's Office or the Risk Manager, whose decision shall be final. Such action will not require a formal Contract amendment, but may be made by administrative action.

Attachment CC
State Solicitation # 69CRC-S3216

STATE OF NEVADA
Colorado River Commission of Nevada
100 N. City Parkway, Suite 1100 | Las Vegas, NV 89106 Phone: 775-684-0170 | Fax: 775-684-0188

Solicitation: **69CRC-S3216**
For
High Voltage System Engineering Services

Release Date: **03/07/2025**
Deadline for Submission and Opening Date and Time: **4/10/2025 @ 2:00 pm**

Single point of contact for the solicitation:
David Rodriguez, Power Systems Engineering Manager
Phone, 702-373-9403
Email Address, drodriguez@crc.nv.gov

(TTY for Deaf and Hard of Hearing, 800-326-6868
Ask the relay agent to dial, 1-775-515-5173/V.)

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1. APPLICABLE REGULATIONS GOVERNING PROCUREMENT

1.1. All applicable Nevada Revised Statutes (NRS) and Nevada Administrative Code (NAC) documentation can be found at: www.leg.state.nv.us/law1.cfm.

1.2. Prospective vendors are advised to review Nevada's ethical standards requirements, including but not limited to NRS 281A, NRS 333.800, and NAC 333.155.

2. PROJECT OVERVIEW

2.1. The State of Nevada, Colorado River Commission of Nevada is seeking proposals from qualified vendors to provide High Voltage System Engineering Services as described in the scope of work and attachments.

2.2. The State intends to award multiple contracts in conjunction with this Request for Proposals (RFP), as determined in the best interests of the State. The Colorado River Commission of Nevada shall administer contract(s) resulting from this solicitation. The resulting contract(s) are expected to be for a contract term of four years.

2.3. AGENCY BACKGROUND

2.3.1. The Colorado River Commission of Nevada (CRCNV) owns and operates high-voltage transmission and distribution system consisting of two 230/69-kV substations, three 230/14.4-kV substations, four 69/13.8-kV substations, seven 69/4.16-kV substation, 32 miles of 230-kV transmission lines, 5 miles 69-kV overhead transmission lines, eleven miles of 69-kV underground transmission lines and other related facilities in Clark County, Nevada. In addition, the Commission is responsible for the operation and maintenance of ten additional substations owned by the Southern Nevada Water Authority and three owned by the Clark County Water Reclamation District.

2.4. GOALS AND OBJECTIVES

2.4.1. The goal of this solicitation can be seen in Attachment A – Scope of Work.

3. SCOPE OF WORK

3.1. See Attachments 4.1.1.

4. ATTACHMENTS

4.1. ATTACHMENTS INCORPORATED BY REFERENCE. To be read and not returned.

4.1.1. Attachment A - Scope of Work
4.1.2. Attachment B - Terms and Conditions for Services

4.2. ATTACHMENTS FOR REVIEW. To be read and not returned (unless redlining).

4.2.1. Attachment C – Standard Form Contract
4.2.2. Attachment D - Insurance Schedule

4.3. PROPOSAL ATTACHMENTS. To be completed and returned in proposal.

4.3.1. Attachment E - Cost Schedule
4.3.2. Attachment F - Proposed Staff Resume
4.3.3. Attachment G - Reference Questionnaire
4.3.4. Attachment H - Vendor Information Response – **Must Be Signed**
   A. Vendor Contact Information
   B. Vendor Information
   C. Payment Authorization for use of Procurement Card
   D. Name of Individual Authorized to Bind the Organization
   E. Vendor Certifications
   F. Confidentiality and Certification of Indemnification
   G. Certification Regarding Lobbying

5. TIMELINE

5.1. QUESTIONS. All questions regarding this solicitation shall be submitted using the Bid Q&A feature in NevadaEPro.

5.2. TIMELINE. The following represents the proposed timeline for this project.

5.2.1. All times stated are Pacific Time (PT).
5.2.2. These dates represent a tentative schedule of events.
5.2.3. The State reserves the right to modify these dates at any time.

A. Deadline for Questions .....No later than 5:00 pm on 03/27/2025
B. Answers Posted..... On or about 04/03/2025
C. Deadline for References.....No later than 5:00 pm on 04/09/2025
D. Deadline Proposal Submission and Opening .....No later than 2:00 pm on 4/10/2025
E. Evaluation Period (estimated).....04/10/2025 - 04/24/2025
F. Selection of a Vendor (estimated)..... On or about 04/24/2025
G. Contract start date (estimated) 05/15/2025

6. EVALUATION

6.1. Evaluation and scoring are conducted in accordance with NRS 333.335 and NAC 333.160-333.165.

6.1.1. Proposals shall be kept confidential until a contract is awarded.
6.1.2. In the event that the solicitation is withdrawn prior to award, proposals remain confidential.
6.1.3. The evaluation committee is an independent committee established to evaluate and score proposals submitted in response to the solicitation.
6.1.4. Financial stability shall be scored on a pass/fail basis.
6.1.5. Proposals shall be consistently evaluated and scored based upon the following factors and relative weights.

A. Addressed all Scope of Work items.....50
B. Provided examples of Contractor's industry experience on all Scope of Work items 35
C. Provided example of final product/deliverables 5
D. Cost Factor.....8
E. No redlines of State contract.....2

6.1.6. Cost proposals will be evaluated based on the following formula.

A. Cost Factor Weight x (Lowest Cost Submitted by a Vendor / Proposer Total Cost) = Cost Score

6.1.7. Presentations

A. Following evaluation and scoring specified above, the State may require vendors to make a presentation of their proposal to the evaluation committee or other State staff, as applicable.
B. The State, at its option, may limit participation in vendor presentations to vendors above a natural break in relative scores from technical and cost scores.
C. Following presentations, the combined technical, cost, and presentation scores will become the final score for a proposal.
D. The State reserves the right to add additional criteria or presentations.
E. The State reserves the right to forego vendor presentations and select vendor(s) based on the written proposals submitted.

6.2. NEVADA-BASED BUSINESS PREFERENCE

6.2.1. The State awards a five percent (5%) preference to Nevada-based businesses pursuant to NRS 333.3351 to 333.3356, inclusive.
6.2.2. Nevada-based business is defined in NRS 333.3352(1).
6.2.3. The term 'principal place of business' has the meaning outlined by the United States Supreme Court in Hertz Corp v. Friend, 559 U.S. 77 (2010), typically meaning a business's corporate headquarters.

6.2.4. To claim this preference a vendor must indicate it on their vendor account and submitted Quote in NevadaEPro.
6.2.5. This preference cannot be combined with any other preference, granted for the award of a contract using federal funds, or granted for the award of a contract procured on a multi-state basis.

6.3. INVERSE PREFERENCE

6.3.1. The State applies an inverse preference to vendors that have a principal place of business in a state other than Nevada and that state applies an in-state preference not afforded to Nevada based vendors, pursuant to AB28 passed in the 81st session of the Nevada Legislature.
6.3.2. The amount of the inverse preference is correlated to the amount of preference applied in the other state.
6.3.3. Vendors who meet this criterion must indicate it on their submitted Quote in NevadaEPro.
6.3.4. This preference cannot be combined with any other preference, granted for the award of a contract using federal funds, or granted for the award of a contract procured on a multi-state basis.

7. MANDATORY MINIMUM REQUIREMENTS

7.1. Pursuant to NRS 333.311 a contract cannot be awarded to a proposal that does not comply with the requirements listed in this section. Proposals shall include confirmation of compliance with all mandatory minimum requirements.

7.2. NEVADA LAW AND STATE INDEMNITY. Pursuant to NRS 333.339, any contract that is entered into may not: (1) Require the filing of any action or the arbitration of any dispute that arises from the contract to be instituted or heard in another state or nation; or (2) Require the State to indemnify another party against liability for damages.

7.3. NO BOYCOTT OF ISRAEL. Pursuant to NRS 333.338, the State of Nevada cannot enter a contract with a company unless that company agrees for the duration of the contract not to engage in a boycott of Israel. By submitting a proposal or bid, vendor agrees that if it is awarded a contract, it will not engage in a boycott of Israel as defined in NRS 333.338(3)(a).

7.4. INDEMNIFICATION. Required contract terms on Indemnification: "To the fullest extent permitted by law, Contractor shall indemnify, hold harmless and defend, not excluding the State's right to participate, the State from and against all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising out of any breach of the obligations of Contractor under this contract, or any alleged negligent or willful acts or omissions of Contractor, its officers, employees and agents. Contractor's obligation to indemnify the State shall apply in all cases except for claims arising solely from the State's own negligence or willful misconduct. Contractor waives any rights of subrogation against the State. Contractor's duty to defend begins when the State requests defense of any claim arising from this Contract."

7.5. LIMITED LIABILITY. Required contract terms on Limited Liability: "The State will not waive and intends to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. Damages for any State breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to Contractor, for the Fiscal Year budget in existence at the time of the breach. Contractor's tort liability shall not be limited."

7.6. CONTRACT RESPONSIBILITY. Awarded vendor shall be the sole point of contract responsibility. The State shall look solely to the awarded vendor for the performance of all contractual obligations which may result from an award based on this solicitation, and the awarded vendor shall not be relieved for the non-performance of any or all subcontractors.

7.7. DATA ENCRYPTION. State IT requires that data be encrypted in transit and in rest.

7.8. STATESIDE DATA. State IT requires that State data assets must be maintained in the United States and data will not be held offshore.

7.9. NEVADA BUSINESS LICENSE. Pursuant to NRS 353.007, prior to contract execution awarded vendor must hold a state business license pursuant to NRS chapter 76 unless exempted by NRS 76.100(7)(b).

7.10. DISCLOSURE. Each vendor shall include in its proposal a complete disclosure of any alleged significant prior or ongoing contract failures, contract breaches, any civil or criminal litigation or investigations pending which involves the vendor or in which the vendor has been judged guilty or liable.

8. CRITICAL ITEMS

8.1. In addition to the *Scope of Work* and *Attachments*, the items listed in this section are critical to the success of the project. These items will be used in evaluating and scoring the proposal. Vendor proposal should address items in this section in enough detail to provide evaluators an accurate understanding of vendor capabilities. Proposals that fail to sufficiently respond to these items may be considered non-responsive.

8.2. CONTRACT FORM. The State strongly prefers vendors agree to the terms of the attached *Contract Form* as is. Ability to agree to contract terms is a high priority to the State. Vendors who cannot agree to the contract as is must include a redlined Word version of the attached *Contract Form* with their proposal response. To the extent a vendor has prior contractual dealings with the State, no assumption should be made that terms outside those provided herein have any influence on this project.

8.3. INSURANCE SCHEDULE

8.3.1. The State strongly prefers vendors agree to the terms of the attached *Insurance Schedule* as is. Vendors who cannot agree must explain which areas are causing non-compliance and attach a red line if necessary.
8.3.2. Awarded vendor shall maintain, for the duration of the contract, insurance coverages as set forth in the fully executed contract.
8.3.3. Work on the contract shall not begin until after the awarded vendor has submitted acceptable evidence of the required insurance coverages.
8.3.4. Failure to maintain any required insurance coverage or acceptable alternative method of insurance shall be deemed a breach of contract.

8.4. VENDOR BACKGROUND

8.4.1. Company background/history and why vendor is qualified to provide the services described in this solicitation.
8.4.2. Provide a brief description of the length of time vendor has been providing services described in this solicitation to the public and/or private sector.

8.5. VENDOR STAFF RESUMES

8.5.1. A resume shall be included for each proposed key personnel, see *Proposed Staff Resume.*
8.5.2. A resume shall also be included for any proposed key subcontractor personnel.

8.6. SUBCONTRACTORS

8.6.1. Subcontractors are defined as a third party, not directly employed by the contractor, who shall provide services identified in this solicitation. This does not include third parties who provide support or incidental services to the contractor.
8.6.2. Proposal should include a completed *Vendor Information Response* form for each subcontractor.
8.6.3. Vendor shall not allow any subcontractor to commence work until all insurance required of the subcontractor is provided to the vendor.
8.6.4. Vendor proposal shall identify specific requirements of the project for which each subcontractor shall perform services.

A. How the work of any subcontractor(s) shall be supervised
B. How channels of communication shall be maintained
C. How compliance with contracts terms and conditions will be assured
D. Previous experience with subcontractor(s)

8.7. VENDOR FINANCIAL INFORMATION

8.7.1. The information requested in this section is designated as confidential business information by the Administrator pursuant to NRS 333.020(5)(b) and is not public information pursuant to NRS 333.333.
8.7.2. This information should be submitted as a separate attachment, flagged as confidential in NevadaEPro.
8.7.3. Proposing vendor shall provide the following financial information and documentation:

A. Dun and Bradstreet Number
B. Federal Tax Identification Number
C. The last two (2) full years and current year interim:

1. Profit and Loss Statements
2. Balance Statements

8.8. BUSINESS REFERENCES

8.8.1. The information requested in this section is designated as confidential business information by the Administrator pursuant to NRS 333.020(5)(b) and is not public information pursuant to NRS 333.333.
8.8.2. Vendors shall provide a minimum of three (3) business references from similar projects performed for private and/or public sector clients within the last five (5) years, see *Reference Questionnaire*.
8.8.3. The purpose of these references is to document relevant experience and aid in the evaluation process.
8.8.4. Business references should return *Reference Questionnaire* directly to Single Point of Contact via email.
8.8.5. Business references will not be accepted directly from proposing vendor.
8.8.6. The State will not disclose submitted references but will confirm if a reference has been received.
8.8.7. The State reserves the right to contact references during evaluation.

9. SUBMISSION CHECKLIST

9.1. This section identifies documents that shall be submitted to be considered responsive. Vendors are encouraged to review all requirements to ensure all requested information is included in their response.

9.1.1. Proposals must be submitted as a Quote through NevadaEPro, https://NevadaEPro.com.
9.1.2. Vendors are encouraged to submit a single file attachment per proposal section if possible.
9.1.3. Technical proposal information and Cost proposal information shall not be included in the same attachment.
9.1.4. Cost proposal attachment shall not be flagged as confidential in NevadaEPro.
9.1.5. Additional attachments may be included but are discouraged and should be kept to a minimum.

9.2. TECHNICAL PROPOSAL

A. Title Page
B. Table of Contents
C. Response to Mandatory Minimum Requirements
D. Response to Critical Items
E. Response to Scope of Work
F. Proposed Staff Resumes
G. Other Informational Material

9.3. PROPRIETARY INFORMATION. If necessary. Attachment should be flagged confidential in NevadaEPro.

A. Title Page
B. Table of Contents
C. Trade Secret information, cross referenced to the technical proposal

9.4. COST PROPOSAL

9.5. VENDOR FINANCIAL INFORMATION. Attachment should be flagged confidential in NevadaEPro.

9.6. SIGNED ATTACHMENTS

A. Vendor Information Response
B. Vendor Certifications
C. Confidentiality and Certification of Indemnification
D. Certification Regarding Lobbying

9.7. OTHER ATTACHMENTS. If necessary, not recommended.

9.8. REFERENCE QUESTIONNAIRES. Not submitted directly by vendor.

Attachment DD
Vendor Proposal

SEL Engineering Services 2025 Rate Table:

Table 1 T&E Rate Tables (USD)

Role	Weekday (per hour)	Weekday Overtime (per hour)	Saturday (per hour)	Sunday/ Holiday (per hour)	Travel (per hour)	Travel Expenses
Principal Engineer	$300.00	$450.00	$450.00	$600.00	$300.00	Cost + 10%
Senior Engineer	$225.00	$337.50	$337.50	$450.00	$225.00	Cost + 10%
Engineer	$175.00	$262.50	$262.50	$350.00	$175.00	Cost + 10%
Associate Engineer	$135.00	$202.50	$202.50	$270.00	$135.00	Cost + 10%
Senior Specialist	$210.00	$315.00	$315.00	$420.00	$210.00	Cost + 10%
Specialist	$145.00	$217.50	$217.50	$290.00	$145.00	Cost + 10%
Designer/Drafter	$115.00	$172.50	$172.50	$230.00	$115.00	Cost + 10%
Relay Technician	$150.00	$225.00	$225.00	$300.00	$150.00	Cost + 10%
Installation Technician	$115.00	$172.50	$172.50	$230.00	$115.00	Cost + 10%
Project Coordination	$125.00	$187.50	$187.50	$250.00	$125.00	Cost + 10%
Security Engineer	$265.00	$397.50	$397.50	$530.00	$265.00	Cost + 10%
Security Specialist	$225.00	$337.50	$337.50	$450.00	$225.00	Cost + 10%

VENDOR INFORMATION RESPONSE

Vendors shall complete and return this form in their proposal.
If the proposal includes subcontractors, form must be completed for each subcontractor as well.

1. VENDOR CONTACT INFORMATION

1.1 COMPANY NAME AND CONTACT INFORMATION:

The information provided in the table below shall be used for development of the contract, if awarded.

Requested Information	Response
Company Name:	SEL Engineering Services, Inc.
Company Street Address:	2350 NE Hopkins CT
City, State, Zip Code:	Pullman, WA 99163
Telephone Number, including area code:	509-332-1890
Toll Free Number, including area code:	
Email Address:	info@selinc.com

1.2 CONTACT PERSON FOR QUESTIONS/CONTRACT NEGOTIATIONS

Requested Information	Response
Name:	Dita Wexler
Title:	Contract Manager
Address:	2350 NE Hopkins CT
City, State, Zip Code:	Pullman, WA 99163
Email Address:	selcontracts@selinc.com
Telephone Number, including area code:	509-332-1890
Toll Free Number, including area code:	

2. VENDOR INFORMATION

2.1 Vendors shall provide an overall company profile in the following table:

Question	Response
Company Name:	SEL Engineering Services, Inc.
Ownership (sole proprietor, partnership, etc.):	Sole Proprietor
State of Incorporation:	New York State
Date of Incorporation:	January 7, 1929
# of years in business:	27
List of top officers:	VP: Michael Barber, Sr Eng Director: Bhrat Tummala, PHX Branch Manger: Milind Malichkar
Location of company headquarters, to include City and State:	Pullman, WA
Location(s) of the office that shall provide the services described in this RFP:	Phoenix, AZ
Number of employees locally with the expertise to support the requirements identified in this RFP:	20+
Number of employees nationally with the expertise to support the requirements in this RFP:	450+
Location(s) from which employees shall be assigned for this project:	Pullman, WA, Irvine CA, Phoenix, AZ, Irvine CA, Vacaville, CA, Boise, ID

2.2 VENDOR LICENSING

2.2.1 **Please be advised:** Pursuant to NRS 80.010, a corporation organized pursuant to the laws of another state shall register with the State of Nevada, Secretary of State's Office as a foreign corporation before a contract can be executed between the State of Nevada and the awarded vendor, unless specifically exempted by NRS 80.015.

2.2.2 The selected vendor, prior to doing business in the State of Nevada, shall be appropriately licensed by the State of Nevada, Secretary of State's Office pursuant to NRS 76. Information regarding the Nevada Business License can be located at http://nvsos.gov.

Question	Response			
Nevada Business License Number:	NV20161599323			
Legal Entity Name:	SEL Engineering Services, Inc.			
Is the Legal Entity Name the same name as vendor is Doing Business As (DBA)?	Yes	◉	No	○
If the answer is 'No', provide explanation below:				

VENDOR INFORMATION RESPONSE

2.3 STATE OF NEVADA EXPERIENCE

Question	Response			
Has the vendor ever been engaged under contract by any State of Nevada agency?	Yes	◉	No	○

2.3.1 If 'Yes', complete the following table for each State agency for whom the work was performed.

2.3.2 Table can be duplicated for each contract being identified.

Question	Response
State Agency Name:	Colorado River Commission of Nevda
State Agency Contact Name:	Chuck Bicknell
Dates Services Were Performed:	1/24/24 - 7/9/24
Type of Duties Performed:	SCADA upgrade
Total Dollar Value of the Contract:	$25k

2.4 CURRENT OR FORMER EMPLOYEE

Question	Response			
Are you now or have you been within the last two (2) years an employee of the State of Nevada, or any of its agencies, departments, or divisions?	Yes	○	No	◉
If 'Yes', please explain when the employee is planning to render services; i.e., while on annual leave, compensatory time, or on their own time?				

2.4.1 If you employ (a) any person who is a current employee of an agency of the State of Nevada, or (b) any person who has been an employee of an agency of the State of Nevada within the past two (2) years, and if such person shall be performing or producing the services which you shall be contracted to provide under this contract, you shall disclose the identity of each such person in your response to this RFP, and specify the services that each person shall be expected to perform.

2.5 PRIOR OR ONGOING CONTRACTUAL ISSUES

2.5.1 Disclosure of any significant prior or ongoing contract failures, contract breaches, civil or criminal litigation in which the vendor has been alleged to be liable or held liable in a matter involving a contract with the State of Nevada or any other governmental entity.

2.5.2 Any pending claim or litigation occurring within the past six (6) years which may adversely affect the vendor's ability to perform or fulfill its obligations if a contract is awarded as a result of this RFP shall also be disclosed.

Question	Response			
Does any of the above apply to your company?	Yes	○	No	◉

2.5.3 If 'Yes', please provide the information in the table below.

2.5.4 Table can be duplicated for each issue being identified.

VENDOR INFORMATION RESPONSE

Question	Response	
Date of alleged contract failure or breach:	N/A	
Parties involved:		
Description of the contract failure, contract breach, or litigation, including the products or services involved:		
Amount in controversy:		
Resolution or current status of the dispute:		
If the matter has resulted in a court case:	**Court**	**Case Number**
Status of the litigation:		

3. PAYMENT AUTHORIZATION FOR USE OF PROCUREMENT CARD

Using agencies may desire to use a Procurement Card as a method of payment to vendors.

PAYMENT AUTHORIZATION FOR USE OF PROCUREMENT CARD				
Question	Response			
Please indicate if you will accept this method of payment?	Yes	○	No	◉

4. NAME OF INDIVIDUAL AUTHORIZED TO BIND THE ORGANIZATION

Requested Information	Response
Name:	Bharat Tummala
Title:	Sr Engineering Director

4.1 SIGNATURE OF INDIVIDUAL AUTHORIZED TO BIND THE VENDOR

Individual shall be legally authorized to bind the vendor per NRS 333.337	
Signature:	T. Bharat
Date:	4/10/25

CONFIDENTIALITY AND CERTIFICATION OF INDEMNIFICATION

Submitted proposals, which are marked confidential in their entirety, or those in which a significant portion of the submitted proposal is marked confidential shall not be accepted by the State of Nevada. Pursuant to NRS 333.333, only proprietary information may be labeled a trade secret as defined in NRS 600A.030(5). All proposals are confidential until the contract is awarded; at which time, both successful and unsuccessful vendor proposals become public information.

In accordance with the submittal instructions of this RFP, vendors are requested to submit confidential information in separate files flagged as confidential in NevadaEPro.

The State shall not be responsible for any information contained within the proposal. If vendors do not comply with the labeling requirements, proposals shall be released as submitted. In the event a governing board acts as the final authority, there may be public discussion regarding the submitted proposals that shall be in an open meeting format, the proposals shall remain confidential.

By signing below, I understand it is my responsibility as the vendor to act in protection of the labeled information and agree to defend and indemnify the State of Nevada for honoring such designation. I duly realize failure to so act shall constitute a complete waiver, and all submitted information shall become public information; additionally, failure to label any information that is released by the State shall constitute a complete waiver of any and all claims for damages caused by the release of the information.

If this proposal contains Confidential Information, Trade Secrets and/or Proprietary information. Please initial the appropriate response in the boxes below and provide the justification for confidential status. Attached additional pages if necessary.

Proprietary Information	Yes ○	No ◉
Justification for Confidential Status:	SEL ES respectfully requests that our Master Agreement with Colorado River Commission SA-12-01 which is good until December 30, 2025, should an award be provided for our proposal.	
Company Name:	SEL Engineering Services, Inc.	
Signature:	T. Bharat	
Print Name:	Bharat Tummala	
Date:	4/10/25	

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or shall be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federally appropriated funds have been paid or shall be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, sub grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Vendor Name:	SEL Engineering Services, Inc.
Project Title:	
Print Name of Official Authorized to Sign Application:	Bharat Tummala
Signature of Official Authorized to Sign Application:	B Tummala
Date:	4/10/25

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM F
FOR MEETING OF AUGUST 12, 2025

SUBJECT: *For Possible Action:* Approve Contract No. SA-25-ProgUSA between the successful bidder, ProgUSA LLC and the Colorado River Commission of Nevada, based on Bid Solicitation No. 69CRC-S3219, for SF6 Gas Reclaimer Equipment and Service in an amount not to exceed $75,000 with the contract ending July 31, 2029.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: Staff recommend the Commission approve the contract and authorize the Executive Director to sign the contract on behalf of the Commission.
FISCAL IMPACT: Contract not to exceed $75,000.

STAFF COMMENTS AND BACKGROUND:

A. Power Delivery Group's Six Year Project Plan

The Colorado River Commission of Nevada's (Commission) Power Delivery Group (PDG) operates an electrical system that delivers power to the Southern Nevada Water Authority, including major cities in Southern Nevada for water pumping and waste-water treatment. The system provides the energy to move the water across a large part of the Las Vegas Valley.

The PDG started building an electrical system to provide service to SNWA in the late 1990s and the system has continued to grow over the past twenty-five plus years. Further, the system includes 27 high voltage substations, with three more expected to be completed in the next two years. The system also comprises various underground and overhead transmission lines, including 32 miles of existing transmission lines, with an additional ten miles planned for completion by the end of 2025. Furthermore, the system is exposed to increasing summer temperatures in the Las Vegas Valley, which place additional stress on infrastructure.

B. Industry Practice and Purpose for Contracts

In the utility industry, use of Sulfur Hexafluoride (SF6) is common in high voltage circuit breakers as an arc-extinguishing gas. However, SF6 is a more potent greenhouse gas than Carbon Dioxide and should be treated carefully. SA-25-ProgUSA allows us to purchase and maintain a SF6 recovery and filling cart to reduce SF6 gas leakage to the atmosphere during initial fill and maintenance operations.

C. Proposed Contract

The proposed contract with ProgUSA LLC will focus on SF6 Recovery and Filling Cart with a term ending July 31, 2029, and a total not-to-exceed amount of $75,000. This contract is an enabling contract to allow necessary work to be requested and performed under purchase orders that outline the specific scope of work and negotiated cost.

D. Staff's Recommendation

Staff recommend the Commission approve Contract No. SA-25-ProgUSA.

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM F
FOR MEETING OF AUGUST 12, 2025

CONTRACT FOR SERVICES OF INDEPENDENT CONTRACTOR

A Contract Between the State of Nevada
Acting by and Through its

Agency Name:	**Colorado River Commission of Nevada**
Address:	**100 N. City Pkwy, Suite 1100**
City, State, Zip Code:	**Las Vegas, Nevada 89106**
Contact:	**Shae Pelkowski**
Phone:	**702-376-9997**
Email:	**spelkowski@crc.nv.gov**

and

Contractor Name:	**ProgUSA LLC**
Address:	**311 Altamonte Commerce Blvd., Unit 1618**
City, State, Zip Code:	**Altamonte Springs FL 32714**
Contact:	**Debbie Langran**
Phone:	**407-332-8678**
Email:	**debbiel@progusa.net**

WHEREAS, NRS 333.700(8)(b) authorizes state departments and agencies to contract for any work of construction or major repairs of state buildings without approval from the Board of Examiners, if the contracting process is controlled by the rules of competitive bidding;

WHEREAS, the Colorado River Commission of Nevada, pursuant to NRS 538.161, represents and acts for the State of Nevada in negotiation and execution of contracts for the use, planning, development or ownership of any facilities for the generation or transmission of electricity for the greatest possible benefit to this State; and

WHEREAS, it is deemed that the service of Contractor is both necessary and in the best interests of the State of Nevada.

NOW, THEREFORE, in consideration of the aforesaid premises, the parties mutually agree as follows:

1. **DEFINITIONS**.

A. "State" – means the State of Nevada and any State agency identified herein, its officers, employees and immune contractors as defined in NRS 41.0307.

B. "Contracting Agency" – means the State agency identified above.

C. "Contractor" – means the person or entity identified above that performs services and/or provides goods for the State under the terms and conditions set forth in this Contract.

D. "Fiscal Year" – means the period beginning July 1st and ending June 30th of the following year.

E. "Contract" – Unless the context otherwise requires, "Contract" means this document entitled Contract for Services of Independent Contractor and all Attachments or Incorporated Documents.

F. "Contract for Independent Contractor" – means this document entitled Contract for Services of Independent Contractor exclusive of any Attachments or Incorporated Documents.

2. **CONTRACT TERM.** This Contract shall be effective as noted below, unless sooner terminated by either party as specified in *Section 9, Contract Termination*.

Effective from:	August 12, 2025	To:	July 31, 2029

3. **NOTICE**. All communications, including notices, required or permitted to be given under this Contract shall be in writing and directed to the parties at the addresses stated above. Notices may be given: (i) by delivery in person; (ii) by a nationally recognized next-day courier service, return receipt requested; or (iii) by certified mail, return receipt requested. If specifically requested by the party to be notified, valid notice may be given by electronic mail to the address(es) stated above.

4. **INCORPORATED DOCUMENTS**. The parties agree that this Contract, inclusive of the following attachments, specifically describes the scope of work. This Contract incorporates the following attachments in descending order of constructive precedence:

ATTACHMENT A:	SCOPE OF WORK
ATTACHMENT B:	INSURANCE SCHEDULE
ATTACHMENT C:	STATE SOLICITATION # 69CRC-S3219
ATTACHMENT D:	VENDOR PROPOSAL

Any provision, term or condition of an Attachment that contradicts the terms of this Contract for Independent Contractor, or that would change the obligations of the State under this Contract for Independent Contractor, shall be void and unenforceable.

5. **CONSIDERATION**. The parties agree that Contractor will provide the services specified in *Section 5, Incorporated Documents* at a cost as noted below:

$ agreed	per	Purchase Order
Total Contract Not to Exceed:	$75,000	

The State does not agree to reimburse Contractor for expenses unless otherwise specified in the incorporated attachments. Any intervening end to a biennial appropriation period shall be deemed an automatic renewal (not changing the overall Contract term) or a termination as the result of legislative appropriation may require.

6. **ASSENT**. The parties agree that the terms and conditions listed on incorporated attachments of this Contract are also specifically a part of this Contract and are limited only by their respective order of precedence and any limitations specified.

7. **BILLING SUBMISSION: TIMELINESS**. The parties agree that timeliness of billing is of the essence to the Contract and recognize that the State is on a Fiscal Year. All billings for dates of service prior to July 1 must be submitted to the state no later than the first Friday in August of the same calendar year. A billing submitted after the first Friday in August, which forces the State to process the billing as a stale claim pursuant to NRS 353.097, will subject Contractor to an administrative fee not to exceed one hundred dollars ($100.00). The parties hereby agree this is a reasonable estimate of the additional costs to the state of processing the billing as a stale claim and that this amount will be deducted from the stale claim payment due to Contractor.

8. **INSPECTION & AUDIT**.

A. Books and Records. Contractor agrees to keep and maintain under generally accepted accounting principles (GAAP) full, true and complete records, contracts, books, and documents as are necessary to fully disclose to the State or United States Government, or their authorized representatives, upon audits or reviews, sufficient information to determine compliance with all State and federal regulations and statutes.

B. Inspection & Audit. Contractor agrees that the relevant books, records (written, electronic, computer related or otherwise), including, without limitation, relevant accounting procedures and practices of Contractor or its subcontractors, financial statements and supporting documentation, and documentation related to the work product shall be subject, at any reasonable time, to inspection, examination, review, audit, and copying at any office or location of Contractor where such records may be found, with or without notice by the State Auditor, the relevant State agency or its contracted examiners, the department of Administration, Budget Division, the Nevada State Attorney General's Office or its Fraud Control Units, the state Legislative Auditor, and with regard to any federal funding, the relevant federal agency, the Comptroller General, the General Accounting Office, the Office of the Inspector General, or any of their authorized representatives. All subcontracts shall reflect requirements of this Section.

C. Period of Retention. All books, records, reports, and statements relevant to this Contract must be retained a minimum three (3) years, and for five (5) years if any federal funds are used pursuant to the Contract. The retention period runs from the date of payment for the relevant goods or services by the state, or from the date of termination of the Contract, whichever is later. Retention time shall be extended when an audit is scheduled or in progress for a period reasonably necessary to complete an audit and/or to complete any administrative and judicial litigation which may ensue.

9. **CONTRACT TERMINATION**.

A. Termination Without Cause. Regardless of any terms to the contrary, this Contract may be terminated upon written notice by mutual consent of both parties. The State unilaterally may terminate this contract without cause by giving not less than thirty (30) days' notice in the manner specified in *Section 3, Notice*. If this Contract is unilaterally terminated by the State, Contractor shall use its best efforts to minimize cost to the State and Contractor will not be paid for any cost that Contractor could have avoided.

B. State Termination for Non-Appropriation. The continuation of this Contract beyond the current biennium is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the State Legislature and/or federal sources. The State may terminate this Contract, and Contractor waives any and all claims(s) for damages, effective immediately upon receipt of written notice (or any date specified therein) if for any reason the contracting Agency's funding from State and/or federal sources is not appropriated or is withdrawn, limited, or impaired.

C. Termination with Cause for Breach. A breach may be declared with or without termination. A notice of breach and termination shall specify the date of termination of the Contract, which shall not be sooner than the expiration of the Time to Correct, if applicable, allowed under subsection 9D. This Contract may be terminated by either party upon written notice of breach to the other party on the following grounds:

1) If Contractor fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Contract within the time requirements specified in this Contract or within any granted extension of those time requirements; or

2) If any state, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the goods or services required by this Contract is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or

3) If Contractor becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the Bankruptcy Court; or

4) If the State materially breaches any material duty under this Contract and any such breach impairs Contractor's ability to perform; or

5) If it is found by the State that any quid pro quo or gratuities in the form of money, services, entertainment, gifts, or otherwise were offered or given by Contractor, or any agent or representative of Contractor, to any officer or employee of the State of Nevada with a view toward securing a contract or securing favorable treatment with respect to awarding, extending, amending, or making any determination with respect to the performing of such contract; or

6) If it is found by the State that Contractor has failed to disclose any material conflict of interest relative to the performance of this Contract.

D. Time to Correct. Unless the breach is not curable, or unless circumstances do not permit an opportunity to cure, termination upon declared breach may be exercised only after service of formal written notice as specified in *Section 3, Notice*, and the subsequent failure of the breaching party within fifteen (15) calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared breach has been corrected. Upon a notice of breach, the time to correct and the time for termination of the contract upon breach under subsection 9C, above, shall run concurrently, unless the notice expressly states otherwise.

E. Winding Up Affairs Upon Termination. In the event of termination of this Contract for any reason, the parties agree that the provisions of this Section survive termination:

1) The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Contract. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination;

2) Contractor shall satisfactorily complete work in progress at the agreed rate (or a pro rata basis if necessary) if so requested by the Contracting Agency;

3) Contractor shall execute any documents and take any actions necessary to effectuate an assignment of this Contract if so requested by the Contracting Agency;

4) Contractor shall preserve, protect and promptly deliver into State possession all proprietary information in accordance with *Section 20, State Ownership of Proprietary Information*.

10. **REMEDIES**. Except as otherwise provided for by law or this Contract, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, actual damages, and to a prevailing party reasonable attorneys' fees and costs. For purposes of an award of attorneys' fees to either party, the parties stipulate and agree that a reasonable hourly rate of attorneys' fees shall be one hundred and fifty dollars ($150.00) per hour. The State may set off consideration against any unpaid obligation of Contractor to any State agency in accordance with NRS 353C.190. In the event that Contractor voluntarily or involuntarily becomes subject to the jurisdiction of the Bankruptcy Court, the State may set off consideration against any unpaid obligation of Contractor to the State or its agencies, to the extent allowed by bankruptcy law, without regard to whether the procedures of NRS 353C.190 have been utilized.

11. **LIMITED LIABILITY**. The State will not waive and intends to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. Damages for any State breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to Contractor, for the Fiscal Year budget in existence at the time of the breach. Contractor's tort liability shall not be limited.

12. **FORCE MAJEURE**. Neither party shall be deemed to be in violation of this Contract if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including without limitation, earthquakes, floods, winds, or storms. In such an event the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of the Contract after the intervening cause ceases.

13. **INDEMNIFICATION AND DEFENSE**. To the fullest extent permitted by law, Contractor shall indemnify, hold harmless and defend, not excluding the State's right to participate, the State from and against all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising out of any breach of the obligations of Contractor under this contract, or any alleged negligent or willful acts or omissions of Contractor, its officers, employees and agents. Contractor's obligation to indemnify the State shall apply in all cases except for claims arising solely from the State's own negligence or willful misconduct. Contractor waives any rights of subrogation against the State. Contractor's duty to defend begins when the State requests defense of any claim arising from this Contract.

14. **REPRESENTATIONS REGARDING INDEPENDENT CONTRACTOR STATUS**. Contractor represents that it is an independent contractor, as defined in NRS 333.700(2) and 616A.255, warrants that it will perform all work under this contract as an independent contractor, and warrants that the State of Nevada will not incur any employment liability by reason of this Contract or the work to be performed under this Contract. To the extent the State incurs any employment liability for the work under this Contract; Contractor will reimburse the State for that liability.

15. **INSURANCE SCHEDULE.** Unless expressly waived in writing by the State, Contractor must carry policies of insurance and pay all taxes and fees incident hereunto. Policies shall meet the terms and conditions as specified within this Contract along with the additional limits and provisions as described in *Attachment B*, incorporated hereto by attachment. The State shall have no liability except as specifically provided in the Contract.

    Contractor shall not commence work before Contractor has provided the required evidence of insurance to the Contracting Agency. The State's approval of any changes to insurance coverage during the course of performance shall constitute an ongoing condition subsequent to this Contract. Any failure of the State to timely approve shall not constitute a waiver of the condition.

    A. Insurance Coverage. Contractor shall, at Contractor's sole expense, procure, maintain and keep in force for the duration of the Contract insurance conforming to the minimum limits as specified in *Attachment B*, incorporated hereto by attachment. Unless specifically stated herein or otherwise agreed to by the State, the required insurance shall be in effect prior to the commencement of work by Contractor and shall continue in force as appropriate until:

        1) Final acceptance by the State of the completion of this Contract; or
        2) Such time as the insurance is no longer required by the State under the terms of this Contract; whichever occurs later.

        Any insurance or self-insurance available to the State shall be in excess of and non-contributing with, any insurance required from Contractor. Contractor's insurance policies shall apply on a primary basis. Until such time as the insurance is no longer required by the State, Contractor shall provide the State with renewal or replacement evidence of insurance no less than thirty (30) days before the expiration or replacement of the required insurance. If at any time during the period when insurance is required by the Contract, an insurer or surety shall fail to comply with the requirements of this Contract, as soon as Contractor has knowledge of any such failure, Contractor shall immediately notify the State and immediately replace such insurance or bond with an insurer meeting the requirements.

    B. General Requirements.

        1) Additional Insured: By endorsement to the general liability insurance policy, the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 shall be named as additional insureds for all liability arising from the Contract.

        2) Waiver of Subrogation: Each insurance policy shall provide for a waiver of subrogation against the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 for losses arising from work/materials/equipment performed or provided by or on behalf of Contractor.

        3) Cross Liability: All required liability policies shall provide cross-liability coverage as would be achieved under the standard ISO separation of insureds clause.

4) Deductibles and Self-Insured Retentions: Insurance maintained by Contractor shall apply on a first dollar basis without application of a deductible or self-insured retention unless otherwise specifically agreed to by the State. Such approval shall not relieve Contractor from the obligation to pay any deductible or self-insured retention. Any deductible or self-insured retention shall not exceed fifty thousand dollars ($50,000.00) per occurrence, unless otherwise approved by the Risk Management Division.

5) Policy Cancellation: Except for ten (10) days notice for non-payment of premiums, each insurance policy shall be endorsed to state that without thirty (30) days prior written notice to the State of Nevada, c/o Contracting Agency, the policy shall not be canceled, non-renewed or coverage and/or limits reduced or materially altered, and shall provide that notices required by this Section shall be sent by certified mail to the address shown on page one (1) of this contract.

6) Approved Insurer: Each insurance policy shall be:

   a) Issued by insurance companies authorized to do business in the State of Nevada or eligible surplus lines insurers acceptable to the State and having agents in Nevada upon whom service of process may be made; and

   b) Currently rated by A.M. Best as "A-VII" or better.

C. Evidence of Insurance.

Prior to the start of any work, Contractor must provide the following documents to the contracting State agency:

1) Certificate of Insurance: The Acord 25 Certificate of Insurance form or a form substantially similar must be submitted to the State to evidence the insurance policies and coverages required of Contractor. The certificate must name the State of Nevada, its officers, employees and immune contractors as defined in NRS 41.0307 as the certificate holder. The certificate should be signed by a person authorized by the insurer to bind coverage on its behalf. The State project/Contract number; description and Contract effective dates shall be noted on the certificate, and upon renewal of the policies listed, Contractor shall furnish the State with replacement certificates as described within *Section 15A, Insurance Coverage*.

   Mail all required insurance documents to the State Contracting Agency identified on Page one of the Contract.

2) Additional Insured Endorsement: An Additional Insured Endorsement (CG 20 10 11 85 or CG 20 26 11 85), signed by an authorized insurance company representative, must be submitted to the State to evidence the endorsement of the State as an additional insured per *Section 15B, General Requirements*.

3) Schedule of Underlying Insurance Policies: If Umbrella or Excess policy is evidenced to comply with minimum limits, a copy of the underlying Schedule from the Umbrella or Excess insurance policy may be required.

4) Review and Approval: Documents specified above must be submitted for review and approval by the State prior to the commencement of work by Contractor. Neither approval by the State nor failure to disapprove the insurance furnished by Contractor shall relieve Contractor of Contractor's full responsibility to provide the insurance required by this Contract. Compliance with the insurance requirements of this Contract shall not limit the liability of Contractor or its subcontractors, employees or agents to the State or others, and shall be in additional to and not in lieu of any other remedy available to the State under this Contract or otherwise. The State reserves the right to request and review a copy of any required insurance policy or endorsement to assure compliance with these requirements.

16. **COMPLIANCE WITH LEGAL OBLIGATIONS.** Contractor shall procure and maintain for the duration of this Contract any state, county, city or federal license, authorization, waiver, permit qualification or certification required by statute, ordinance, law, or regulation to be held by Contractor to provide the goods or services required by this Contract. Contractor shall provide proof of its compliance upon request of the Contracting Agency. Contractor will be responsible to pay all taxes, assessments, fees, premiums, permits, and licenses required by law. Real property and personal property taxes are the responsibility of Contractor in accordance with NRS 361.157 and NRS 361.159. Contractor agrees to be responsible for payment of any such government obligations not paid by its subcontractors during performance of this Contract.

17. **WAIVER OF BREACH**. Failure to declare a breach or the actual waiver of any particular breach of the Contract or its material or nonmaterial terms by either party shall not operate as a waiver by such party of any of its rights or remedies as to any other breach.

18. **SEVERABILITY.** If any provision contained in this Contract is held to be unenforceable by a court of law or equity, this Contract shall be construed as if such provision did not exist and the non-enforceability of such provision shall not be held to render any other provision or provisions of this Contract unenforceable.

19. **ASSIGNMENT/DELEGATION.** To the extent that any assignment of any right under this Contract changes the duty of either party, increases the burden or risk involved, impairs the chances of obtaining the performance of this Contract, attempts to operate as a novation, or includes a waiver or abrogation of any defense to payment by State, such offending portion of the assignment shall be void, and shall be a breach of this Contract. Contractor shall neither assign, transfer nor delegate any rights, obligations nor duties under this Contract without the prior written consent of the State.

20. **STATE OWNERSHIP OF PROPRIETARY INFORMATION**. Any data or information provided by the State to Contractor and any documents or materials provided by the State to Contractor in the course of this Contract ("State Materials") shall be and remain the exclusive property of the State and all such State Materials shall be delivered into State possession by Contractor upon completion, termination, or cancellation of this Contract.

21. **PUBLIC RECORDS**. Pursuant to NRS 239.010, information or documents received from Contractor may be open to public inspection and copying. The State has a legal obligation to disclose such information unless a particular record is made confidential by law or a common law balancing of interests. Contractor may label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 333.333, provided that Contractor thereby agrees to indemnify and defend the State for honoring such a designation. The failure to so label any document that is released by the State shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

22. **CONFIDENTIALITY**. Contractor shall keep confidential all information, in whatever form, produced, prepared, observed or received by Contractor to the extent that such information is confidential by law or otherwise required by this Contract.

23. **FEDERAL FUNDING**. In the event federal funds are used for payment of all or part of this Contract, Contractor agrees to comply with all applicable federal laws, regulations and executive orders, including, without limitation the following:

    A. Contractor certifies, by signing this Contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency. This certification is made pursuant to Executive Orders 12549 and 12689 and Federal Acquisition Regulation subpart 9.4, and any relevant program-specific regulations. This provision shall be required of every subcontractor receiving any payment in whole or in part from federal funds.

    B. Contractor and its subcontracts shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1990 (P.L. 101-136), 42 U.S.C. 12101, as amended, and regulations adopted thereunder, including 28 C.F.R. Section 35, inclusive, and any relevant program-specific regulations.

    C. Contractor and it subcontractors shall comply with the requirements of the Civil Rights Act of 1964 (P.L. 88-352), as amended, the Rehabilitation Act of 1973 (P.L. 93-112), as amended, and any relevant program-specific regulations, and shall not discriminate against any employee or offeror for employment because of race, national origin, creed, color, sex, religion, age, disability or handicap condition (including AIDS and AIDS-related conditions.)

24. **LOBBYING**. The parties agree, whether expressly prohibited by federal law, or otherwise, that no funding associated with this Contract will be used for any purpose associated with or related to lobbying or influencing or attempting to lobby or influence for any purpose the following:

    A. Any federal, state, county or local agency, legislature, commission, council or board;

    B. Any federal, state, county or local legislator, commission member, council member, board member, or other elected official; or

    C. Any officer or employee of any federal, state, county or local agency; legislature, commission, council or board.

25. **GENERAL WARRANTY**. Contractor warrants that all services, deliverables, and/or work products under this Contract shall be completed in a workmanlike manner consistent with standards in the trade, profession, or industry; shall conform to or exceed the specifications set forth in the incorporated attachments; and shall be fit for ordinary use, of good quality, with no material defects.

26. **PROPER AUTHORITY**. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract. Contractor acknowledges that as required by statute or regulation this Contract is effective only for the period of time specified in the Contract. Any services performed by Contractor before this Contract is effective or after it ceases to be effective are performed at the sole risk of Contractor.

27. **DISCLOSURES REGARDING CURRENT OR FORMER STATE EMPLOYEES**. For the purpose of State compliance with NRS 333.705, Contractor represents and warrants that if Contractor, or any employee of Contractor who will be performing services under this Contract, is a current employee of the State or was employed by the State within the preceding 24 months, Contractor has disclosed the identity of such persons, and the services that each such person will perform, to the Contracting Agency.

28. **ASSIGNMENT OF ANTITRUST CLAIMS**. Contractor irrevocably assigns to the State any claim for relief or cause of action which Contractor now has or which may accrue to Contractor in the future by reason of any violation of State of Nevada or federal antitrust laws in connection with any goods or services provided under this Contract.

29. **GOVERNING LAW: JURISDICTION**. This Contract and the rights and obligations of the parties hereto shall be governed by, and construed according to, the laws of the State of Nevada, without giving effect to any principle of conflict-of-law that would require the application of the law of any other jurisdiction. The parties consent to the exclusive jurisdiction of and venue in the state District Court, Clark County, Nevada for enforcement of this Contract, and consent to personal jurisdiction in such court for any action or proceeding arising out of this Contract.

30. **ENTIRE CONTRACT AND MODIFICATION**. This Contract and its integrated attachment(s) constitute the entire agreement of the parties and as such are intended to be the complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Contract specifically displays a mutual intent to amend a particular part of this Contract, general conflicts in language between any such attachment and this Contract shall be construed consistent with the terms of this Contract. Unless otherwise expressly authorized by the terms of this Contract, no modification or amendment to this Contract shall be binding upon the parties unless the same is in writing and signed by the respective parties hereto and approved by the Office of the Attorney General. This Contract, and any amendments, may be executed in counterparts.

/ / /
/ / /
/ / /

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be signed and intend to be legally bound thereby.

ProgUSA LLC

Glenn Poulos	07/23/2025	President
Name:	Date	Title

Colorado River Commission of Nevada

		Executive Director
Eric Witkoski	Date	Title

Approved as to form by:

Office of the Attorney General

On:

Michelle Briggs, Special Counsel		Date

Attachment A
Scope of Work

COLORADO RIVER COMMISSION OF NEVADA

SF6 GAS RECLAIMING EQUIPMENT AND SERVICE

SCOPE OF WORK

March 2025

REVISION 0

Revisions

REVISION	DESCRIPTION	DATE
0	INITIAL ISSUE	03/01/2025

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01 00 00 – GENERAL REQUIREMENTS

01 11 00 - SUMMARY OF WORK

1. **Objective**
    a. The Colorado River Commission of Nevada (CRCNV, Owner) Power Delivery Group (PDG) is looking for qualified suppliers for SF6 Gas Reclamation Carts and Equipment to safely extract SF6 gas from the high voltage circuit breakers in the fleet as needed for the reliable operations and maintenance of the CRCNV Power Delivery system.
2. **Scope of Work**
    a. NRS 333.700(8)(b) authorizes state departments and agencies to contract for any work of construction or major repairs of state buildings without approval from the Board of Examiners if the contracting process is controlled by the rules of competitive bidding.
    b. The Colorado River Commission of Nevada, pursuant to NRS 538.161, negotiates and contracts for the planning, development or ownership of any facilities for the generation or transmission of electricity for the greatest possible benefit to this State.
    c. This scope of work covers the ability to use a contractor for the purpose of maintaining the Colorado River Commission of Nevada's high voltage transmission and substation public works assets.
    d. Contractor should be willing and capable of providing at a minimum the following services:
        i. SF6 Gas Reclamation Cart Services
            1. Maintenance of the cart, Pricing included on Pricing Sheet provided with bid
            2. Replacement parts, Pricing included on Pricing Sheet provided with bid
            3. Certification as required, Pricing included on Pricing Sheet provided with bid
        ii. SF6 Gas Cart Equipment

1. Contractor shall provide pricing for a SF6 Gas Recover, Filling, and Drying Cart for mobile field filling of 69kV – 230kV High Voltage Circuit Breakers
2. Minimum 1.5m^3/hr SF6 Standard Compressor
3. Minimum 3m^3/hr Oil Free Vacuum Compressor
4. 120VAC – Single Phase – 60HZ – 20A Circuit – 10ft Cord
5. Two sets of Rubber Hoses – 10ft with DN-8 Self Sealing Quick Disconnect End Connections
6. Two Aluminum Storage Cylinders – Minimum 40lbs of SF6
7. Integrated SF6 Cylinder Scale
8. Stainless Steel Tubing
9. Electric Dryer
10. Particulate Filter
11. Purifier Cartridge
12. Fittings Kit w/Carry Cases
    a. DN8
    b. DN20
    c. Malmquist
    d. Aero Quip
    e. CGA 590
    f. QC4
    g. ¼" Flare
    h. 3/8" Flare
    i. ¼" NPT
    j. ¼" Swage
    k. Regulator
    l. Steel Braided Armored FEP Sampling Tube w/ Quick Connect

ATTACHMENT B

INSURANCE SCHEDULE

ATTACHMENT B
INSURANCE SCHEDULE

Contractor and subcontractors shall procure and maintain until all of their obligations have been discharged, including any warranty periods under this Contract are satisfied, insurance against claims for injury to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

The insurance requirements herein are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract.

The State in no way warrants that the minimum limits contained herein are sufficient to protect the Contractor from liabilities that might arise out of the performance of the work under this Contract by the Contractor, his agents, representatives, employees, or subcontractors. Contractor is free to purchase such additional insurance as may be determined necessary.

A. **MINIMUM SCOPE AND LIMITS OF INSURANCE -** Contractor shall provide coverage with limits of liability not less than those stated below. An excess liability policy or umbrella liability policy may be used to meet the minimum liability requirements provided that the coverage is written on a "following form" basis.

1. **Commercial General Liability – Occurrence Form**
   Policy shall include bodily injury, property damage, broad form contractual liability and XCU coverage.

   Minimum Requirements:

   - General Aggregate $2,000,000
   - Products – Completed Operations Aggregate $1,000,000
   - Personal and Advertising Injury $1,000,000
   - Each Occurrence $1,000,000

   a. The policy shall be endorsed to include the following additional insured language: "The State of Nevada shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Contractor, including completed operations".

2. **Automobile Liability**
   Bodily injury and property damage for any owned, hired, and non-owned vehicles used in the performance of this Contract.

   Combined Single Limit (CSL) $1,000,000

   a. The policy shall be endorsed to include the following additional insured language: "The State of Nevada shall be named as an additional insured with respect to liability arising out of the activities performed by, or on behalf of the Contractor, including automobiles owned, leased, hired or borrowed by the Contractor".

3. **Worker's Compensation and Employers' Liability**

Workers' Compensation	Statutory
Employers' Liability	
Each Accident	$100,000
Disease – Each Employee	$100,000
Disease – Policy Limit	$500,000

   a. Policy shall contain a waiver of subrogation against the State.

   b. This requirement shall not apply when a contractor or subcontractor is exempt under N.R.S., **AND** when such contractor or subcontractor executes the appropriate sole proprietor waiver form.

B. **ADDITIONAL INSURANCE REQUIREMENTS:** The policies shall include, or be endorsed to include, the following provisions:

1. On insurance policies where the State of Nevada, Colorado River Commission of Nevada is named as an additional insured, the State of Nevada shall be an additional insured to the full limits of liability purchased by the Contractor even if those limits of liability are in excess of those required by this Contract.
2. The Contractor's insurance coverage shall be primary insurance and non-contributory with respect to all other available sources.

C. **NOTICE OF CANCELLATION:** Contractor shall for each insurance policy required by the insurance provisions of this Contract shall not be suspended, voided or canceled except after providing thirty (30) days prior written notice been given to the State, except when cancellation is for non-payment of premium, then ten (10) days prior notice may be given. Such notice shall be sent directly to **(Gina Goodman 100 N. City Pkwy Ste 1100, Las Vegas, NV 89106)**. Should contractor fail to provide State timely notice, contractor will be considered in breach and subject to cure provisions set forth within this contract.

D. **ACCEPTABILITY OF INSURERS:** Insurance is to be placed with insurers duly licensed or authorized to do business in the state of Nevada and with an "A.M. Best" rating of not less than A-VII. The State in no way warrants that the above-required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

E. **VERIFICATION OF COVERAGE:** Contractor shall furnish the State with certificates of insurance (ACORD form or equivalent approved by the State) as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

All certificates and any required endorsements are to be received and approved by the State before work commences. Each insurance policy required by this Contract must be in effect at or prior to commencement of work under this Contract and remain in effect for the duration of the project. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of contract.

All certificates required by this Contract shall be sent directly to **(Gina Goodman 100 N. City Pkwy Ste 1100, Las Vegas, NV 89106)**. The State project/contract number and project description shall be noted on the certificate of insurance. The State reserves the right to require complete, certified copies of all insurance policies required by this Contract at any time**.**

F. **SUBCONTRACTORS:** Contractors' certificate(s) shall include all subcontractors as additional insureds under its policies **or** subcontractors shall maintain separate insurance as determined by the Contractor, however, subcontractor's limits of liability shall not be less than $1,000,000 per occurrence / $2,000,000 aggregate.

G. **APPROVAL:** Any modification or variation from the insurance requirements in this Contract shall be made by the State Risk Management Division or the Attorney General's Office, whose decision shall be final. Such action will not require a formal Contract amendment, but may be made by administrative action.

ATTACHMENT C

STATE SOLICIATION # 69CRC-S3219

STATE OF NEVADA
Colorado River Commission of Nevada
100 N. City Parkway, Suite 1100 │ Las Vegas, NV 89106 Phone: 775-684-0170 │ Fax: 775-684-0188

Solicitation: **69CRC-S3219**
For
SF6 Gas Reclaimer Equipment and Service

Release Date: **03/07/2025**
Deadline for Submission and Opening Date and Time: **4/10/2025 @ 2:00 pm**

Single point of contact for the solicitation:
David Rodriguez, Power Systems Engineering Manager
Phone, 702-373-9403
Email Address, drodriguez@crc.nv.gov

(TTY for Deaf and Hard of Hearing, 800-326-6868
Ask the relay agent to dial, 1-775-515-5173/V.)

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1. APPLICABLE REGULATIONS GOVERNING PROCUREMENT

1.1. All applicable Nevada Revised Statutes (NRS) and Nevada Administrative Code (NAC) documentation can be found at: www.leg.state.nv.us/law1.cfm.

1.2. Prospective vendors are advised to review Nevada's ethical standards requirements, including but not limited to NRS 281A, NRS 333.800, and NAC 333.155.

2. PROJECT OVERVIEW

2.1. The State of Nevada, Colorado River Commission of Nevada is seeking proposals from qualified vendors to provide SF6 Gas Reclaimer Equipment and Service as described in the scope of work and attachments.

2.2. The State intends to award multiple contract(s) in conjunction with this Request for Proposals (RFP), as determined in the best interests of the State. Colorado River Commission of Nevada shall administer contract(s) resulting from this solicitation. The resulting contract(s) are expected to be for a contract term of four years.

2.3. AGENCY BACKGROUND

2.3.1. The Colorado River Commission of Nevada (CRCNV) owns and operates high-voltage transmission and distribution system consisting of two 230/69-kV substations, three 230/14.4-kV substations, four 69/13.8-kV substations, seven 69/4.16-kV substation, 32 miles of 230-kV transmission lines, 5 miles 69-kV overhead transmission lines, eleven miles of 69-kV underground transmission lines and other related facilities in Clark County, Nevada. In addition, the Commission is responsible for the operation and maintenance of ten additional substations owned by the Southern Nevada Water Authority and three owned by the Clark County Water Reclamation District.

2.4. GOALS AND OBJECTIVES

2.4.1. The goal of this solicitation is to obtain a qualified contractor able to assist the CRCNV in reclaiming SF6 Gas safely and environmentally proper from our fleet of SF6 High Voltage Circuit Breakers.

3. SCOPE OF WORK

3.1. See Attachments 4.1.1.

4. ATTACHMENTS

4.1. ATTACHMENTS INCORPORATED BY REFERENCE. To be read and not returned.

4.1.1. Attachment A - Scope of Work
4.1.2. Attachment B - Terms and Conditions for Services

4.2. ATTACHMENTS FOR REVIEW. To be read and not returned (unless redlining).

4.2.1. Attachment C – Standard Form Contract
4.2.2. Attachment D - Insurance Schedule

4.3. PROPOSAL ATTACHMENTS. To be completed and returned in proposal.

4.3.1. Attachment E - Cost Schedule
4.3.2. Attachment F - Proposed Staff Resume
4.3.3. Attachment G - Reference Questionnaire
4.3.4. Attachment H - Vendor Information Response – **Must Be Signed**
   A. Vendor Contact Information
   B. Vendor Information
   C. Payment Authorization for use of Procurement Card
   D. Name of Individual Authorized to Bind the Organization
   E. Vendor Certifications
   F. Confidentiality and Certification of Indemnification
   G. Certification Regarding Lobbying

5. TIMELINE

5.1. QUESTIONS. All questions regarding this solicitation shall be submitted using the Bid Q&A feature in NevadaEPro.

5.2. TIMELINE. The following represents the proposed timeline for this project.

5.2.1. All times stated are Pacific Time (PT).
5.2.2. These dates represent a tentative schedule of events.
5.2.3. The State reserves the right to modify these dates at any time.

A. Deadline for Questions ..... No later than 5:00 pm on 03/27/2025
B. Answers Posted ..... On or about 04/03/2025
C. Deadline for References ..... No later than 5:00 pm on 04/09/2025
D. Deadline Proposal Submission and Opening ..... No later than 2:00 pm on 4/10/2025
E. Evaluation Period (estimated) ..... 04/10/2025 - 04/24/2025
F. Selection of a Vendor (estimated) ..... On or about 04/24/2025
G. Contract start date (estimated) 05/15/2025

6. EVALUATION

6.1. Evaluation and scoring are conducted in accordance with NRS 333.335 and NAC 333.160-333.165.

6.1.1. Proposals shall be kept confidential until a contract is awarded.
6.1.2. In the event the solicitation is withdrawn prior to award, proposals remain confidential.
6.1.3. The evaluation committee is an independent committee established to evaluate and score proposals submitted in response to the solicitation.
6.1.4. Financial stability shall be scored on a pass/fail basis.
6.1.5. Proposals shall be consistently evaluated and scored based upon the following factors and relative weights.

A. Addressed all Scope of Work items 50
B. Provided examples of Contractor's industry experience on all Scope of Work items 35
C. Provided example of final product/deliverables 5
D. Cost Factor 8
E. No redlines of State contract 2

6.1.6. Cost proposals will be evaluated based on the following formula.

A. Cost Factor Weight x (Lowest Cost Submitted by a Vendor / Proposer Total Cost) = Cost Score

6.1.7. Presentations

A. Following evaluation and scoring specified above, the State may require vendors to make a presentation of their proposal to the evaluation committee or other State staff, as applicable.
B. The State, at its option, may limit participation in vendor presentations to vendors above a natural break in relative scores from technical and cost scores.
C. Following presentations, the combined technical, cost, and presentation scores will become the final score for a proposal.
D. The State reserves the right to add additional criteria or presentations.
E. The State reserves the right to forego vendor presentations and select vendor(s) based on the written proposals submitted.

6.2. NEVADA-BASED BUSINESS PREFERENCE

6.2.1. The State awards a five percent (5%) preference to Nevada-based businesses pursuant to NRS 333.3351 to 333.3356, inclusive.
6.2.2. Nevada-based business is defined in NRS 333.3352(1).
6.2.3. The term 'principal place of business' has the meaning outlined by the United States Supreme Court in Hertz Corp v. Friend, 559 U.S. 77 (2010), typically meaning a business's corporate headquarters.
6.2.4. To claim this preference a vendor must indicate it on their vendor account and submitted Quote in NevadaEPro.

6.2.5. This preference cannot be combined with any other preference, granted for the award of a contract using federal funds, or granted for the award of a contract procured on a multi-state basis.

6.3. INVERSE PREFERENCE

6.3.1. The State applies an inverse preference to vendors that have a principal place of business in a state other than Nevada and that state applies an in-state preference not afforded to Nevada based vendors, pursuant to AB28 passed in the 81st session of the Nevada Legislature.
6.3.2. The amount of the inverse preference is correlated to the amount of preference applied in the other state.
6.3.3. Vendors who meet this criterion must indicated it on their submitted Quote in NevadaEPro.
6.3.4. This preference cannot be combined with any other preference, granted for the award of a contract using federal funds, or granted for the award of a contract procured on a multi-state basis.

7. MANDATORY MINIMUM REQUIREMENTS

7.1. Pursuant to NRS 333.311 a contact cannot be awarded to a proposal that does not comply with the requirements listed in this section. Proposal shall include confirmation of compliance with all mandatory minimum requirements.

7.2. NEVADA LAW AND STATE INDEMNITY. Pursuant to NRS 333.339, any contract that is entered into may not: (1) Require the filing of any action or the arbitration of any dispute that arises from the contract to be instituted or heard in another state or nation; or (2) Require the State to indemnify another party against liability for damages.

7.3. NO BOYCOTT OF ISRAEL. Pursuant to NRS 333.338, the State of Nevada cannot enter a contract with a company unless that company agrees for the duration of the contract not to engage in a boycott of Israel. By submitting a proposal or bid, vendor agrees that if it is awarded a contract, it will not engage in a boycott of Israel as defined in NRS 333.338(3)(a).

7.4. INDEMNIFICATION. Required contract terms on Indemnification: "To the fullest extent permitted by law, Contractor shall indemnify, hold harmless and defend, not excluding the State's right to participate, the State from and against all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising out of any breach of the obligations of Contractor under this contract, or any alleged negligent or willful acts or omissions of Contractor, its officers, employees and agents. Contractor's obligation to indemnify the State shall apply in all cases except for claims arising solely from the State's own negligence or willful misconduct. Contractor waives any rights of subrogation against the State. Contractor's duty to defend begins when the State requests defense of any claim arising from this Contract."

7.5. LIMITED LIABILITY. Required contract terms on Limited Liability: "The State will not waive and intends to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. Damages for any State breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to Contractor, for the Fiscal Year budget in existence at the time of the breach. Contractor's tort liability shall not be limited."

7.6. CONTRACT RESPONSIBILITY. Awarded vendor shall be the sole point of contract responsibility. The State shall look solely to the awarded vendor for the performance of all contractual obligations which may result from an award based on this solicitation, and the awarded vendor shall not be relieved for the non-performance of any or all subcontractors.

7.7. DATA ENCRYPTION. State IT requires that data be encrypted in transit and in rest.

7.8. STATESIDE DATA. State IT requires that State data assets must be maintained in the United States and data will not be held offshore.

7.9. NEVADA BUSINESS LICENSE. Pursuant to NRS 353.007, prior to contract execution awarded vendor must hold a state business license pursuant to NRS chapter 76 unless exempted by NRS 76.100(7)(b).

7.10. DISCLOSURE. Each vendor shall include in its proposal a complete disclosure of any alleged significant prior or ongoing contract failures, contract breaches, any civil or criminal litigation or investigations pending which involves the vendor or in which the vendor has been judged guilty or liable.

8. CRITICAL ITEMS

8.1. In addition to the *Scope of Work* and *Attachments*, the items listed in this section are critical to the success of the project. These items will be used in evaluating and scoring the proposal. Vendor proposal should address items in this section in enough detail to provide evaluators an accurate understanding of vendor capabilities. Proposals that fail to sufficiently respond to these items may be considered non-responsive.

8.2. CONTRACT FORM. The State strongly prefers vendors agree to the terms of the attached *Contract Form* as is. Ability to agree to contract terms is a high priority to the State. Vendors who cannot agree to the contract as is must include a redlined Word version of the attached *Contract Form* with their proposal response. To the extent a vendor has prior contractual dealings with the State, no assumption should be made that terms outside those provided herein have any influence on this project.

8.3. INSURANCE SCHEDULE

8.3.1. The State strongly prefers vendors agree to the terms of the attached *Insurance Schedule* as is. Vendors who cannot agree must explain which areas are causing non-compliance and attach a red line if necessary.
8.3.2. Awarded vendor shall maintain, for the duration of the contract, insurance coverages as set forth in the fully executed contract.
8.3.3. Work on the contract shall not begin until after the awarded vendor has submitted acceptable evidence of the required insurance coverages.
8.3.4. Failure to maintain any required insurance coverage or acceptable alternative method of insurance shall be deemed a breach of contract.

8.4. VENDOR BACKGROUND

8.4.1. Company background/history and why vendor is qualified to provide the services described in this solicitation.
8.4.2. Provide a brief description of the length of time vendor has been providing services described in this solicitation to the public and/or private sector.

8.5. VENDOR STAFF RESUMES

8.5.1. A resume shall be included for each proposed key personnel, see *Proposed Staff Resume.*
8.5.2. A resume shall also be included for any proposed key subcontractor personnel.

8.6. SUBCONTRACTORS

8.6.1. Subcontractors are defined as a third party, not directly employed by the contractor, who shall provide services identified in this solicitation. This does not include third parties who provide support or incidental services to the contractor.
8.6.2. Proposal should include a completed *Vendor Information Response* form for each subcontractor.
8.6.3. Vendor shall not allow any subcontractor to commence work until all insurance required of the subcontractor is provided to the vendor.
8.6.4. Vendor proposal shall identify specific requirements of the project for which each subcontractor shall perform services.

A. How the work of any subcontractor(s) shall be supervised
B. How channels of communication shall be maintained
C. How compliance with contracts terms and conditions will be assured
D. Previous experience with subcontractor(s)

8.7. VENDOR FINANCIAL INFORMATION

8.7.1. The information requested in this section is designated as confidential business information by the Administrator pursuant to NRS 333.020(5)(b) and is not public information pursuant to NRS 333.333.
8.7.2. This information should be submitted as a separate attachment, flagged as confidential in NevadaEPro.
8.7.3. Proposing vendor shall provide the following financial information and documentation:

A. Dun and Bradstreet Number
B. Federal Tax Identification Number
C. The last two (2) full years and current year interim:

1. Profit and Loss Statements
2. Balance Statements

8.8. BUSINESS REFERENCES

8.8.1. The information requested in this section is designated as confidential business information by the Administrator pursuant to NRS 333.020(5)(b) and is not public information pursuant to NRS 333.333.
8.8.2. Vendors shall provide a minimum of three (3) business references from similar projects performed for private and/or public sector clients within the last five (5) years, see *Reference Questionnaire*.
8.8.3. The purpose of these references is to document relevant experience and aid in the evaluation process.
8.8.4. Business references should return *Reference Questionnaire* directly to Single Point of Contact via email.
8.8.5. Business references will not be accepted directly from proposing vendor.
8.8.6. The State will not disclose submitted references, but will confirm if a reference has been received.
8.8.7. The State reserves the right to contact references during evaluation.

9. SUBMISSION CHECKLIST

9.1. This section identifies documents that shall be submitted to be considered responsive. Vendors are encouraged to review all requirements to ensure all requested information is included in their response.

9.1.1. Proposals must be submitted as a Quote through NevadaEPro, https://NevadaEPro.com.
9.1.2. Vendors are encouraged to submit a single file attachment per proposal section if possible.
9.1.3. Technical proposal information and Cost proposal information shall not be included in the same attachment.
9.1.4. Cost proposal attachment shall not be flagged as confidential in NevadaEPro.
9.1.5. Additional attachments may be included, but are discouraged and should be kept to a minimum.

9.2. TECHNICAL PROPOSAL

A. Title Page
B. Table of Contents
C. Response to Mandatory Minimum Requirements
D. Response to Critical Items
E. Response to Scope of Work
F. Proposed Staff Resumes
G. Other Informational Material

9.3. PROPRIETARY INFORMATION. If necessary. Attachment should be flagged confidential in NevadaEPro.

A. Title Page
B. Table of Contents
C. Trade Secret information, cross referenced to the technical proposal

9.4. COST PROPOSAL

9.5. VENDOR FINANCIAL INFORMATION. Attachment should be flagged confidential in NevadaEPro.

9.6. SIGNED ATTACHMENTS

A. Vendor Information Response
B. Vendor Certifications
C. Confidentiality and Certification of Indemnification
D. Certification Regarding Lobbying

9.7. OTHER ATTACHMENTS. If necessary, not recommended.

9.8. REFERENCE QUESTIONNAIRES. Not submitted directly by vendor.

ATTACHMENT D

VENDOR PROPOSAL

ProgUSA
311 Altamonte Commerce Blvd., Unit 1618
United States Altamonte Springs FL 32714
+1 407-332-8678 | http://progusa.net | info@progusa.net

Quotation # S00618

BILL TO:
Colorado River Commission of Nevada
1299 Burkholder Blvd.
Henderson, Nevada (US), 89015

SHIP TO:
Colorado River Commission of Nevada
1299 Burkholder Blvd.
Henderson NV 89015
United States

Date: 05/27/2025
Payment Terms: NET 30
Freight Term: PPA **Incoterm:** FOB
F.O.B. Point: Our Dock
Validity: 30 Days
Salesperson: Allan Kopczynski
allank@progusa.net
Mobile: 949-351-8028

#	SKU	DESCRIPTION	QTY	UNIT PRICE	AMOUNT
1	GRU-4 PLUS XDS (Custom)	GRU-4 PLUS XDS (Custom) ECH-2025-1428 - 110 V, 60HZ- Includes a 2m3/h SF6 Compressor, 10 CFM (17 m3/h) Vacuum Pump, 22.5 kg Storage Tank, Stainless Steel Tubing, Filters - Drier Filter D-1; Particulate Filter F-1; Purifier Cartridge and 3m Power Cord. With upgrade to GRU-4 PLUS XDS with Vacuum Compressor for gas recovery down to 99.9% (3.3m3/hr <1mbar Residual SF6 Gas Pressure) Includes Digital Vacuum Gauge. - Additional portable two-cylinder cart with storage for 2 x standard 115 lb gas cylinders. Includes precision battery powered weigh scale and 2 hose manifolds with valved CGA-590 cylinder connections. - Set of 2 hoses 3 meter (10ft) with DN-8 female on both ends. Enervac SF6 Fittings Kit -Filter Kit: Drier Filter D-1; Particulate Filter F-1; Purifier Cartridge (D-109691) -946ml Vacuum Pump Oil (E-25979) TRAINING: Two of the customers' electricians are offered free training at the factory. The end customer is responsible for all necessary accommodation, boarding, and transportation charges for District personnel to the manufacturer's factory.	1	50,000.00	$ 50,000.00

These goods are manufactured by: Enervac International in the Country of Canada
Warranty is 1 Years Parts and Labor
Leadtime is 20 Weeks ARO (after receipt of order)

Any applicable tariffs or trade duties in effect at the time of delivery will be added at cost to the invoice.

Total $ 50,000.00

This Quotation S00618 is subject to the following conditions:

** Please include your US Tax ID Number on your purchase order.*

- All orders are subject to acceptance by our head office.
- Prices are applicable only to those quantities shown.
- All orders are subject to credit approval by ProgUSA LLC.
- Over-due invoices are charged at 1-1/2% per month.

In the above prices:

- DUTY is included. Any applicable taxes, tariffs or government-imposed fees are not included in this quote and will be the responsibility of the purchaser. These charges, if applicable, will be added to the final invoice.
- 3% additional charge if credit card used for payment

Note: ALL prices are in $US.
Please make purchase orders out to:
ProgUSA
311 Altamonte Commerce Blvd., Unit 1618
United States Altamonte Springs FL 32714
Attention: Debbie Langran
Tel: 407-332-8678
debbiel@progusa.net

Terms & Conditions: https://www.progusa.net/terms

Enervac™ INTERNATIONAL ULC
A CLARK-RELIANCE COMPANY

GRU-4 PLUS

SF_6 GAS RECOVERY UNIT

SPECIFICATIONS

DIMENSIONS:

Height: 49” (1170 mm)
Width: 20” (560 mm)
Depth: 28" (610 mm)
Weight: 227lbs (103kg)

STANDARD VOLTAGE:

120V-1PH-60 Hz
220V-1PH-50/60 Hz

SYSTEM PERFORMANCE:

Designed for breakers up to 69 kV

SF6 gas transfer rates up to 1.2 CFM (2m^3/h)

Vacuum pump for evacuation of air & moisture 10 CFM (17 m^3/hr) <1 mbar

Enervac International ULC
280 Holiday Inn Drive
Cambridge, Ontario
Canada
N3C 1Z4
(P)1-519-651-1034
(F)1-519-651-1038

www.enervac.com
sales@enervac.com

For more information scan the code!

This cart is ideally suited for servicing small volume SF_6 equipment. All processes required for servicing SF_6 equipment can be performed with this cart.

APPLICATIONS:

- Recovery and Purify SF_6
- Evacuate air and moisture prior to filling
- Consolidate SF_6 cylinders
- Store SF_6 in liquid state with onboard 50lb tank or to external cylinders
- Regulate filling of SF_6 equipment
- Purification of SF_6 (Removes particles, moisture and SF_6 decomposition products)

FEATURES:

- Mounted on a convenient hand cart with 10" (250mm) tires for ease of movement
- Very easy to operate - only two valves to switch operating modes
- High pressure, direct-drive oil-less compressor with 1000:1 compression ratio (capable of 500psi – 34 bar)
- Capable of liquid SF_6 storage
- Purifies, dries and filters to 0.1 microns during recovery and re-pressurization.
- Filters are easily changed without disconnecting any tubing or using any special tools
- Auxiliary connection allows for infinitely expandable storage through use of external tanks
- Comes complete with power cable
- Colour change moisture indicator to monitor moisture in gas
- Stainless Steel Fittings instead of copper/brass for better corrosion resistance and durability.

OPTIONS:

- Tank heater
- Insulation blanket for storage tank
- 3M or 6M hoses - Rubber or Stainless Braided
- SF6 gas recovery down to 99.9% - Optional Vacuum Compressor 1.9 CFM (3.3m3/h)

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM G
FOR MEETING OF AUGUST 12, 2025

SUBJECT: *For Possible Action:* Approve the Assignment of Contract No. PAS-25-01 between the Colorado River Commission of Nevada and Moss Adams LLP to Baker Tilly US, LLP as a result of the merger of the two accounting firms, and to amend the contract to include services to complete the 2024 ACFR.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: Staff recommend the Commission approve the assignment of Contract No. PAS-25-01 to Baker Tilly US, LLP and an amendment to include completion of the 2024 ACFR with funds remaining from the prior audit services contract, and to authorize the Executive Director to sign the same.
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

A. Background

On April 8, 2025, the Colorado River Commission of Nevada's (Commission) approved Contract No. PAS-25-01 with Moss Adams LLP for annual financial audit services (including internal control review) to begin on July 1, 2025. On or about June 3, 2025, Moss Adams LLP merged with Baker Tilly US, LLP.

The Commission's prior contract with Moss Adams dated June 8, 2021, expired on June 30, 2025, before Moss Adams could complete Contracting Agency's 2024 ACFR. Moss Adams could not complete the 2024 ACFR by the end of the contract term, because it was waiting, and still waiting for information from the Nevada State Controller's Office. Contract No. PAS-25-01 needs to be amended to add services to complete the 2024 ACFR and to supplement spending authority to include the remaining funds under the prior contract.

The terms of an assignment to Baker Tilly US and an amendment to include completion of the 2024 ACFR are being negotiated. Given that the services of the new merged firm will be needed for not only the completion of the ACFR for 2024, but the audit work is expected to commence in September for FY 2025, Staff is requesting authority to amend the contract and execute the assignment when the specifics of the assignment are agreed upon.

Under the merged company, Staff is still working with and expects to continue to work with the assigned Staff that Moss Adams previously assigned to the Commission for the audit work. Thus, Staff is not expecting significant changes to occur as a result of Moss Adam's merger with Baker Tilly. Staff would note that Baker Tilly is an accounting firm well known in the energy/utility sector and performs the audits of the Silver State Energy Association (SSEA) of which the Commission is a member.

B. Recommendation

Staff recommends the Commission approve an assignment of Contract No. PAS-25-01 to Baker Tilly US, LLP and an amendment to include completion of the 2024 ACFR with funds remaining from the prior audit services contract, and to authorize the Executive Director to sign the same.

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM H
FOR MEETING OF AUGUST 12, 2025

SUBJECT: *For Possible Action*: Consideration of and possible action on Staff's Draft Notice to Eligible Applicants of the Opportunity to Apply for an Allocation of Hydropower from the Parker-Davis Project (P-DP) and the Application for an allocation of P-DP beginning October 1, 2028, in accordance with NAC 538.455(5).
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: Staff recommend the Commission approve the Notice and Application for P-DP hydropower allocation.
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

I. Background

1. Parker-Davis Contracts expire September 30, 2028

The Commission's contracts with Western Area Power Administration (WAPA) for hydropower generation from the Parker-Davis Project (P-DP) are set to expire on September 30, 2028. Consequently, the Commission's related P-DP contracts with its customers will also expire on that date. Staff anticipates the Commission will enter a new contract with WAPA for a 20-year term commencing October 1, 2028. As part of this effort, Staff has prepared a draft *Notice to Eligible Applicants of the Opportunity to Apply for an Allocation of Hydropower from the P-DP* (Notice and Application) for the Commission to review and approve, revise or reject pursuant to NAC 538.455(5). *See Exhibit H-1.* Staff's presentation regarding the Notice and Application is attached. *See Exhibit H-2.*

2. Staff Held Public Hearing

Following the June Commission meeting, where Staff provided an overview of the P-DP process, Staff posted the Draft Notice and Application on June 13, 2025. *O*n July 1, 2025, Staff held a public meeting, accessible both in person and remotely for interested parties to ask questions and provide comments on the draft Notice and Application pursuant to NAC 538.455. The public meeting had eight attendees participating remotely and four in person and nearly all were hydropower contractors of the Commission. The deadline for comments on the draft was July 11. Staff did not receive any objections or requests to change the Draft Notice and Application. Attached are the documents associated with the Staff's public meeting. *See Exhibit H-3.*

3. Request for Commission's Consideration

The Commission is asked to approve the Draft Notice and Application which includes: 1) a description of the power to be allocated, 2) the Criteria to be used to evaluate and determine who will receive a post-2028 P-DP allocation, 3) the Application to be filled out by applicants; and 4) the timeline for applications to be received.

II. Criteria for an Application

1. Statutory and Regulation Requirements

a. Under NRS 704.787, the Commission is limited to whom it may serve. The first category includes:

> Any customer that the Commission on July 16, 1997, was serving or had a contract to serve, including successors of interest to such customers; (*this includes Black Mountain Industrial Complex customers and electric utility customers that were customers at that time.*)

b. The second category under NRS 704.787 includes:

> The Southern Nevada Water Authority (SNWA) or a member agency of SNWA that will use the power in connection with water and wastewater operations.

c. The third category under NAC 538.410 (5), restricts the electric utilities that the CRC can grant an allocation of P-DP to:

- utilities that have a peak demand of at least 8 megawatts;
- utilities in WAPA's defined marketing area in this State for P-DP; and
- utilities eligible to receive preference power under the applicable provisions of federal law relating to preference power.

Preference entities include cities and towns, irrigation districts, public utility districts, and rural electric cooperatives. For purposes of P-DP, under the regulations, NV Energy is not considered a preference customer since it is an investor-owned utility that resells energy. However, it should be noted that NV Energy with its allocation of Hoover hydropower holds approximately 50% of all the Commission's hydropower.

2. Stranded costs applicable to the Post 2028 contract

During the current term of the P-DP contract, WAPA incurred approximately $50 million in under-recovered purchased power costs between 2018 and 2023. These costs arose from increases in market energy prices, which were not fully passed on under the existing contracts. Under the new contract, WAPA will no longer provide firming services or incur market purchase costs. However, the legacy (stranded cost), which is being collected by WAPA over a 20-year period, must still be recovered and will be assigned to the new contracts.

Nevada's share of the under-recovered costs is approximately $14 million and will be allocated across the new contracts. This additional charge is expected to add approximately $3-$4 per megawatt hour to the cost of the P-DP resource, which is estimated to be approximately $20-$22

per megawatt hour. Even with the additional charge, the cost of the P-DP resource is expected to remain reasonable.

3. General Requirements

The general requirements that an Applicant must meet are spelled out in Section C and cover items such as demonstrating a need for the resource, being a sophisticated enough power customer to manage its allocation, having the ability to execute the contract in a timely fashion, and being creditworthy, among some other basic requirements.

4. Existing Contract Holders and Future Allottees

Given that the scope of potential contractors for P-DP is limited by NRS 704.787 and NAC 538.410, the proposed Notice offers any electric utility or water purveyor that is a current P-DP contractor in Nevada, who applies, meets the above criteria, and whose load and resource data during federal fiscal years 2022 through 2024 shows that they have fully utilized the resource, will automatically be granted at minimum their existing percentage share of the P-DP electric power resource. Staff have proposed this provision to allow electric utilities and water purveyors that have an obligation to serve, to have assurance for planning purposes that they will at least have some share of P-DP commencing October 1, 2028.

III. Application for Allocation of P-DP

1. General Information

The Application for Allocation of P-DP asks the customer to confirm that they are an eligible customer, to indicate the percentage of the overall allocation that the contractor is requesting of the Summer and Winter capacity, show their historical demand, historical resources available, and whether they have access to the necessary transmission for the delivery of the power.

2. Specific Criteria Under Section 3

Under NRS 538.161 (2), as part of the Commission's evaluation and consideration in granting an allocation of hydropower, the Commission is to allocate resources in a manner that provides the "*greatest possible benefit to the state*." With that statute and mind, Section 3 of the Application provides an opportunity for applicants to describe how receipt of an allocation allows them to meet one or more of the following criteria:

a. Promote the widespread beneficial use of the resource

b. Support the continued economic health and viability of the Applicant

c. Promote utility rate stability for public entities

d. Promote diversification of the Applicant's energy portfolio

3. Timetable for Applications to be Submitted

Staff propose an application period of 30 days. Application forms will be posted and sent out on or about August 18, 2025, and completed applications must be submitted on or about by September 18, 2025.

IV. Recommendation

Staff recommend the Commission approve the draft notice which contains:

1) a description of the power to be allocated,

2) the Criteria to be used to evaluate and determine who will receive a post-2028 Parker-Davis allocation,

3) the Application to be filled out by applicants; and

4) the Timeline for applications to be received.

Exhibit H-1

COLORADO RIVER COMMISSION
OF NEVADA

Posted: June 13, 2025

NOTICE AND AGENDA FOR STAFF'S PUBLIC MEETING PURSUANT TO NAC 538.455 TO COMMENCE THE PROCESS TO ALLOCATE POWER FROM THE PARKER-DAVIS PROJECT

A public meeting conducted by the Staff for the Colorado River Commission of Nevada (Commission) will be held at 10:30 a.m. on TUESDAY, JULY 1, 2025, at Molasky Building, 100 N. City Parkway, 7th Floor, Grand Canyon Room, Las Vegas, Nevada 89106.

THIS MEETING WILL HAVE A PHYSICAL LOCATION AND BE AVAILABLE THROUGH A REMOTE TECHNOLOGY SYSTEM. FOR REMOTE ATTENDANCE, THE LINK FOR THE MEETING MAY BE ACCESSED AT THE COMMISSION WEBSITE AT, CRC.NV.GOV, UNDER THE MEETING TAB.

The purpose of this meeting is for Commission staff to solicit public comment on the draft Notice to Eligible Applicants of an Opportunity to Apply for an Allocation of Hydropower from the Parker-Davis Project.

Agenda

A. *Introductions*: Introduction of staff and the public present.

B. *Comments from the public:* Members of the public are invited to comment on items on the meeting agenda.

C. *Background on Resource:* Staff will provide a summary of the Parker-Davis Project Resource.

D. *Western Area Power Administration's Process and Timetable:* Staff will provide a summary of the process and dates of WAPA's process for the allocation of power from the Parker-Davis Project for contracts to be effective October 1, 2028.

E. *Commission's Process and Timetable:* Staff will provide the CRCNV's process for the allocation of power from the Parker-Davis Project and projected timetable.

100 N. City Parkway, Suite 1100, Las Vegas, Nevada 89106-4614
Phone: (725) 246-0436
Fax: (725) 204-7923
http://crc.nv.gov

F. *Proposed Draft Notice:* Staff will present the draft notice which includes the criteria and application for the resource pursuant to NAC 538.455(2).

G. *Deadline to Submit Public Comment*: Public comments to the draft notice are due and must be received by the CRCNV staff no later than July 11, 2025.

H. *Comments from the public*: Members of the public are invited to comment on items on the meeting agenda or on items not contained therein.

Eric Witkoski, Executive Director

Individuals may direct inquiries to obtain copies of the agenda and supporting materials to CRCAdmins@crc.nv.gov or call (725) 246-0436. Materials may also be viewed on the Commission's website at: https://crc.nv.gov/index.php?p=meetings and are available at the Commission's main office: Molasky Building 100 N. City Parkway, Suite 1100, Las Vegas, Nevada 89106. A public copy of supporting materials received during a meeting will be made available.

NOTICE: The Commission is pleased to make reasonable accommodations for persons who are disabled and wish to attend the meeting. If special arrangements are required, please notify the Colorado River Commission of Nevada in writing, 100 N. City Parkway, Suite 1100, Las Vegas, Nevada 89106 or by calling (725) 246-0436 at least 2 business days prior to the meeting.

THIS NOTICE HAS BEEN POSTED AT THE FOLLOWING LOCATION:

Colorado River Commission of Nevada, 100 N. City Parkway, 7th Floor and Suite 1100, Las Vegas, Nevada 89106 and at the following websites:

Colorado River Commission of Nevada website, crc.nv.gov/
Nevada Public Notice website, https://notice.nv.gov/

COLORADO RIVER COMMISSION
OF NEVADA

DRAFT PUBLIC NOTICE[1]

August 18, 2025

NOTICE TO ELIGIBLE APPLICANTS OF OPPORTUNITY TO APPLY FOR AN ALLOCATION OF HYDROPOWER FROM THE PARKER-DAVIS PROJECT

The Colorado River Commission of Nevada (CRCNV) hereby notifies all eligible, interested parties that certain hydropower resources from the Parker-Davis Project (P-DP) have become available for allocation under contract, commencing on October 1, 2028. Interested, eligible parties that can be served by the CRCNV pursuant to NRS 704.787, should review the available resources, the criteria for the allocation and complete the attached application form for submittal.

Completed applications must be received by CRCNV by:

4:00 PM on THURSDAY, SEPTEMBER 18, 2025

I. Resource Available

The Western Area Power Administration (Western or WAPA) is expected to make available a contract for an allocation of Parker-Davis Project (P-DP) resources for the period of October 1, 2028 through September 30, 2048 to the CRCNV. The determination of CRCNV's exact allocation of the P-DP resource is expected to be made by Western prior to the summer of 2026.

The CRCNV expects to receive a fixed amount of capacity, referred to as Contract

[1] Draft Notice is provided pursuant to NAC 538.455 2.

Rate of Delivery (CROD), in the amount of 56,231 kW for the Summer Season (March-September) and 40,692 kW for the Winter Season (October-February).[2] Quarterly Energy will be offered by WAPA three months at a time based on forecasted P-DP generation.

For a more thorough explanation of the product to be offered by WAPA, please see the Department of Energy, Western Area Power Administration, "Final 2028 Parker-Davis Project Power Marketing Plan and Call for Resource Pool Applications." 89 Fed. Reg. 88,999 posted on CRCNV's website at https://crc.nv.gov/ under Meetings.

II. Criteria to be Used by the CRCNV in the Allocation of the Resource

The CRCNV will review the applications and allocate resources in a manner the Commission deems appropriate, consistent with the established criteria, and achieves the greatest possible benefit to the State pursuant to NRS 538.161(2). To be considered for a hydropower allocation, Applicants must meet the following criteria:

A. Statutory Requirements for Applicants:

1. The Applicant must be an entity that the CRCNV has the statutory authority to serve under NRS 704.787. That includes:
   - **a.** Any customer that the CRCNV was serving or had a contract to serve on July 16, 1997, including any successor in interest to such customers; or
   - **b.** The Southern Nevada Water Authority (SNWA) or a member agency of SNWA that will use the power for water and wastewater operations.

B. Regulation Requirements for Applicants:

1. Applicants must comply with NAC 538.410. If the Applicant is an electric utility, it must satisfy the requirements of NAC 538.410(5) which states that the electric utility:
   - **a.** has a peak demand of at least 8 megawatts;
   - **b.** is located within Western's defined marketing area in this State for the Parker-Davis Project;

[2] Includes 3,231 kW of withdrawable Summer Season capacity and 2,037 kW of withdrawable Winter Season capacity. Withdrawable capacity is capacity that can be withdrawn by WAPA for priority uses upon two years advance notice.

c. is eligible to receive preference power under the applicable provisions of federal law relating to preference power. Preference entities include cities and towns, irrigation districts, public utility districts, and rural electric cooperatives.

C. General Requirements:

1. The Applicant must have a need for the resource to meet its load after considering all resources that are owned or purchased under long-term contracts,[3] including other hydropower resources from the CRCNV.

2. To determine whether existing contract holders have demonstrated a need for a P-DP allocation, an assessment will be made of the Applicant's past usage of the P-DP allocation, including the last three federal fiscal years (2022-2024).

3. The award of resources to the Applicant will not place an excessive administrative burden on the CRCNV.

4. Applicant must be willing to execute a Contract with the CRCNV by March 1, 2028 for power deliveries beginning on October 1, 2028.

5. The Applicant must demonstrate, by March 1, 2028, that it will have all necessary transmission, scheduling and distribution arrangements in place prior to delivery.

6. The Applicant must be able to make its own, independent assessment of the need for optional energy products offered under the P-DP Electric Service Contract.

7. The Applicant must be creditworthy and in compliance with its current Commission contracts and may be required to post collateral in accordance with the CRCNV's statutes and regulations.

8. CRCNV reserves the right to ask for audited financial statements or other documentation to support creditworthiness.

[3] A long-term contract is a contract with a term of 10 years or longer.

D. Existing Contract Holders and Future Allottees

1. Any electric utility or water purveyor that is a current P-DP contractor in Nevada, who applies, meets the above criteria, and whose load and resource data during federal fiscal years 2022 through 2024[4] shows that they have fully utilized the resource, will automatically be granted, as a ***minimum***, their existing percentage share of the P-DP electric power resource. The current percentages for each of the CRCNV's contractors is posted on the CRCNV's website at https://crc.nv.gov/ under Meetings.

2. Any eligible contractor who applies may be considered for a future allocation. In awarding the resource to eligible contractors, the CRCNV will consider the degree to which awarding the allocation will:

a. Promote the widespread beneficial use of the resource;

b. Support the continued economic health and viability of the Applicant;

c. Promote utility rate stability for public entities;

d. Promote diversification of the Applicant's energy portfolio.

[4] Federal fiscal years 2022 through 2024 means the period from October 1, 2021 through September 30, 2024.

Application Form and Submission Dates

The Application Form is attached to this Notice and is available on the CRCNV's website at https://crc.nv.gov/. The completed Application may be submitted between August 18, 2025 and September 18, 2025. Applications should be addressed to the Executive Director and submitted:

- By email addressed to: crcpower@crc.nv.gov;
- By fax to (725) 204-7923; or
- By personal delivery or U.S. Mail to the CRCNV's office, 100 N. City Parkway, Suite 1100, Las Vegas, NV 89106.

No applications will be accepted after 4:00 p.m. PDT on:

THURSDAY, SEPTEMBER 18, 2025

Questions about this process should be directed to: crcpower@crc.nv.gov

Colorado River Commission of Nevada
Application for Allocation of Parker-Davis Project

This form was created in Microsoft Word and a digital copy is available on the Colorado River Commission of Nevada's (CRCNV) website: www.crc.nv.gov. If the form is opened in Microsoft Word, responses may be entered directly into the text boxes which will expand as needed to accept the text entered. Alternatively, additional pages for your responses may be attached by the Applicant. Applicants are requested to clearly identify on any attachments the Applicant's name and the related numbered item on the form.

ALL APPLICATIONS AND INFORMATION SUBMITTED TO THE CRCNV WILL BE CONSIDERED PUBLIC RECORDS SUBJECT TO PUBLIC DISCLOSURE UPON REQUEST. PLEASE SEE NOTE ATTACHED TO THIS APPLICATION FORM FOR MORE INFORMATION.

Completed applications must be received by the CRCNV by 4:00 p.m. PDT on:

THURSDAY, SEPTEMBER 18, 2025

1. Applicant Information. Please provide the following:

a. Name and address of entity/organization requesting and allocation:

Entity Name	
Address	
City, State, Zip	

b. Person(s) representing Applicant:

Contact Person Title	
Address	
City, State, Zip	
Telephone	
Fax	
Email Address	

c. Please refer to Section II. A of the Notice (Statutory Requirements for Applicants). Are you applying under part 1.a (customer existing on July 16, 1997) or part 1.b (SNWA or member agency for water or wastewater operations)? Please select one.

1.a _____

1.b _____

d. The CRCNV expects to receive approximately 56,231 kW of Summer Capacity and 40,692 kW of Winter Capacity. Please provide the percent of the CRCNV's capacity you would like to receive. Note: The same percentage will be applied to both seasons.

_____**%**

2. Applicant Data:

Historical Demand:

a. Provide the actual monthly maximum demand (kilowatts) experienced for federal fiscal years 2022-2024. ***Note: For those applying for power to be used in their water and/or wastewater operations - please provide monthly data directly related to such use.***

Federal Fiscal Year 2022						
	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022
Demand (kilowatts)						
	Apr 2022	May 2022	Jun 2022	Jul 2022	Aug 2022	Sep 2022
Demand (kilowatts)						

Federal Fiscal Year 2023						
	Oct 2022	Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023
Demand (kilowatts)						
	Apr 2023	May 2023	Jun 2023	Jul 2023	Aug 2023	Sep 2023
Demand (kilowatts)						

Federal Fiscal Year 2024						
	Oct 2023	Nov 2023	Dec 2023	Jan 2024	Feb 2024	Mar 2024
Demand (kilowatts)						
	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024
Demand (kilowatts)						

Applicant's Power Resources.

a. Historical Resources

Please provide the energy resources in kWh that were delivered (scheduled) to serve Applicant's load during federal fiscal years 2022-2024. Delivered resources should total up to the Applicant's loads in each period. Long-term contracts are those contracts that have a term of 10 years or longer.

Federal Fiscal Year 2022						
	Oct 2021 kWh	Nov 2021 kWh	Dec 2021 kWh	Jan 2022 kWh	Feb 2022 kWh	Mar 2022 kWh
Hoover (kWh)	To Be Provided by CRCNV					
Parker-Davis (kWh)						
SLCAIP (kWh)						
Fossil Fuel Assets Owned or Purchased Under Long-Term Contract (kWh)						
Intermittent Assets Owned or Purchased Under Long-Term Contract (kWh)						
Short-Term or Unspecified (kWh)						
Load (kWh) Total of Resources Above						
	Apr 2022 kWh	May 2022 kWh	Jun 2022 kWh	Jul 2022 kWh	Aug 2022 kWh	Sep 2022 kWh
Hoover (kWh)	To Be Provided by CRCNV					
Parker-Davis (kWh)						
SLCAIP (kWh)						
Fossil Fuel Assets Owned or Purchased Under Long-Term Contract (kWh)						
Intermittent Assets Owned or Purchased Under Long-Term Contract (kWh)						
Short-Term or Unspecified (kWh)						
Load (kWh) Total of Resources Above						

Federal Fiscal Year 2023						
	Oct 2022 kWh	Nov 2022 kWh	Dec 2022 kWh	Jan 2023 kWh	Feb 2023 kWh	Mar 2023 kWh
Hoover (kWh)	To Be Provided by CRCNV					
Parker-Davis (kWh)						
SLCAIP (kWh)						
Fossil Fuel Assets Owned or Purchased Under Long-Term Contract (kWh)						
Intermittent Assets Owned or Purchased Under Long-Term Contract (kWh)						
Short-Term or Unspecified (kWh)						
Load (kWh) Total of Resources Above						
	Apr 2023 kWh	May 2023 kWh	Jun 2023 kWh	Jul 2023 kWh	Aug 2023 kWh	Sep 2023 kWh
Hoover (kWh)	To Be Provided by CRCNV					
Parker-Davis (kWh)						
SLCAIP (kWh)						
Fossil Fuel Assets Owned or Purchased Under Long-Term Contract (kWh)						
Intermittent Assets Owned or Purchased Under Long-Term Contract (kWh)						
Short-Term or Unspecified (kWh)						
Load (kWh) Total of Resources Above						

Federal Fiscal Year 2024						
	Oct 2023 kWh	Nov 2023 kWh	Dec 2023 kWh	Jan 2024 kWh	Feb 2024 kWh	Mar 2024 kWh
Hoover (kWh)	To Be Provided by CRCNV					
Parker-Davis (kWh)						
SLCAIP (kWh)						
Fossil Fuel Assets Owned or Purchased Under Long-Term Contract (kWh)						
Intermittent Assets Owned or Purchased Under Long-Term Contract (kWh)						
Short-Term or Unspecified (kWh)						
Load (kWh) Total of Resources Above						
	Apr 2024 kWh	May 2024 kWh	Jun 2024 kWh	Jul 2024 kWh	Aug 2024 kWh	Sep 2024 kWh
Hoover (kWh)	To Be Provided by CRCNV					
Parker-Davis (kWh)						
SLCAIP (kWh)						
Fossil Fuel Assets Owned or Purchased Under Long-Term Contract (kWh)						
Intermittent Assets Owned or Purchased Under Long-Term Contract (kWh)						
Short-Term or Unspecified (kWh)						
Load (kWh) Total of Resources Above						

b. Transmission:

Points of delivery/location of energy delivery: Provide the Applicant's requested point(s) of delivery on the Parker-Davis Transmission System, the voltage of service required and the capacity desired. The CRCNV's authorized point(s) of delivery include Amargosa Substation, Henderson Switching Station, Boulder City Tap, Clark Tap, and Mead Substation.

3. **Please describe how receipt of the allocated resource accomplishes the following:**

a. Promote the widespread beneficial use of the resource.

b. Support the continued economic health and viability of the Applicant.

c. Promote utility rate stability for public entities.

d. Promote diversification of the Applicant's energy portfolio.

4. **Other Information:**

The Applicant may provide any other information pertinent to the application.

5. **By signing this application, the Applicant acknowledges that if the Applicant accepts an allocated resource from the CRCNV, the Applicant will be subject to the following:**

   i. The Applicant will execute a Contract with the CRCNV before March 1, 2028 for power deliveries beginning on October 1, 2028.

6. **Signature:**

The Colorado River Commission of Nevada requires the signature and title of an appropriate official who can attest to the validity of the application and who is authorized to submit the request for an allocation.

By signing below, I certify the information which I have provided is true and correct to the best of my information, knowledge and belief.

Signature_____ Title_____

Print Name_____

Applications may be addressed to the Executive Director and submitted:

- **By email addressed to: crcpower@crc.nv.gov;**
- **By fax to (725) 204-7923; or**
- **By personal delivery or U.S. Mail to the CRCNV's office, 100 N. City Parkway, Suite 1100, Las Vegas, NV 89106.**

Applications may be submitted between **August 18, 2025** and **September 18, 2025**.

No applications will be accepted after 4:00 p.m. PDT on:

THURSDAY, SEPTEMBER 18, 2025

NOTE ON SUBMITTAL OF CONFIDENTIAL
OR COMMERCIALLY SENSITIVE INFORMATION
TO THE COLORADO RIVER COMMISSION OF NEVADA

The Colorado River Commission of Nevada, as a State agency, is subject to the Public Records Law of Nevada, Nevada Revised Statutes (NRS), Chapter 239, which provides for public access upon request to all records, data and information in the possession of a state agency.

As a result, all Applications and all data or information supplied to the Commission in support of an Application will be considered "public records" subject to public disclosure upon request.

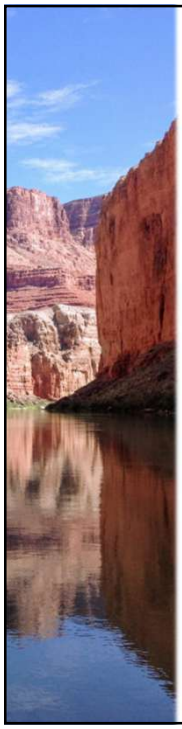
Further, the Colorado River Commission of Nevada is also subject to the Open Meeting Law, Nevada Revised Statutes (NRS) chapter 241.

The contents of the Applications will be discussed at a public meeting. Copies of the Applications and all data or information supplied to the Commission in support of an Application will be available to the Commissioners and staff, as back up material, at the Commission meeting where the applications are discussed. Any member of the public requesting copies of the backup materials will be provided them.

Any Applicant desiring to discuss issues concerning potentially confidential or sensitive information should contact the Commission through:

Michelle Briggs
Special Counsel
(725) 281-1098
mdbriggs@crc.nv.gov

Exhibit H-2

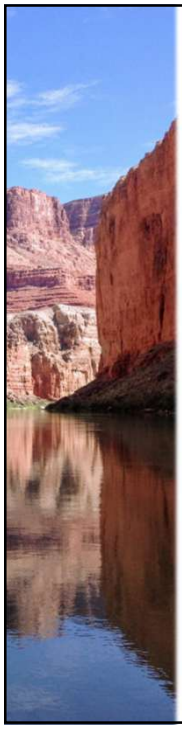


Colorado River Commission of Nevada

Public Notice of Parker-Davis Project
Criteria and Application

August 12, 2025

1



Background

- The Commission's contracts with Western Area Power Administration (WAPA) for hydropower generation from the Parker-Davis Project expire on Sept. 30, 2028.
- The Commission's Parker-Davis contracts with its customers also expire on Sept. 30, 2028.
- We expect to enter into a new contract with WAPA for a 20 Year Term beginning October 1, 2028.
- The Commission's regulations dictate the process we must use to determine who will receive a Parker-Davis allocation from the Commission in 2028.

2

What are we Asking the Commission to Do Today?

- Approve, revise, or reject the draft notice which contains:
  - A description of the power to be allocated;
  - Criteria to be used to determine who will receive a post-2028 Parker-Davis allocation;
  - Application that will be filled out by applicants;
  - Timeline for applications to be received.

3

Criteria Highlights

- Contract Term
  - October 1, 2028 through September 30, 2048
- Treatment of Stranded Costs
  - WAPA is carrying approximately $54.8 million in purchased power deficits from 2018-2023 which is being amortized through 2043.
  - The CRCNV's share of the deficit, including interest, is approximately $14.1 million.
  - The CRCNV's current plan is to assess the deficit to all contract holders in proportion to their post-2028 capacity allocations.
  - Impact is estimated to be approximately $3-$4/MWh in addition to resource cost of approximately $20-$22/MWh.

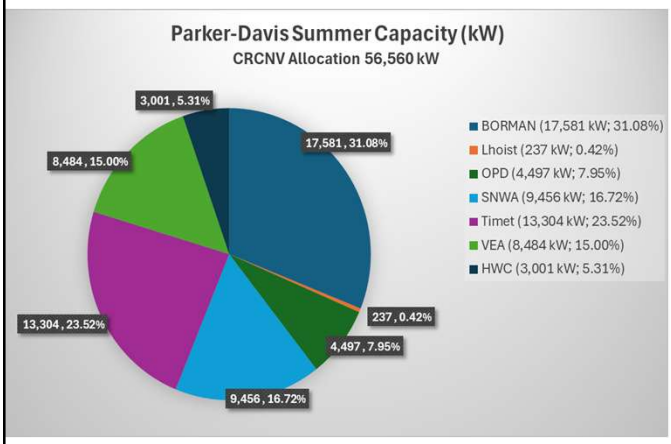
4

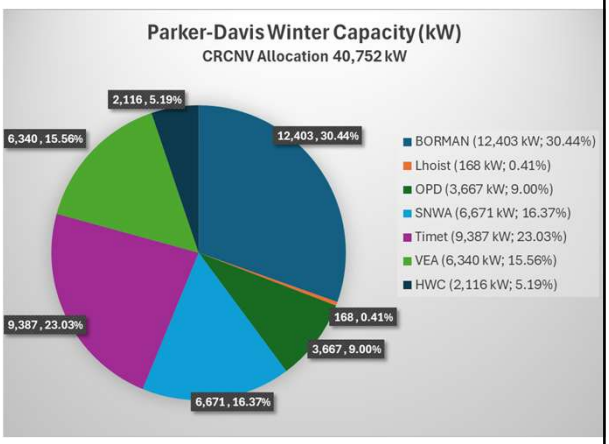
Statutory and Regulatory Highlights

- Statutory Requirements
  - The Applicant must be an entity that the CRCNV has the statutory authority to serve under NRS 704.787. That includes:
    - Any customer that the CRCNV was serving or had a contract to serve on July 16, 1997, including any successor in interest to such customers; or
    - The Southern Nevada Water Authority (SNWA) or a member agency of SNWA that will use the power for water and wastewater operations.

5

Current Parker-Davis Allocations





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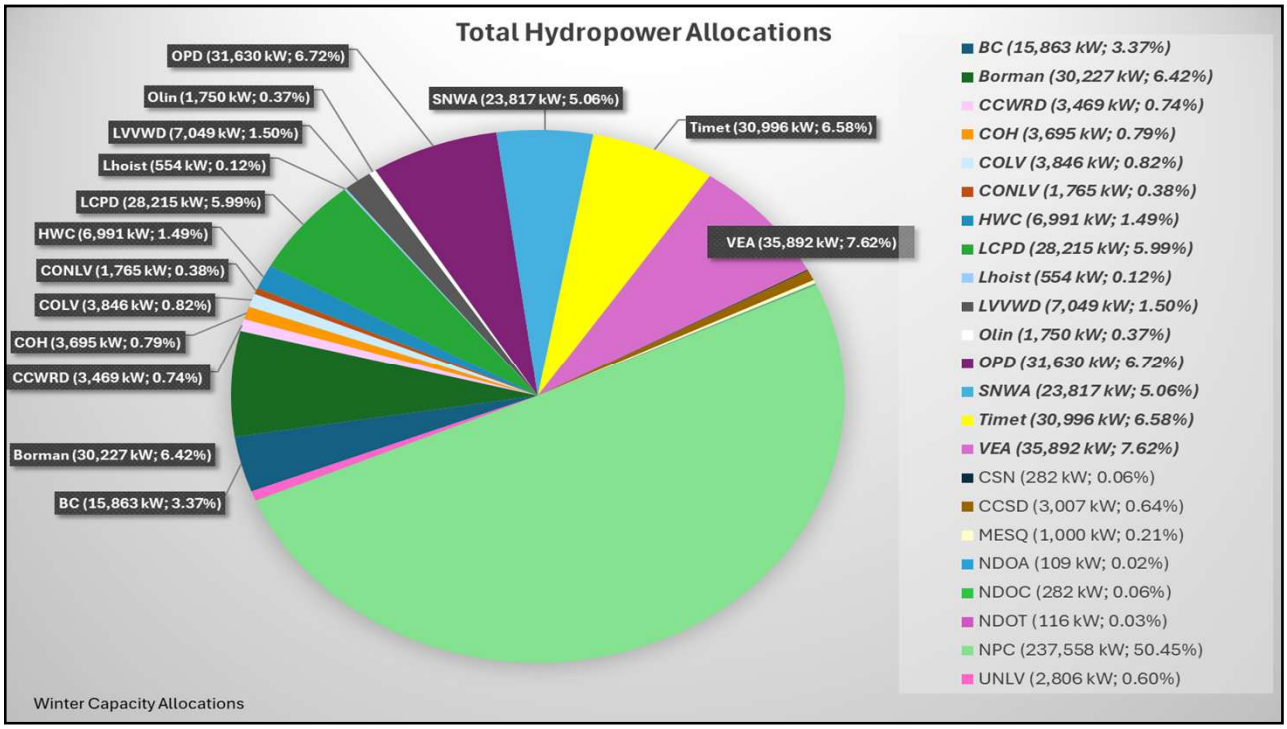

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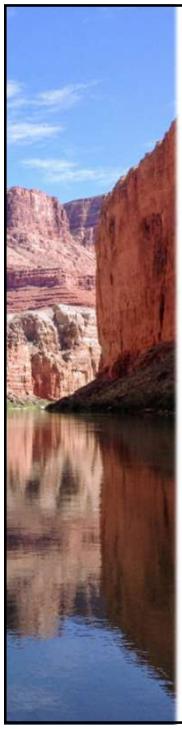


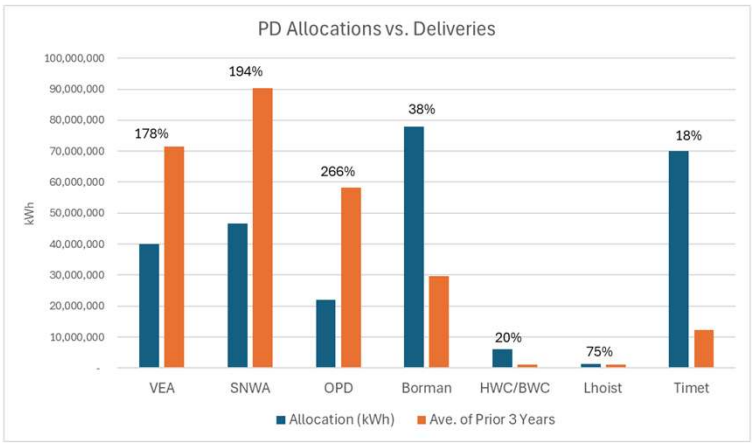
Statutory and Regulatory Highlights

- Regulatory Requirements
  - Applicants must comply with NAC 538.410. If the Applicant is an electric utility, it must satisfy the requirements of NAC 538.410(5) which states that the electric utility:
    - has a peak demand of at least 8 megawatts;
    - is located within Western's defined marketing area in this State for the Parker-Davis Project;
    - is eligible to receive preference power under the applicable provisions of federal law relating to preference power. Preference entities include cities and towns, irrigation districts, public utility districts, and rural electric cooperatives.

8

General Requirement

- The Applicant must have a need for the resource to meet its load after considering all resources that are owned or purchased under long-term contracts, including other hydropower resources from the CRCNV.



Focus will be on past use of the P-DP allocation, including the last three federal fiscal years (2022-2024).

9

Other General Requirement

- The award of resources to the Applicant will not place an excessive administrative burden on the CRCNV.
- The Applicant must demonstrate, by March 1, 2028, that it will have all necessary transmission, scheduling and distribution arrangements in place prior to delivery.
- The Applicant must be able to make its own, independent assessment of the need for optional energy products offered under the P-DP Electric Service Contract.
- Applicants must be creditworthy and in compliance with its current Commission contracts and may be required to post collateral in accordance with the CRCNV's statutes and regulations.

10

Existing Contract Holders and Future Allottees

- Any electric utility or water purveyor that is a current P-DP contractor in Nevada, who applies, meets the above criteria, and whose load and resource data during federal fiscal years 2022 through 2024 shows that they have fully utilized the resource, will automatically be granted, as a *minimum*, their existing percentage share of the P-DP electric power resource.
- Any eligible contractor who applies may be considered for a future allocation. In awarding the resource to eligible contractors, the CRCNV will consider the degree to which awarding the allocation will:
  - Promote the widespread beneficial use of the resource;
  - Support the continued economic health and viability of the Applicant;
  - Promote utility rate stability for public entities;
  - Promote diversification of the Applicant's energy portfolio.

WAPA Parker-Davis Marketing Timeline*

November 12, 2024
Published Notice of Decision *Federal Register Notice* (FRN)
Final Marketing Plan and Call for Applications

August 2025
Publish Notice of Proposal FRN for Proposed Resource Pool Allocations

June 2026
Publish Notice of Decision FRN for Final Resource Pool Allocations

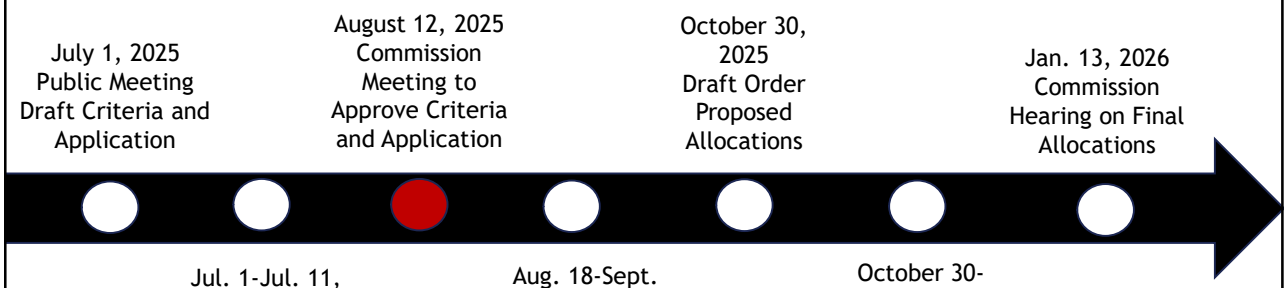
June 2026 – May 2028 Contract Negotiations

May 31, 2028
Deadline for Contract Execution

October 1, 2028
Service Begins

Timeline is tentative and subject to change

CRCNV Parker-Davis Marketing Timeline*

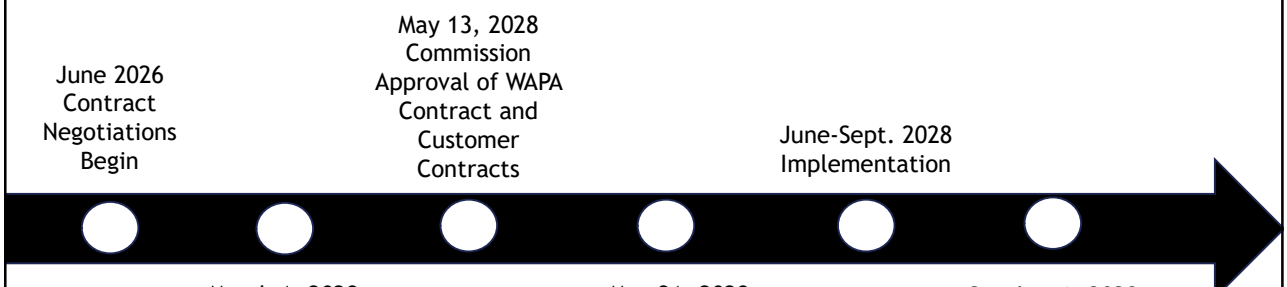


Timeline is tentative and subject to change

8/12/2025 13

13

CRCNV Parker-Davis Marketing Timeline*



Timeline is tentative and subject to change

8/12/2025 14

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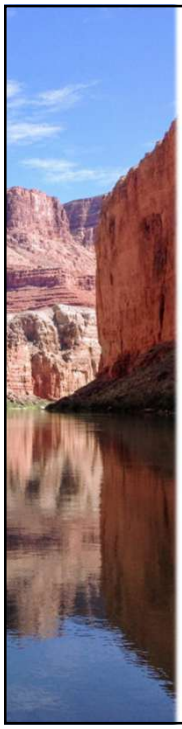

Questions?

15

Exhibit H-3

Staff's Public Meeting Documents

July 1, 2025

- Notice and Agenda
- Presentation on Parker-Davis Project
- Minutes from Public Meeting
- Responses to Submitted Questions

COLORADO RIVER COMMISSION
OF NEVADA

Posted: June 13, 2025

NOTICE AND AGENDA FOR STAFF'S PUBLIC MEETING PURSUANT TO NAC 538.455 TO COMMENCE THE PROCESS TO ALLOCATE POWER FROM THE PARKER-DAVIS PROJECT

A public meeting conducted by the Staff for the Colorado River Commission of Nevada (Commission) will be held at 10:30 a.m. on TUESDAY, JULY 1, 2025, at Molasky Building, 100 N. City Parkway, 7th Floor, Grand Canyon Room, Las Vegas, Nevada 89106.

THIS MEETING WILL HAVE A PHYSICAL LOCATION AND BE AVAILABLE THROUGH A REMOTE TECHNOLOGY SYSTEM. FOR REMOTE ATTENDANCE, THE LINK FOR THE MEETING MAY BE ACCESSED AT THE COMMISSION WEBSITE AT, CRC.NV.GOV, UNDER THE MEETING TAB.

The purpose of this meeting is for Commission staff to solicit public comment on the draft Notice to Eligible Applicants of an Opportunity to Apply for an Allocation of Hydropower from the Parker-Davis Project.

Agenda

A. *Introductions*: Introduction of staff and the public present.

B. *Comments from the public:* Members of the public are invited to comment on items on the meeting agenda.

C. *Background on Resource:* Staff will provide a summary of the Parker-Davis Project Resource.

D. *Western Area Power Administration's Process and Timetable:* Staff will provide a summary of the process and dates of WAPA's process for the allocation of power from the Parker-Davis Project for contracts to be effective October 1, 2028.

E. *Commission's Process and Timetable:* Staff will provide the CRCNV's process for the allocation of power from the Parker-Davis Project and projected timetable.

100 N. City Parkway, Suite 1100, Las Vegas, Nevada 89106-4614
Phone: (725) 246-0436
Fax: (725) 204-7923
http://crc.nv.gov

F. *Proposed Draft Notice:* Staff will present the draft notice which includes the criteria and application for the resource pursuant to NAC 538.455(2).

G. *Deadline to Submit Public Comment*: Public comments to the draft notice are due and must be received by the CRCNV staff no later than July 11, 2025.

H. *Comments from the public*: Members of the public are invited to comment on items on the meeting agenda or on items not contained therein.

Eric Witkoski, Executive Director

Individuals may direct inquiries to obtain copies of the agenda and supporting materials to CRCAdmins@crc.nv.gov or call (725) 246-0436. Materials may also be viewed on the Commission's website at: https://crc.nv.gov/index.php?p=meetings and are available at the Commission's main office: Molasky Building 100 N. City Parkway, Suite 1100, Las Vegas, Nevada 89106. A public copy of supporting materials received during a meeting will be made available.

NOTICE: The Commission is pleased to make reasonable accommodations for persons who are disabled and wish to attend the meeting. If special arrangements are required, please notify the Colorado River Commission of Nevada in writing, 100 N. City Parkway, Suite 1100, Las Vegas, Nevada 89106 or by calling (725) 246-0436 at least 2 business days prior to the meeting.

THIS NOTICE HAS BEEN POSTED AT THE FOLLOWING LOCATION:

Colorado River Commission of Nevada, 100 N. City Parkway, 7th Floor and Suite 1100, Las Vegas, Nevada 89106 and at the following websites:

Colorado River Commission of Nevada website, crc.nv.gov/
Nevada Public Notice website, https://notice.nv.gov/

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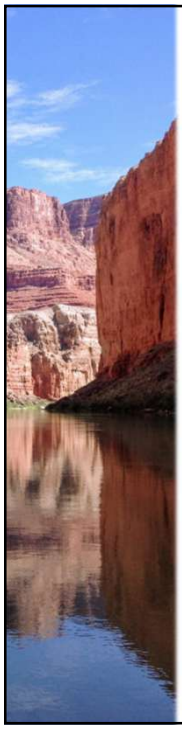
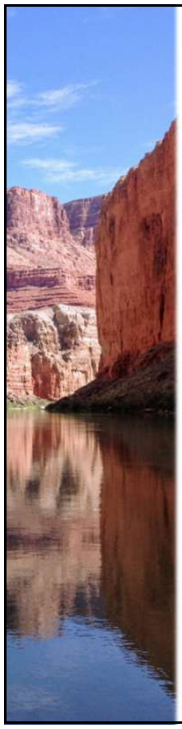


Colorado River Commission of Nevada

Parker-Davis Project Background

July 1, 2025

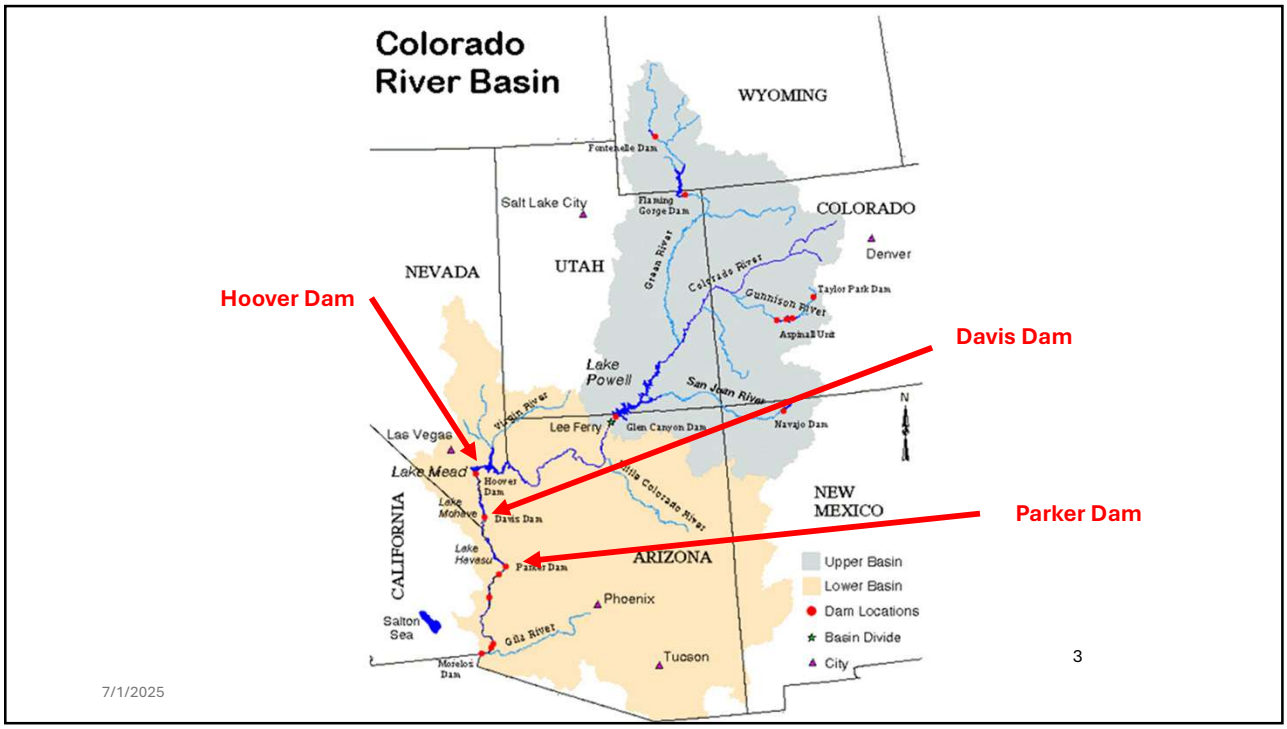
1



Content of Presentation

- History and Background
- P-DP Generation Forecast
- Post-2028 P-DP Product
- Estimated Rates
- WAPA Timeline
- CRCNV Timeline

2


Colorado River Basin
WYOMING
COLORADO
NEVADA
UTAH
NEW MEXICO
ARIZONA
CALIFORNIA
Salt Lake City
Denver
Phoenix
Tucson
Las Vegas
Lake Powell
Lake Mead
Lake Mohave
Lake Havasu
Salton Sea
Fontenelle Dam
Flaming Gorge Dam
Taylor Park Dam
Gunnison River
Colorado River
Green River
Lee Ferry
Glen Canyon Dam
Navajo Dam
San Juan River
Virgin River
Hoover Dam
Davis Dam
Parker Dam
Gila River
Morelos Dam
Little Colorado River
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Upper Basin
Lower Basin
Dam Locations
Basin Divide
City
Hoover Dam
Davis Dam
Parker Dam
7/1/2025
3

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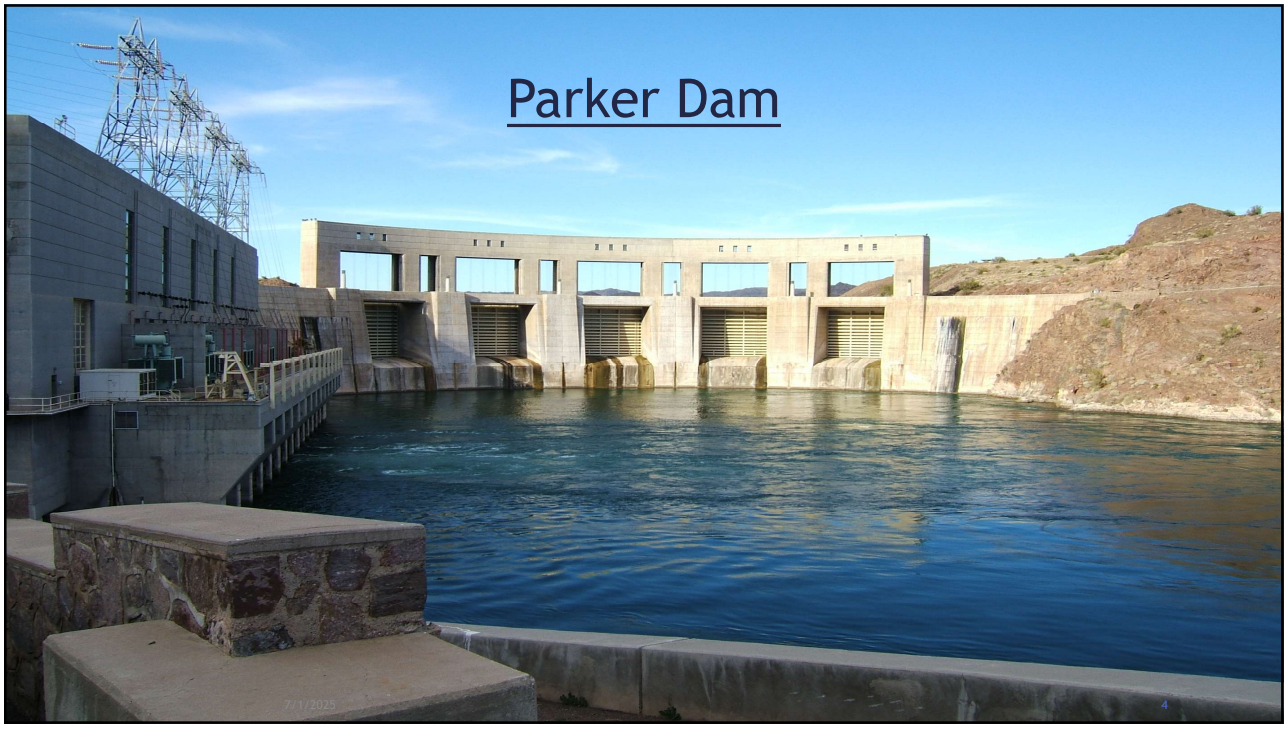

Parker Dam
7/1/2025
4

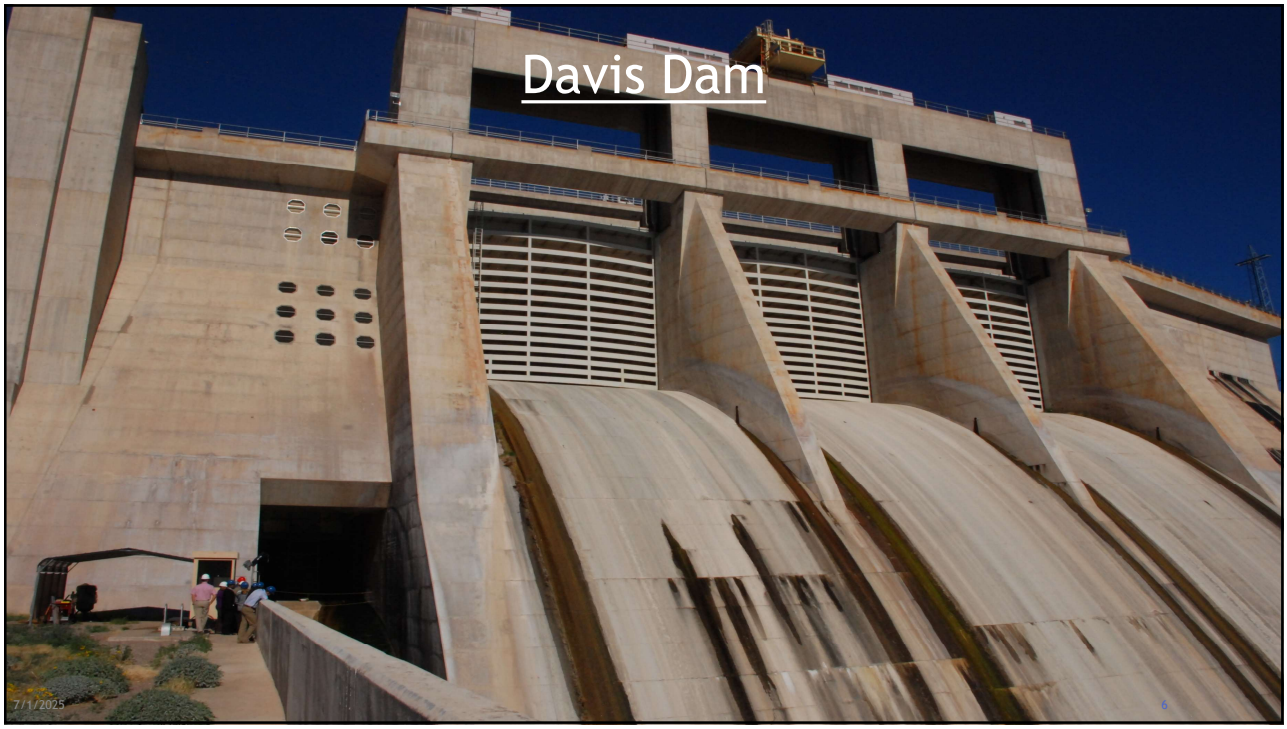
4

Parker Dam

- Construction began in 1934 and was completed in 1938.
- Powerplant construction was started in 1939.
- Built to create Lake Havasu for MWD Whitsett Intake Pumping Plant for the Colorado River Aqueduct.
  - Half of all Parker Dam generation is for MWD water pumping.
- Lake Havasu available storage is 0.619 MAF.
- 4 Generating Units: P1, P2, P3, P4
- One full unit is equivalent to 4600 cfs.
  - Enough to fill a football field 1 foot deep in 10 seconds
  - Generates roughly 27-30 MW

7/1/2025 5

5



6

Davis Dam

- Davis Dam Project authorized in April 1941.
- Initial excavations began in June 1942, but work was stopped due to WWII.
- The Mexican Treaty of 1944 required the US to construct Davis Dam for water regulation to ensure delivery to Mexico.
- Work authorization resumed in July 1945 but didn't commence until April 1946.
- Construction was completed in 1953.
- Lake Mohave available storage is 1.81 MAF.
- 5 Generating Units: D1, D2, D3, D4, D5
- One full unit is equivalent to 4600 cfs.
  - Generates roughly 48-51 MW

7

Current Powerplant Information

Powerplant	Nameplate Capacity
Davis	255 MW
Parker	120 MW
Total	375 MW

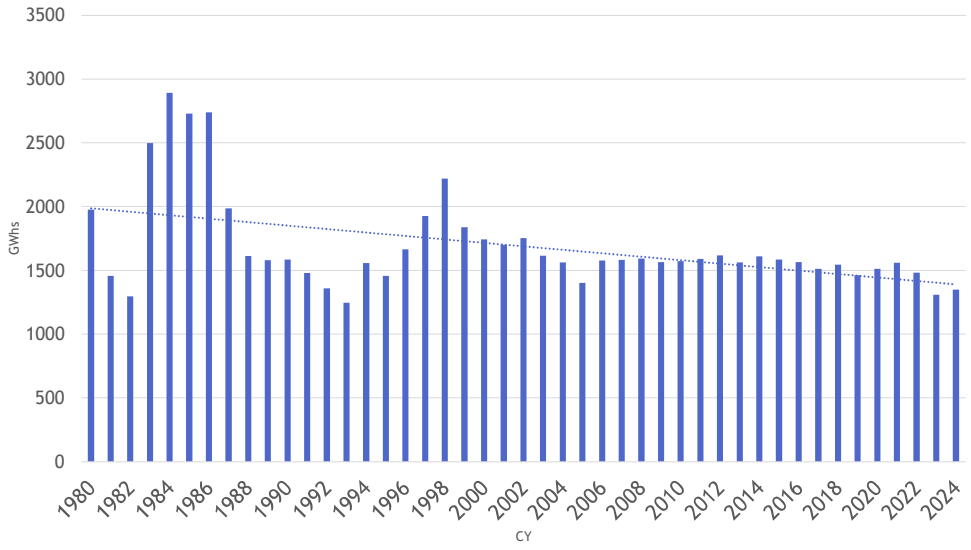
8

P-DP Generation

- Generation is a product of water releases and therefore heavily affected by:
  - Active Weather & Drought
  - System Conservation
  - System Shortages
- The last two are highly dependent on post-2026 river operations which are unknown at this point.

9

Historical PD Plant Generation



10

Post-2028 P-DP Capacity

- We expect to retain most of our current Parker-Davis capacity.
  - Current allocations were reduced so that WAPA could create a small 2% pool for new applicants.

Season	Current Capacity (kW)	Expected Capacity (kW)
Summer (Mar-Sept.)	56,560	56,231
Winter (Oct.-Feb.)	40,752	40,692

- Includes 3,231 kW of withdrawable Summer Season capacity and 2,037 kW of withdrawable Winter Season capacity.
  - Withdrawable capacity is capacity that can be withdrawn by WAPA for priority uses upon two years advance notice.

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Post-2028 P-DP Capacity (con't)

- WAPA can propose to adjust the capacity, also known as the Contract Rate of Delivery (CROD).
  - Requires a five-year minimum notice to contractors.
  - Subject to a public process.
- WAPA will impose a minimum scheduling constraint.
  - Methodology will be determined in collaboration with WAPA.

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Post-2028 P-DP Energy

- WAPA will provide a product called "Quarterly Energy."
  - Based on WAPA's forecast of what they expect to generate.
  - WAPA will provide notice of the quarterly amounts before the start of each quarter.
- WAPA will offer contractors a product called "Optional Energy" which is energy contractors can elect for WAPA to purchase.
  - Optional Energy, up to the CROD, will be offered at market prices.
- WAPA will reduce energy mid-month in response to weather or other conditions that cause reduced water use but will offer Optional Energy to maintain Quarterly Energy amounts.

13

Post-2028 P-DP Transmission and RECs

- WAPA will allow contractors to use transmission capacity, reserved for P-DP deliveries, to move contractor-owned or contractor-purchased resources.
  - If the path differs from the path reserved for P-DP deliveries, WAPA will conduct studies to determine availability comparable to the OATT process for redirecting PTP transmission.
- P-DP RECs will be made available to contractors.
  - WAPA plans to establish a REC marketing program similar to the one they already have for Hoover.

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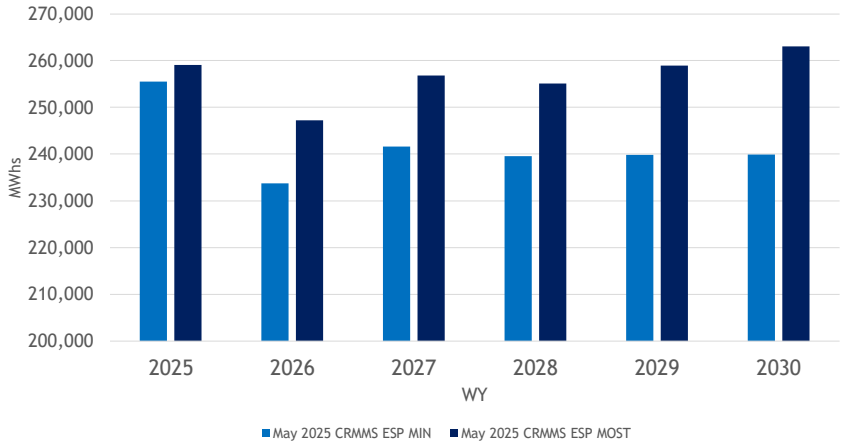
CRCNV's Energy Forecasts

- May 2025 CRMMS modified
- Assumes system conservation post 2026



2028
Min: 239,541 MWh
Most: 255,127 MWh

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Estimated P-DP Rates

- We anticipate that the CRCNV's share of the revenue requirement for the P-DP Project will be approximately $4.1M per year in 2028.
- Dividing by the most and the min energy forecasts shown on the prior slide yields a rate of:
  - $16-$17 per MWh
- Additional charges for:
  - CRCNV's administrative charge ($1.22/MWh);
  - Lower Colorado River Basin Development Fund (LCRBDF) ($2.50/MWh);
  - Multi-Species Conservation Program (MSCP) ($.52/MWh).
- Total rate before transmission in the range of:
  - $20.24/MWh to $21.24/MWh

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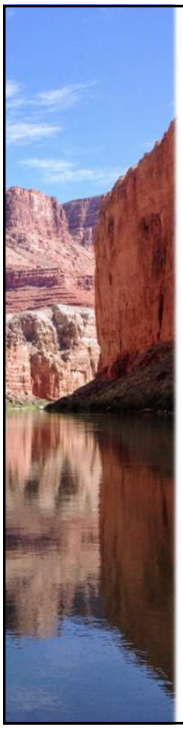

Estimated P-DP Rates

- Transmission estimated to be approximately $1.90 per kW-month.
- WAPA is carrying approximately $54.8 million in purchased power deficits from 2018-2023.
  - This amount is being amortized through 2043.
  - The CRCNV's share of the deficit, including interest, is approximately $14.1 million.
  - WAPA does not yet have a firm plan for recovering this amount from contractors.
    - Rate vs. surcharge
- The CRCNV's current plan is to assess the deficit to all contract holders in proportion to their post-2028 capacity allocations.
- Estimated cost impact: $3-$4/MWh.

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WAPA Parker-Davis Marketing Timeline*

November 12, 2024
Published Notice of Decision *Federal Register Notice* (FRN) Final Marketing Plan and Call for Applications

August 2025
Publish Notice of Proposal FRN for Proposed Resource Pool Allocations

June 2026
Publish Notice of Decision FRN for Final Resource Pool Allocations

June 2026 – May 2028 Contract Negotiations

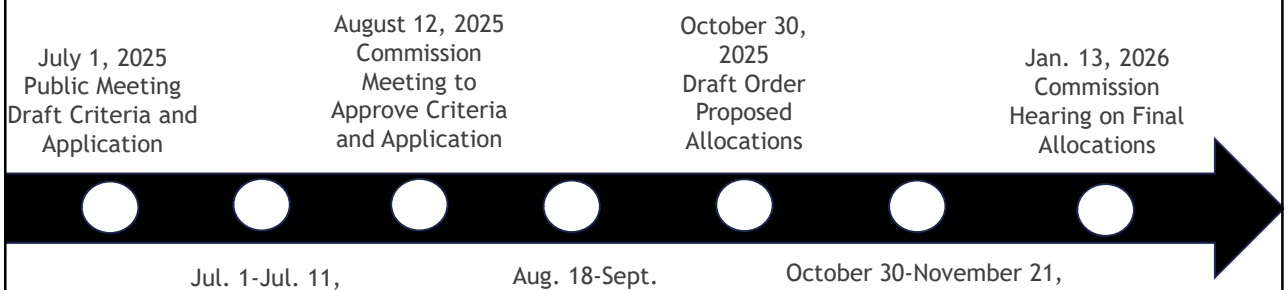
May 31, 2028
Deadline for Contract Execution

October 1, 2028
Service Begins

Timeline is tentative and subject to change

18

CRCNV Parker-Davis Marketing Timeline*



Timeline is tentative and subject to change

7/1/2025

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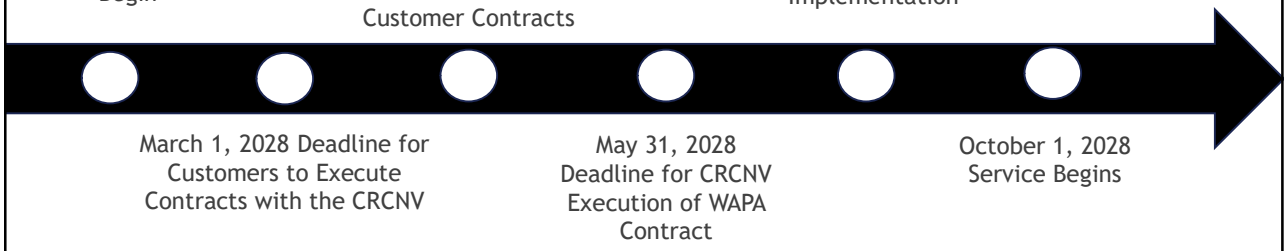
CRCNV Parker-Davis Marketing Timeline*



Timeline is tentative and subject to change

7/1/2025

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Questions?

- Please submit written questions to: *crcpower@crc.nv.gov*
- The answers to all written questions will be posted on our website: *crc.nv.gov*

Blank sheet

MINUTES OF STAFF PUBLIC MEETING

The Colorado River Commission of Nevada Staff held a meeting at 10:30 a.m. on Tuesday, July 1, 2025, at the Molasky Building, 100 N. City Parkway, 7th Floor, Grand Canyon Room, Las Vegas, Nevada 89106.

DEPUTY ATTORNEY(S) GENERAL

Special Counsel, Attorney General	Michelle D. Briggs
Special Counsel, Attorney General	David W Newton

COMMISSION STAFF IN ATTENDANCE

Executive Director	Eric Witkoski
Assistant Director, Hydropower	Gail Bates
Hydropower Analyst	Elissa Emery
Assistant Hydropower Program Manager	Matthew Alinsod
System Coordinator	Chris Smith
Applications Specialist	John Sagmani
Natural Resources Specialist	Danielle Collins
Natural Resources Specialist	Kristina Sasser
Office Manager	Noah Fischel
Administrative Assistant II	Bobbie Hickman

COMMISSION STAFF IN ATTENDANCE VIA ONLINE

Chief Finance & Administration	Doug Beatty
Assistant Director of Information Systems	Kaleb Hall
Operations Manager	Gina Goodman
Senior Energy Accountant	Hyelim Hong
Administrative Assistant IV	Elsa Nava
Administrative Assistant III	Tamisha Randolph
Administrative Assistant II	Joshua Cleveland
Administrative Assistant II	Thyandra Lewis
Energy Operations Coordinator	Ken Mayer

OTHERS PRESENT: REPRESENTING

Clark County Water Reclamation	Peter Beaulieu
Clark County Water Reclamation	Shawn Mollus
NV Energy	Jana Stewart
Southern Nevada Water Authority	Mike Slattery

OTHERS PRESENT: REPRESENTING VIA ONLINE

City of Boulder City	Joshua Hardy
City of Henderson	Christopher Boyd

City of Las Vegas	Rachel Lewison
Henderson Water Conveyance	Dwayne Waterman
Legislative Counsel Bureau	Justin Luna
Lincoln County Power District	Dane Bradfield
Las Vegas Valley Water District	Jason Bailey

July 1, 2025

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The Colorado River Commission of Nevada (Commission) meeting was called to order by Executive Director Eric Witkoski at 10:30 a.m.

A. Introductions.

Mr. Witkoski confirmed that the meeting was posted in compliance with the Open Meeting Law. Mr. Witkoski informed attendees the meeting is accessible via remote technology through the commission's website crc.nv.gov under the meeting tab. He made clear the documents being presented were drafts intended for comment from interested parties and feedback would be encouraged. Mr. Witkoski proceeded to introduce the Commission staff presenting in the meeting.

B. Comments from the public. Members of the public are invited to comment on items on the meeting agenda or on items not contained therein. No action may be taken on a matter raised during public comment until the matter itself has been specifically included on an agenda as an item for possible action.

Mr. Witkoski asked if there were any comments from the public. There were none at that time.

C. *Background on Resource: Staff will provide a summary of the Parker-Davis Project Resource.*

Assistant Hydropower Program Manager, Matthew Alinsod gave a brief history and background on the Parker-Davis project.

D. *Western Area Power Administration's Process and Timetable: Staff will provide a summary of the process and dates of WAPA's process for the allocation of power from the Parker-Davis Project for contracts to be effective October 1, 2028.*

Assistant Director of Hydropower, Gail Bates, presented information describing the Post 2028 product to be marketed, the estimated cost of the resource, WAPA's proposed timeline for marketing the resource, and the CRC's proposed timeline for marketing the resource. After there was a pause for questions, a representative from Southern Nevada Water Authority, Mike Slattery asked, "Are they (WAPA) going to put thresholds on mid-month changes in terms of how far they drop the capacity?" Ms. Bates answered, "They have not said there will be a limitation." There were no questions that proceeded.

E. *Commission's Process and Timetable: Staff will provide the CRCNV's process for the allocation of power from the Parker-Davis Project and projected timetable.*

Ms. Bates described the Commission staff plan and process for handling the Parker-Davis Project allocations, starting with the present open meeting.

F. ***Proposed Draft Notice: Staff will present the draft notice which includes the criteria and application for the resource pursuant to NAC 538.455(2).***

Ms. Bates presented the draft application for the Parker-Davis project allocations that will be introduced to the Commission on August 12, 2025. She also mentioned that should the draft application be approved by the Commission, the document will be posted on August 18, 2025.

G. ***Deadline to Submit Public Comment: Public comments to the draft notice are due and must be received by the CRCNV staff no later than July 11, 2025.***

Mr. Witkoski emphasized the deadline for comments on the documents are to be submitted no later than July 11, 2025.

H. ***Comments from the public: Members of the public are invited to comment on items on the meeting agenda or on items not contained therein*.**

Mr. Witkoski opened the floor and online attendees for public comment. There were none at that time.

I. Adjournment.

The meeting was adjourned at 11:09 a.m.

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM I
FOR MEETING OF AUGUST 12, 2025

SUBJECT: *For Information Only:* Update on the financial audit and preparation of the Annual Comprehensive Financial Report for Fiscal Year 2024.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION:
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM J
FOR MEETING OF AUGUST 12, 2025

SUBJECT: *For Information Only:* Update on pending legal matters, including filings before the Federal Energy Regulatory Commission, the Public Utilities Commission of Nevada filings and federal legislation, and related matters.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION:
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

COLORADO RIVER COMMISSION
OF NEVADA

July 28, 2025

Regional Manager
Desert Southwest Region
Western Area Power Administration
P.O. Box 6457
Phoenix, AZ 85005-6457
dswpwrmrk@wapa.gov

Subject: Comments on Proposed FY 2026 Base Charge for the Boulder Canyon Project Related to PRB Costs

To Regional Manager:

We are writing in response to the Western Area Power Administration's (WAPA) proposed FY 2026 Base Charge for the Boulder Canyon Project (Hoover Dam). Hoover Dam contractors face uncertainty about the future affordability of their Hoover power generation. One of our primary goals is to maintain the affordability of that resource for as long as we can.

The proposed 8% increase in the FY 2026 Base Charge is significant. Given that, the CRCNV requests that WAPA consider ceasing the collection of Post-Retirement Benefits (PRB) costs in all future Base Charges, including FY26. Absent WAPA's willingness to cease collection of PRBs altogether, the CRCNV respectfully requests that the proposed increase of $189,000 to cover Post-Retirement Benefits (PRB) costs not be allocated to PRBs but instead be directed toward design and engineering services for new wide head generation turbines at Hoover Dam.

Our position is based on the following key points:

1. **Existing PRB Reserves Are Substantial**: Reclamation has already accumulated approximately $50 million in the Colorado River Dam Fund (CRDF) for PRB purposes. These funds have not been transferred to Treasury and there is no legal obligation requiring such a transfer.

2. **Further increases in PRB collections are not necessary;** Further increases would just needlessly add to the already substantial balance of unused PRB funds that have accrued over the past 25 years.

3. **The Boulder Canyon Project faces an urgent infrastructure need.** In January 2025, the Bureau of Reclamation reported that if Lake Mead falls below elevation 1035 feet, Hoover Dam will lose 12 of its 17 generating turbines, and total generation capacity will drop from approximately 1,300 megawatts to just 382 megawatts. (*See Attached - Table 1.)*

4. **The current hydrology forecast is not encouraging.** Reclamation's *July 2025 Most Probable 24-Month Study* is projecting that Lake Mead will drop to a new low elevation of 1,038 feet by June 2027. In addition, the water year 2025 has continued to be dry, with Lake Powell inflow anticipated to be only 52% of average. Continued drought conditions could further aggravate the situation, increasing the likelihood that Lake Mead could fall below elevation 1035 in 2027. (*See Attached – Table 2.)*

5. **Congressional action is underway to address the PRB funds**. The *Help the Hoover Dam Act (HHDA)*, which is pending in both the House of Representatives and the Senate, would authorize the use of the $50 million in accumulated PRB funds for project purposes at Hoover Dam. In parallel, alternative administrative approaches are being explored to make these funds available, even if HHDA is not enacted.

6. **The collection of PRB costs is not aligned with the applicable cost-review standards outlined in federal regulations**. Specifically, under 10 CFR § 904.5(a)(1), the costs to be considered in setting the base charge are those related to the operation and maintenance of the Boulder Canyon Project. PRBs are not a current cost of operation or maintenance but rather long-term perceived legacy obligation that, if collected, will just increase the balance of unused funds associated with PRBs. Although the CRCNV believes that PRB collections should cease altogether, if WAPA is unwilling to do so, we ask that WAPA avoid increasing PRB collections for FY26 and repurpose the increased amount for project purposes, namely the preliminary design and engineering services for wide-head turbines. Under 10 CFR § 904.7(e), WAPA has authority to adjust the base charge to reflect updated data and changing conditions. Accordingly, the proposed increase for PRB costs should be replaced with a cost justified under the rule which directly addresses operational risk and meets the rule's intent.

7. **Given these legislative and administrative efforts**, it is increasingly possible that funding may become available to support projects at Hoover Dam, including some portion of the cost of wide head turbines. By including funding for design

and engineering services in FY 2026, the work can commence that will lay the groundwork for future replacements of turbines.

Recommendation:
We urge WAPA to cease collection of PRB costs in all future Base Charges. However, if WAPA is unwilling to do so, we recommend that the increase of $189,000 be collected and allocated for preliminary design and engineering services for wide head turbines, which are critical to preserving Hoover Dam's generation capacity amid worsening hydrological conditions.

Thank you for considering these comments.

Sincerely,

Eric Witkoski
Executive Director
Colorado River Commission of Nevada

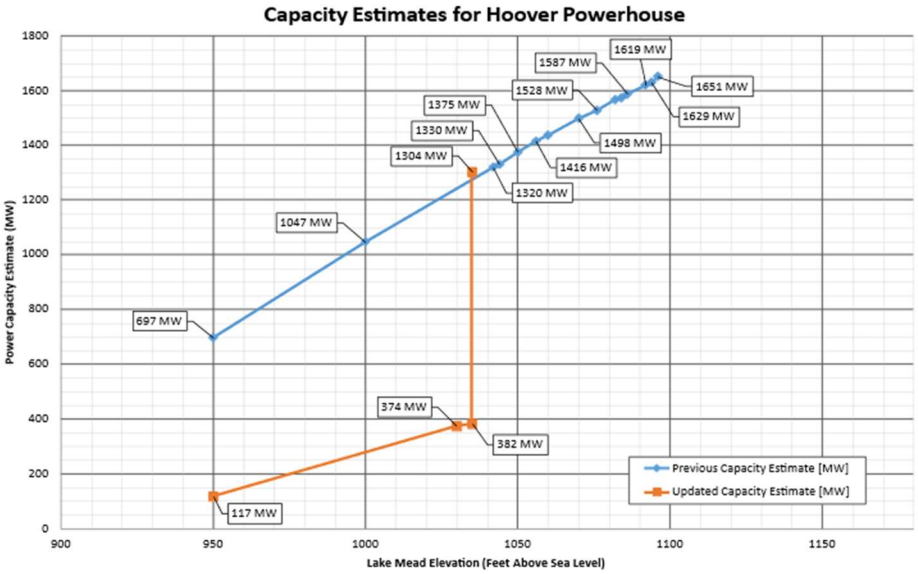
Gail Bates
Assistant Director – Hydropower
Colorado River Commission of Nevada

Cc: Len Schilling – Area Manager LCDO – lschilling@usbr.gov

Table 1

Hoover Dam Updated Capacity Estimates

- Recent evaluation of Hoover's capabilities to pass water and generate power at low lake elevations found a change in hydropower capacity estimates
- At elevation 1035ft Hoover Dam's estimated hydropower capacity reduces from ~1304MW to 382MW
  - When the original analysis was done the operating range of the non-wide head turbines was overestimated



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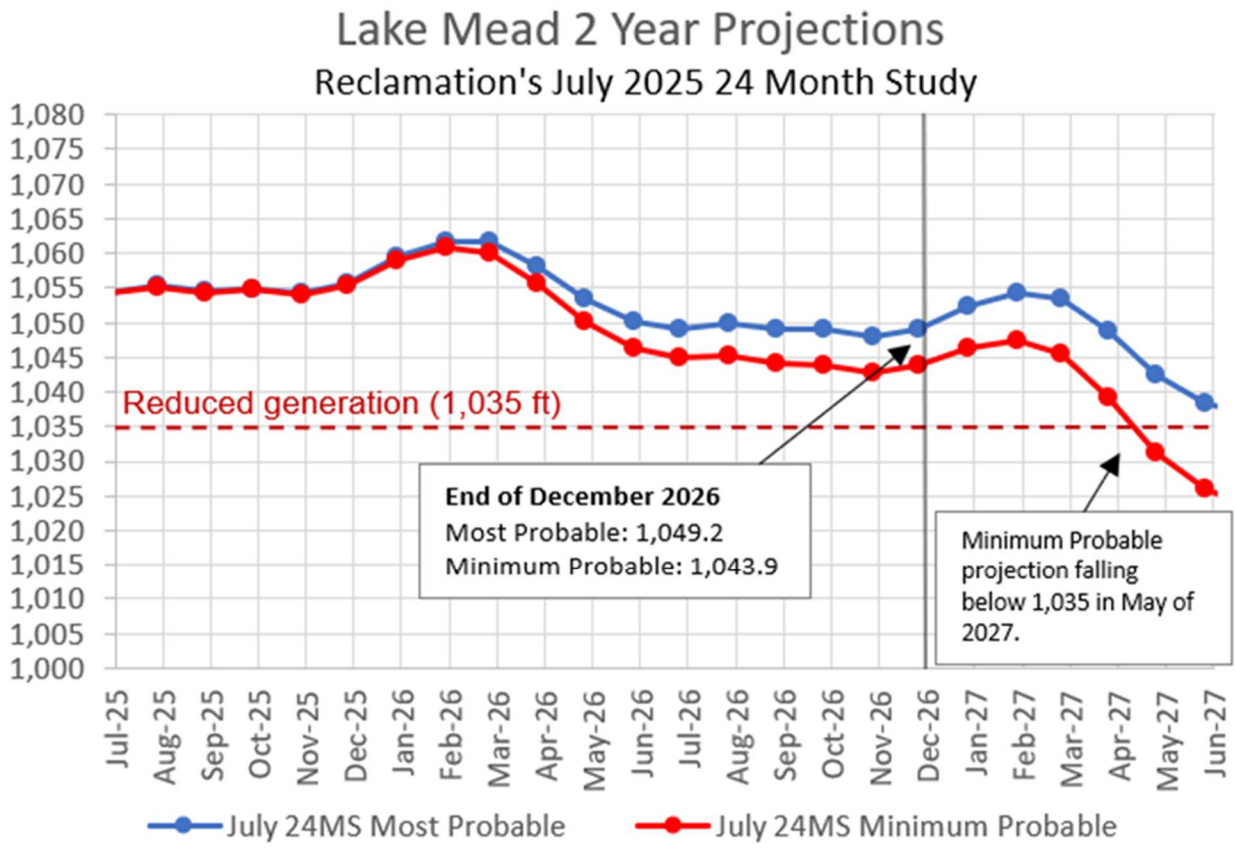

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM K
FOR MEETING OF AUGUST 12, 2025

SUBJECT: *For Information Only:* Status update from Staff on the hydrological conditions, drought, and climate of the Colorado River Basin, Nevada's consumptive use of Colorado River water, basin negotiations, impacts on hydropower generation, electrical construction activities and other developments on the Colorado River.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: None.
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM L
FOR MEETING OF AUGUST 12, 2025

SUBJECT: Comments from the public. Members of the public are invited to comment on items on the meeting agenda or on items not contained therein. No action may be taken on a matter raised during public comments until the matter itself has been specifically included on the agenda as an item for possible action.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: None.
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM M
FOR MEETING OF AUGUST 12, 2025

SUBJECT: Comments and questions from the Commission members.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: None.
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM N
FOR MEETING OF AUGUST 12, 2025

SUBJECT: Selection of the next possible meeting date.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION: None.
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND:

The next meeting is tentatively scheduled for 1:30 p.m. on October 14, 2025, at the Clark County Government Center, Commission Chambers, 500 South Grand Central Parkway, Las Vegas, Nevada 89155.

COLORADO RIVER COMMISSION OF NEVADA
AGENDA ITEM O
FOR MEETING OF AUGUST 12, 2025

SUBJECT: Adjournment.
RELATED TO AGENDA ITEM: None.
RECOMMENDATION OR RECOMMENDED MOTION:
FISCAL IMPACT: None.

STAFF COMMENTS AND BACKGROUND: