

CONTRACTING AND PROCUREMENT PLAYBOOK – SOLAR POWER PROJECT

Comprehensive Procurement Guide for Solar Project Execution



Part 4/6 | Playbook Series for Project Nav Saksham
Developed for Torrent Power

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Abstract

This playbook is a comprehensive guide to the Contracting and Procurement processes of solar projects at Torrent Power. Its primary objective is to standardize, streamline, and optimize C&P activities, ensuring continued execution excellence as the organization scales up the RE portfolio. The playbook brings a structured approach to managing procurement across each stage of the project lifecycle — from vendor identification and qualification to contract management and contractor performance monitoring.

Each chapter outlines clear process steps, process maps, RACI matrices, and KPIs to further streamline operations, ensuring consistency and efficiency across projects. By establishing standardized operating procedures (SoPs) and integrating best practices, this playbook will support Torrent Power in scaling its solar projects more effectively, while maintaining high standards of quality and performance.

Objectives

- **Establish a Standardized Approach** – Provide a unified, repeatable methodology for the C&P function, ensuring consistency across all solar projects.
- **Streamline C&P Activities and Enhance Collaboration** – Foster improved communication and decision-making through well-defined steps and roles, ensuring efficient project execution.
- **Support Scalable Growth** – Facilitate the growth of Torrent Power's solar projects by creating a robust C&P process, that can aid scale enhancement with increasing project portfolio complexity.
- **Vendor Relationship Management** – Build and maintain strong relationships with vendors through clear evaluation criteria, performance monitoring, and feedback mechanisms.

Scope

This playbook outlines the structured approach to Contracting & Procurement (C&P) for solar projects at Torrent Power. The scope includes:

- **Process Steps** – Detailed guidelines for each stage of the C&P process, from vendor identification and RFQ issuance to contract finalization and contractor performance monitoring. These steps ensure a standardized, systematic approach to procurement activities, aligning with project objectives and timelines.
- **RACI** – Clear RACI matrices that define roles and responsibilities for each step of the C&P process. This fosters accountability and transparency, ensuring each stakeholder understands their involvement at every step, from initial procurement requests to contract closure.
- **Process Maps** – Visual representations of key procurement workflows, illustrating the sequence of activities, approval stages, and decision points. These maps enhance clarity, improve cross-functional collaboration, and ensure alignment across teams.
- **KPIs** – Defined metrics to track performance throughout the procurement lifecycle, covering areas such as vendor responsiveness, contract adherence, cost efficiency, and delivery timelines. These KPIs enable proactive monitoring and continuous improvement.

This playbook serves as the foundation for establishing consistent and efficient Contracting & Procurement practices, supporting the successful execution of future solar projects at Torrent Power.

Coverage

The document covers the Contracting & Procurement process throughout a project's lifecycle. It is structured as follows –

- **Chapter 1 – Role in Bid Submission**
 - **Cost Estimation Process for PPA Bid Submission** – Establishes alignment between BD, engineering and procurement teams to prepare an accurate cost estimation for PPA bid submission.
- **Chapter 2 – Vendor Empanelment**
 - **Vendor Empanelment Framework** – Structured process for vendor qualification and empanelment through RFI (Request for Information) evaluation.
- **Chapter 3 – Contract Award and Purchase Requisition Execution**
 - **3a.1 Contract Award for Project-Specific Contract** – Process of vendor selection through the issuance of RFQs (Request for Quotation), bid qualification and contract negotiation.
 - **3a.2 Purchase Requisition Execution under Project-Specific Contract** – Process of executing the contract and ensuring timely delivery for procured goods.
 - **3b.1 Contract Award for Framework Agreements** – Centralized approach for identifying high-value or long lead items, conducting RFQs, and finalizing vendors for framework agreements.
 - **3b.2 Purchase Requisition Execution under Framework Agreement** – Process of executing a contract under the framework agreement and ensuring timely delivery for procured goods.
- **Chapter 4 – Contractor Management**
 - **4.1 Dispute Escalation & Resolution Framework** – Defines a clear chain of escalation for handling disputes with vendors, minimizing project impact while ensuring timely resolution.
 - **4.2 Amendment of Contract** – Formalizes the process for handling unexpected changes in contractor scope or contract terms.

Who is this playbook for?

- **Procurement Team** – Leads the end-to-end contracting and procurement processes, from vendor identification and bid qualification to contract management and performance monitoring. Responsible for floating RFQs, managing bid evaluations, handling negotiations, and ensuring procurement aligns with project requirements and timelines.
- **Project Team** – Coordinates with procurement to ensure alignment with project needs, and monitors vendor deliverables to ensure timely execution of project milestones.
- **Engineering Team** – Provides technical inputs for vendor qualification, assists in bid evaluation by assessing technical compliance, and supports procurement in defining technical requirements and acceptance criteria for goods and services.
- **Supply Chain Management Team** – Collaborates with procurement to ensure seamless supplier onboarding and contract execution for logistical requirements.
- **Business Development Team** – Supports procurement during vendor empanelment by providing insights into market growth outlook, vendor capacity, and long-term scalability for future projects.

- **Finance Team** – Ensures financial due diligence during vendor selection, verifies alignment with project budgets, and facilitates timely processing of purchase orders, payments, and cost control.
- **Legal Team** – Provides support in drafting and reviewing contracts, ensures compliance with legal standards, and handles escalation of disputes or breaches of contractual terms.

Chapter 1 – Cost Estimation for PPA Bid Submission

1.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
S	– Bid In-charge ¹ requests Solar Engineering Head (SEH) to share the design requirements and initial Bill of Quantities (BoQ) and Bill of Services (BoS) with Solar Procurement Head (SPH) ² for cost estimation					-
P1	– SEH leverages the standardized BoQ and BoS templates and selects basis project requirements and site conditions	I1	Standardized BoQ and BoS templates	O1	BoQ and BoS	0.5
P2	– SEH shares the BoQ and BoS with SPH and requests for the cost estimate					-
P3	– SPH places items from BoQ and BoS within procurement packages – SPH assigns those packages to the Procurement Leads	I2	BoQ and BoS			3
		I3	Contracting Strategy Packages			
P4	– Procurement Leads check ³ availability and costs of package items in the market – Procurement Leads prepare the Market availability report and share it with SPH			O2	Market availability report	
P5	– SPH and SEH align on requirements basis market availability and finalize BoQ and BoS	I4	Market availability report			-
P6	– SPH prepares the Cost Estimate report basis estimates ⁴ from Procurement Leads	I2	BoQ and BoS	O3	Cost Estimate	0.5
KEY - S: Start P: Process Steps I: Input O: Output E: End						

¹ Bid Incharge is responsible for overseeing end to end bid submission.

² For packages under the scope of ESC (Evacuation, Substation, Connectivity) Procurement Head (EPH), this and following steps will be conducted by EPH rather than SPH

³ Procurement Leads may refer to costs from recent past orders or get informal quotes from vendors

⁴ Contingency allowance to be taken on all costs

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P7	– SPH receives IRR sensitivity report from Chief BD			O4	IRR Sensitivity Report	-
P8	– SPH shares Cost Estimate and IRR sensitivity report with Engineering and BD Teams for finalization and sign-off					-
P9	– Changes recommended are incorporated and re-shared for finalization and sign-off					0.5
E	– SPH shares approved Cost Estimate and IRR sensitivity report with Chief BD					Total – 4 – 5 weeks

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

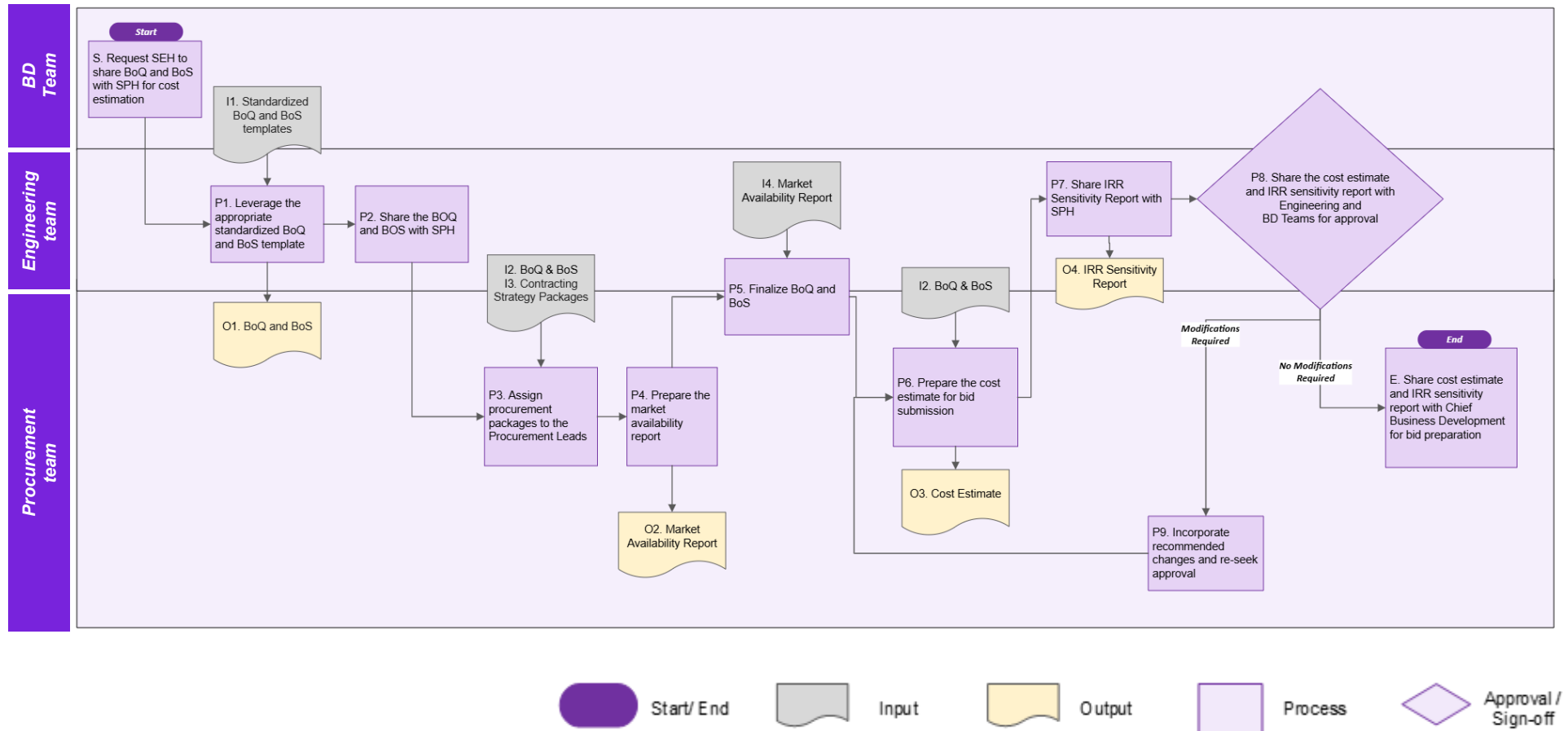
1.2 – RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Request SEH to share BoQ and BoS with SPH for cost estimation	Bid Incharge			Solar Engineering Head
P1	Leverage the appropriate standardized BoQ and BoS template	Solar Engineering Head			
P2	Share the BOQ and BOS with SPH	Solar Engineering Head			Solar Procurement Head
P3	Assign procurement packages to the Procurement Leads	Solar Procurement Head			Procurement Leads
P4	Prepare the market availability report	Procurement Leads			Solar Procurement Head
P5	Align on requirements basis market availability and finalize BOQ and BOS	Solar Procurement Head		Solar Engineering Head	
P6	Prepare the cost estimate report for bid submission	Solar Procurement Head		Procurement Leads	
P7	Share IRR Sensitivity Report with SPH	Chief BD			Solar Procurement Head
P8	Share the cost estimate and IRR sensitivity report with Engineering and BD Teams for approval	Solar Procurement Head		Engineering and BD Team	Chief Procurement
KEY - S: Start P: Process Steps I: Input O: Output E: End					

#	Key Task	Responsible	Accountable	Consulted	Informed
P9	Incorporate recommended changes and re-seek approval	Solar Procurement Head		Engineering and BD Team	Chief Procurement
E	Share cost estimate and IRR sensitivity report with Chief Business Development for bid preparation	Solar Procurement Head			Chief Business Development, Chief Procurement

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

1.3 – Process Map



¹ **Map Glossary - SPH:** Solar Procurement Head

Chapter 2 – Vendor Empanelment

2.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
S	– Chief Business Development shares the quarterly Growth Outlook ¹ with Solar Procurement Head (SPH) ² <i>For the 1st and 3rd quarters of the financial year</i>					-
P1	– SPH identifies land parcels for projects in the pipeline	I1 I2	Growth Outlook Land Bank	O1	Project-wise Land Parcel List	0.5
P2	– SPH assigns the contracting packages with associated region/land parcel to Procurement Leads	I3 I4	Project-wise Land Parcel List Contracting Strategy Packages			
P3	– Procurement Leads, for each package, create a Gap Assessment Summary, identifying regions where the empaneled vendors are insufficient to meet the projected demand <i>Engineering and Land Teams to prepare the Gap Assessment Summary for service providers under their scope³</i>	I5	List of Empaneled Vendors	O2	Gap Assessment Summary	2.5
P4	– Once the gap is identified, Procurement Lead begins preparation of the RFI for their respective package – Procurement Lead requests the Solar Engineering Head (SEH) to prepare the PQC and technical assessment section of the RFI					-

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ It outlines projected evacuation and land requirements, based on market trends, Torrent's current market standing and growth projections, and central and state-level renewable energy policies.

² Empanelment of Land Aggregators to be done by the Land Team.

³ Refer to Engineering Playbook for the list of Engineering-related contractors, and Pre-development Playbook for the list of Land-related contractors

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P5	<ul style="list-style-type: none"> Procurement Lead receives the Pre-Qualification Criteria (PQC) and technical assessment section¹ of the RFI from the SEH Procurement Lead drafts all the other sections² of the RFI <i>RFI is prepared by modifying the standard RFI template</i> 	I6	Gap Assessment Summary	O3	RFI	0.5
		I7	RFI Template			
		I8	PQC & Technical Assessment			
P6	<ul style="list-style-type: none"> Procurement Lead floats the RFI and collates responses from all the vendors 			O4	RFI Responses	2 ³
P7	<ul style="list-style-type: none"> Procurement Lead shares responses with SEH for technical evaluation 					-
P8	<ul style="list-style-type: none"> SEH prepares⁴ and shares the list of feasible / shortlisted vendors with the Procurement Lead 			O5	List of Feasible / Shortlisted Vendors	0.5
P9	<ul style="list-style-type: none"> Procurement Lead evaluates the feasible/shortlisted vendors basis appropriate evaluation criteria and prepares a list of Vendors to be Empaneled 	I9	List of Feasible / Shortlisted Vendors	O6	List of Empaneled Vendors	0.5
P10	<ul style="list-style-type: none"> Procurement Lead shares the final list with SPH for approval <i>If the package covered in the RFI > 10% of the procurement budget, approval of Chief Procurement is also required</i> 					-
P11	<ul style="list-style-type: none"> Procurement Lead incorporates any feedback and re-shares for approval 					0.5

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ PQC includes pre-requisites (e.g., minimum 10 years of experience), and Required Capabilities

² RFI Overview & Objectives, Scope of Work including BoQ and BoS, Vendor Information Request, Compliance and Certifications, Delivery and Logistics, Commercial Terms, Submission Guidelines, Next Steps and Timeline

³ Timeline may vary depending on category. Refer to the Master Plan for exact timelines.

⁴ Engineering Team takes inputs from the project team on technical evaluation of contractors and suppliers.

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P12	– Procurement Lead empanels the vendors and informs them, on receiving approval					
E	– Procurement Lead shares the new list with the respective Engineering, Project or Land Team, basis who raise the PR for given packages' items					Total – 6 – 7 weeks

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

2.2 – RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Share the quarterly Growth Outlook with Solar Procurement Head (SPH) ¹	Chief Business Development (BD)			Solar Procurement Head
P1	Identify land parcels for projects in the pipeline	Solar Procurement Head		Chief Land Officer, Chief BD	
P2	Assign the contracting packages with associated region/land parcel to Procurement Leads	Solar Procurement Head			Procurement Lead
P3	Create a Gap Assessment Summary	Procurement Lead ²		Solar Engineering Head, Project Team	
P4	Request the Solar Engineering Head (SEH) to share the PQC and technical assessment section of the RFI	Procurement Lead			Solar Engineering Head
P5	Draft the RFI document	Procurement Lead		Solar Engineering Head	
P6	Float the RFI document and collate responses from all the vendors	Procurement Lead	Procurement Lead		Solar Procurement Head
P7	Share responses with SEH for technical evaluation	Procurement Lead			Solar Engineering Head

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

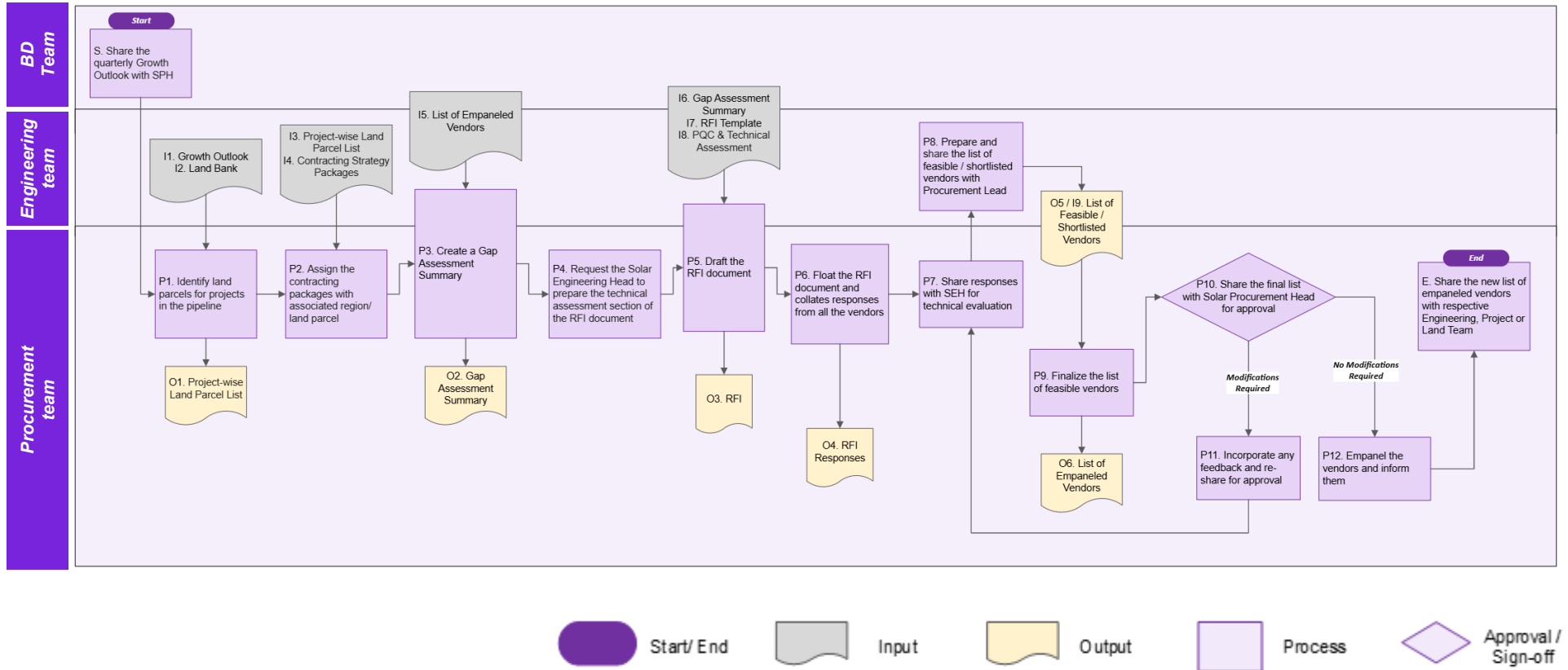
¹ Empanelment of Land Aggregators to be done by the Land Team.

² Engineering and Land Teams to prepare the Gap Assessment Summary for service providers under their scope

#	Key Task	Responsible	Accountable	Consulted	Informed
P8	Prepare and share the list of feasible / shortlisted vendors with Procurement Lead	Solar Engineering Head		Project Team	Procurement Lead
P9	Evaluate the feasible/shortlisted vendors basis appropriate evaluation criteria and prepare a list of Vendors to be Empaneled	Procurement Lead			
P10	Share the final list with Solar Procurement Head for approval	Procurement Lead		Solar Procurement Head	
P11	Incorporate any feedback from Solar Procurement Head and re-share for approval	Procurement Lead		Solar Procurement Head	
P12	Empanel the vendors and inform them	Procurement Lead			Solar Procurement Head
E	Share the new list of empaneled vendors with respective Engineering, Project or Land Team	Procurement Lead			Solar Procurement Head, Engineering, Land, Project Team

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

2.3 – Process Map



¹ Map Glossary - PQC: Pre-qualification criteria | RFI: Request for Information

Chapter 3 – Contract Award and PR Execution

Chapter 3a.1 – Contract Award for Project-specific Agreement

3a.1.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
S	– Technical Team ¹ raises a comprehensive Purchase Requisition (PR) ² to a Procurement Lead					-
P1	– Procurement Lead reviews the PR and decides one of the following: – Repeat order to a previously contracted vendor – RFQ for empaneled vendors <i>For repeat order, approval will be taken from SPH, and steps will continue from P9 onwards</i>	I1	Purchase Requisition (PR)			0.5
P2	– Procurement Lead prepares the RFQ and incorporates: – Technical requirements from the Solar Engineering Head (SEH) ³ – Timeline that aligns with the Project Procurement Plan	I1	PR	O1	RFQ	
		I2	Technical requirements			
		I3	Project Procurement Plan			
P3	– Procurement Lead floats the RFQ to empaneled vendors and collates the responses	I4	RFQ	O2	RFQ responses	2 ⁴
P4	– Procurement Lead shares the responses / proposals with the SEH for technical evaluation					-
KEY - S: Start P: Process Steps I: Input O: Output E: End						

¹ Technical Team refers to Engineering, Land or Project Team.

² PR to include BoQ/BoS and Scope of Work. Detailed Engineering Deliverables (incl. BoQ/BoS) comes from Lead Project Engineering Manager.

³ For Land Aggregator, Technical Consultant for Land Feasibility, Owner's Engineer, Site Survey Consultant and Third-Party Inspection Consultant, separate technical requirements are shared as these contractors are selected before BoS creation.

⁴ Timelines may vary by category. Refer to the Master Plan for exact timelines.

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P5	– SEH performs technical evaluation ¹ , shortlists vendor proposals and shares the list with Procurement Lead	I5	RFQ responses	O3	Shortlisted Vendor Proposals	0.5
P6	– Procurement Lead reviews the quotations within these proposals – Procurement Lead selects 2-3 vendors based on appropriate assessment criteria, highlighting the order of selection preference	I6	Shortlisted Vendor Proposals	O4	Shortlisted Vendor List	0.5
P7	– Procurement Lead shares the selected vendors' quotes with SPH for finalization and approval to initiate contract negotiations <i>If the contract size > 10% of the procurement budget, approval of Chief Procurement is also required</i>					
P8	– SPH finalizes a vendor and directs the Procurement Lead to initiate contract negotiation					-
P9	– Procurement Lead negotiates contract terms and finalizes them with the vendor – Procurement Lead prepares the contract basis negotiated terms ²			O5	Vendor Contract	2
P10	– Procurement Lead shares the Vendor Contract with SPH for approval <i>If the contract size > 10% of the procurement budget, approval of Chief Procurement is also required</i>					
P11	– SPH reviews the Vendor Contract and provides comments, if any					0.5
P12	– Procurement Lead incorporates any feedback from SPH and re-negotiates with the vendor					

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Project Team inputs also taken during technical evaluation

² L2 Schedule is included in the contract.

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P13	– Procurement Lead ensures signature of Vendor Contract ¹ by signatories from both sides					
E	– Procurement Lead shares the signed Vendor Contract with SPH					Total – 6 – 7 weeks

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Including No Deviation Certificate.

3a.1.2 RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Raise a comprehensive Purchase Requisition (PR) to the Procurement Lead	Technical Team ¹			Procurement Lead, Solar Procurement Head ²
P1	Review the PR and decide between repeat and new order	Procurement Lead			
P2	Prepare the RFQ	Procurement Lead		Solar Engineering Head	
P3	Float the RFQ to empaneled vendors and collate the responses	Procurement Lead	Procurement Lead		Solar Procurement Head
P4	Share the RFQ responses with the Solar Engineering Head (SEH) for technical evaluation	Procurement Lead			Solar Engineering Head
P5	Shortlist vendors and share the list with Procurement Lead	Solar Engineering Head		Project Team	Procurement Lead
P6	Choose vendors for contract negotiations based on appropriate assessment criteria	Procurement Lead			
P7	Share the selected vendors' proposals with Solar Procurement Head for finalization and approval to initiate contract negotiations	Procurement Lead		Solar Procurement Head	

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

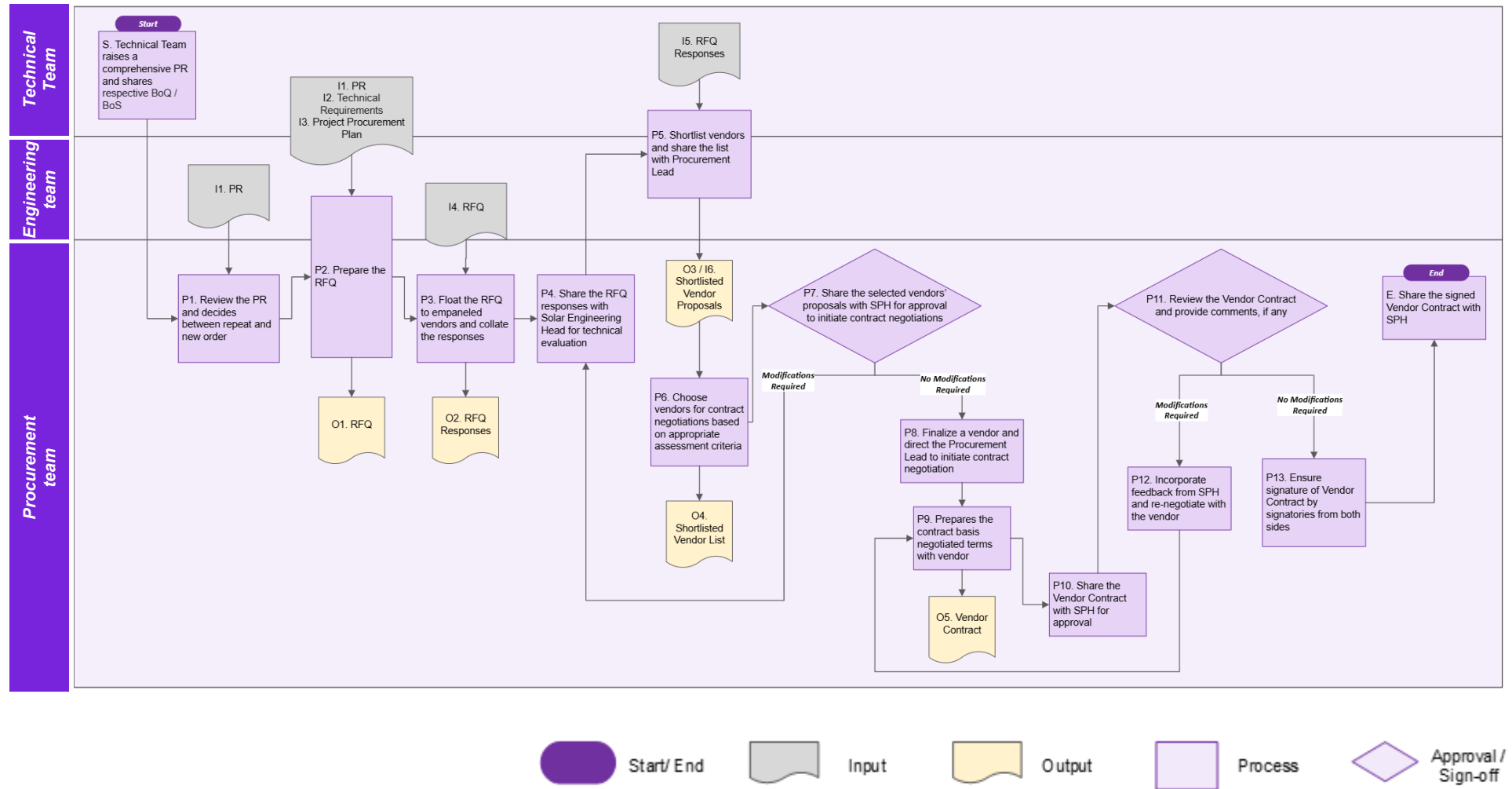
¹ Technical Team refers to Engineering, Land or Project Execution Team.

² For packages under the scope of ESC (Evacuation, Substation, Connectivity) Procurement Head (EPH), EPH will be informed instead

#	Key Task	Responsible	Accountable	Consulted	Informed
P8	Finalize a vendor and direct the Procurement Lead to initiate contract negotiation	Solar Procurement Head			Procurement Lead
P9	Prepare the contract basis negotiated terms with vendor	Procurement Lead		Selected Vendor	
P10	Share the Vendor Contract with SPH for approval	Procurement Lead		Solar Procurement Head	
P11	Review the Vendor Contract and provide comments, if any	Solar Procurement Head			Procurement Lead
P12	Incorporate any feedback from SPH and re-negotiate with the vendor	Procurement Lead			Solar Procurement Head
P13	Ensure signature of Vendor Contract by signatories from both sides	Procurement Lead			Solar Procurement Head
E	Share the signed Vendor Contract with SPH	Procurement Lead			Solar Procurement Head

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

3a.1.3 – Process Map



Chapter 3a.2 – Purchase Requisition Execution under Project-specific Agreement

3a.2.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
S	– Procurement Lead shares the signed Vendor Contract with SPH					-
P1	– Procurement Lead issues a Purchase Order (PO) to the vendor basis requirements outlined in the contract – Procurement Lead to serve as the Order Manager ¹ for the given PO	I1	Vendor Contract	O1	Purchase Order (PO)	0.5
P2	– Order Manager updates the PO tracker and informs the Project Manager					-
P3	– SCM Chief aligns the schedule with the Vendor and informs Project Manager and Site Team					0.5
P4	For goods ² in the TPI list, – SCM Chief sends ³ a third-party inspection (TPI) agency to inspect goods at manufacturing site			O2	Inspection Checklist	1 ⁴
P5	– Once the inspection is complete, Chief SCM grants approval for all components under evaluation and issues the Quality Release Note (QRN) to the vendor	I2	Inspection Checklist	O3	Quality Release Note	
P6	– Goods are dispatched to the project site – Delivery is tracked by the Store Manager in the Delivery Tracker – If item is delayed, the PO gets added to the Delayed Items Tracker					-

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ For procurement done by EPC, Order Manager for EPC serves as Order Manager for the PO, and steps start from P2

² For services, Order Manager schedules the kick-off meeting between Technical Team and Contractor.

³ TPI hiring and onboarding procedure is the same as for other service contractors

⁴ For inspections outside India, additional 2-3 days to be taken

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P7	– On dispatch, Order Manager receives the payment invoice from the vendor and confirms the QRN with Chief SCM					-
P8	– Store Manager receives the delivery on-site and informs the Chief SCM					-
P9	– Chief SCM issues the Goods Received Note (GRN) to the Order Manager			O4	Goods Received Note	-
E	– Order Manager coordinates with the Finance Team to release payment to the Vendor and updates the PO tracker					Total – 2 – 3 weeks + delivery lead time

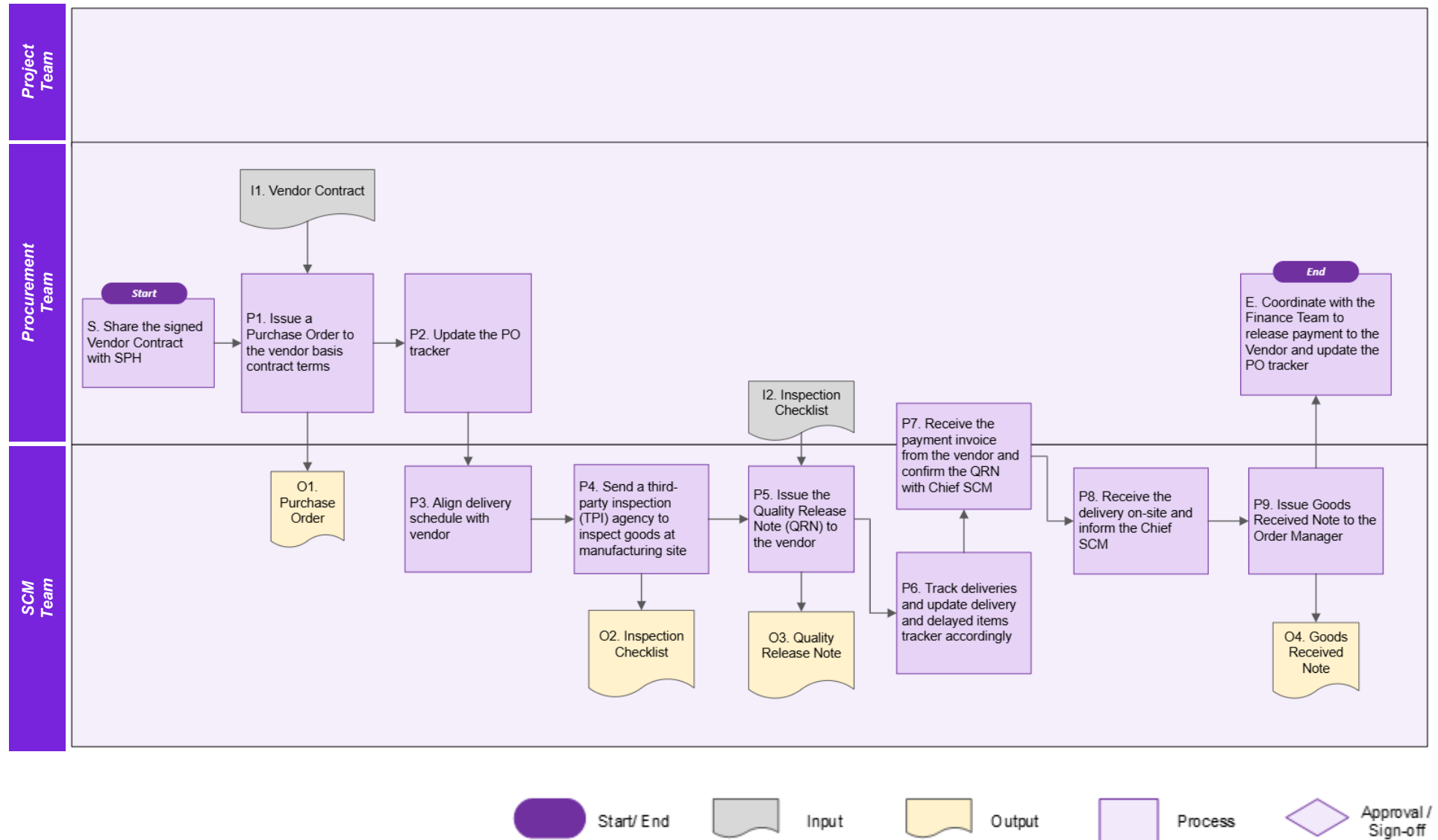
KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

3a.2.2 RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Share the signed Vendor Contract with SPH	Procurement Lead			Solar Procurement Head
P1	Issue a Purchase Order (PO) to the vendor basis requirements outlined in the contract	Procurement Lead			Technical Team
P2	Update the PO tracker	Order Manager			Project Manager
P3	Align schedule with vendor	Chief SCM			Project Manager, Site Team
P4	Send a third-party inspection (TPI) agency to inspect goods at manufacturing site	Chief SCM			SCM Team, Order Manager
P5	Issue the QRN to the vendor	Chief SCM			Project Manager
P6	Track deliveries and update delivery and delayed items tracker accordingly	Store Manager		Chief SCM	Order Manager
P7	Receive the payment invoice from the vendor and confirm the QRN with Chief SCM	Order Manager		Chief SCM	
P8	Receive the delivery on-site and inform the Chief SCM	Store Manager			Chief SCM
P9	Issue the GRN to the Order Manager	Chief SCM			Order Manager, Project Manager
E	Coordinate with the Finance Team to release payment to the Vendor and update the PO tracker	Order Manager			Finance Team

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

3a.2.3 – Process Map



¹ Map Glossary - TPI: Third-Party Inspection

Chapter 3b.1 – Contract Award for Framework Agreements

3b.1.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
S	<ul style="list-style-type: none"> Chief Procurement (CP) requests Solar Procurement Head (SPH)¹ to identify packages for framework agreement and shortlist vendors for the same <i>The vendor selection process is to be held via a closed RFQ for empaneled vendors only</i>					-
P1	<ul style="list-style-type: none"> SPH reviews the packages based on the execution strategy for contracting, and identifies high-value / long-lead items² SPH takes input from the Engineering and BD teams on design specifications and BoQ, based on projected requirement in Growth Outlook 	I1	Contracting Strategy Packages	O1	BOQ	0.5
		I2	Growth Outlook	O2	Technical specs	
P2	<ul style="list-style-type: none"> SPH assigns a Procurement Lead to each package and requests to shortlist vendors for the same 					-
P3	<ul style="list-style-type: none"> Procurement Lead reviews the List of Empaneled Vendors for given BOQ items and selects vendors for the closed RFQ 	I3	BOQ	O3	Vendor List for RFQ	-
		I4	List of Empaneled Vendors			
P4	<ul style="list-style-type: none"> List is shared with SPH and Solar Engineering Head (SEH) for approval 					0.5
P5	<ul style="list-style-type: none"> Procurement Lead incorporates any feedback and re-shares for approval 					-

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ For packages under the scope of ESC (Evacuation, Substation, Connectivity) Procurement Head (EPH), it will be EPH

² Framework agreements to be pursued for standardized items for cross-project application.

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P6	– Procurement Lead prepares the RFQ and incorporates technical specifications from SEH	I3	BOQ	O4	RFQ	0.5
		I5	Technical specs			
P7	– Procurement Lead floats the RFQ and collates responses					2 ¹
P8	– Procurement Lead shares the responses / proposals with the SEH for technical evaluation ²					-
P9	– SEH shortlists vendor proposals and shares the list with Procurement Lead	I6	RFQ Responses	O5	Shortlisted Vendor Proposals	0.5
P10	– Procurement Lead reviews the quotations within these proposals – Procurement Lead selects 2-3 vendors based on appropriate assessment criteria, highlighting the order of selection preference	I7	Shortlisted Vendor Proposals			0.5
P11	– Procurement Lead shares the selected vendors' quote with SPH for finalization and approval to initiate contract negotiations <i>If the contract size > 10% of the procurement budget, approval of Chief Procurement is also required</i>					
P12	– SPH finalizes a vendor and directs the Procurement Lead to initiate contract negotiation					-
P13	– Procurement Lead negotiates and finalizes contract terms with the vendor – Procurement Lead prepares the Framework Agreement basis negotiated terms			O6	Framework Agreement	0.5

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Timelines may vary by category. Refer to the Master Plan for exact timelines.

² Inputs from Project Team taken during technical evaluation too

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P14	– Procurement Lead shares the Framework Agreement with SPH for approval <i>If the contract size > 10% of the procurement budget, approval of Chief Procurement is also required</i>					3
P15	– SPH reviews the Framework Agreement and provides comments, if any					
P16	– Procurement Lead incorporates any feedback from SPH and re-negotiates with the vendor					
P17	– Procurement Lead ensures signature of Framework Agreement by signatories from both sides					-
E	– Procurement Lead shares the Framework Agreement with SPH and Chief Procurement					Total – 8 – 9 weeks

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

3b.1.2 RACI

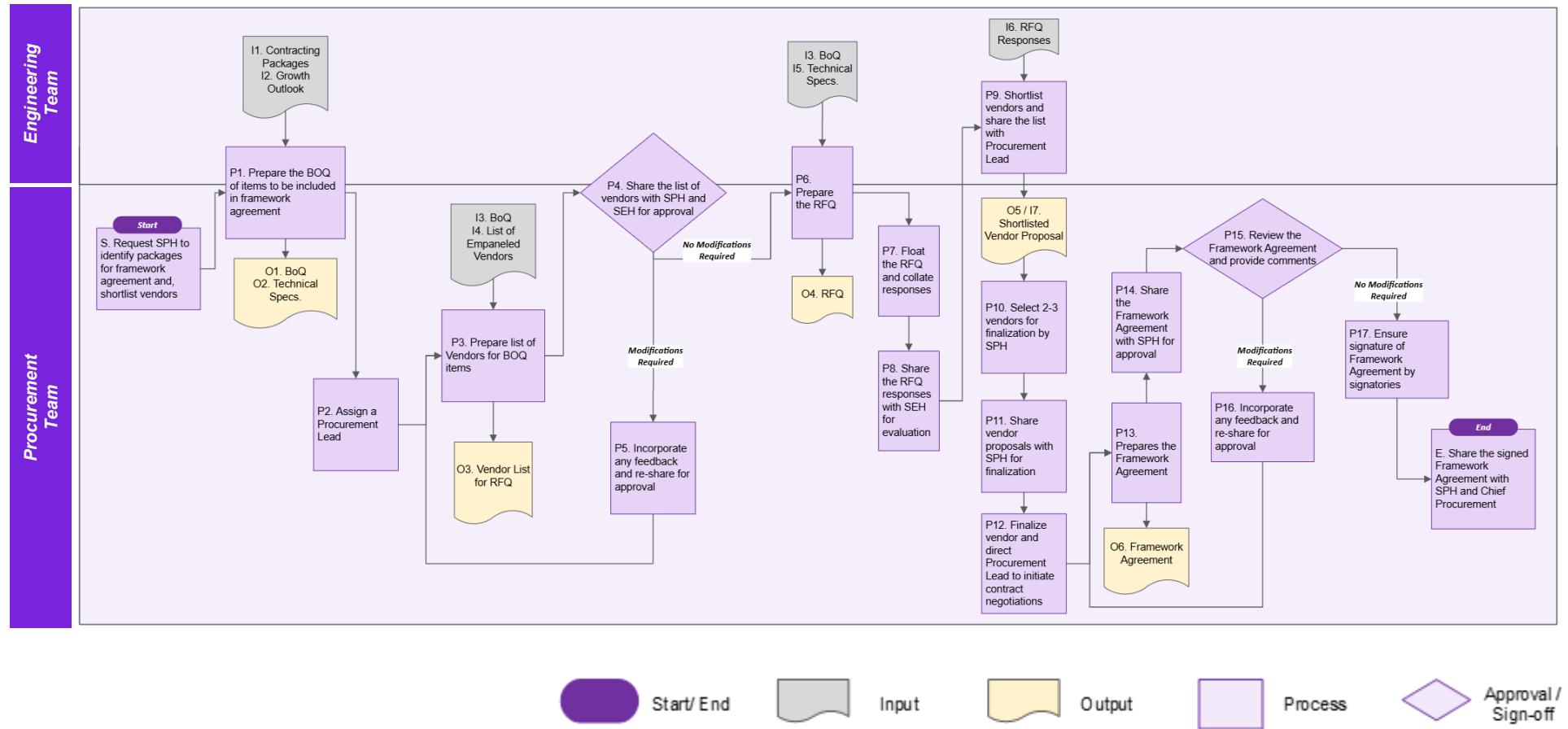
#	Key Task	Responsible	Accountable	Consulted	Informed
S	Request Solar Procurement Head (SPH) to identify packages for framework agreement and shortlist vendors for the same	Chief Procurement			Solar Procurement Head
P1	Review contracting strategy packages and identifying items for framework agreement	Solar Procurement Head		Engineering, BD Teams	
P2	Assign a Procurement Lead for the package	Solar Procurement Head			Procurement Lead
P3	Selects vendors for the closed RFQ	Procurement Lead		Solar Procurement Head, Solar Engineering Head	
P4	Share with vendor list with SPH and SEH for approval	Procurement Lead		Solar Procurement Head, Solar Engineering Head	
P5	Incorporate any feedback and re-share for approval	Procurement Lead		Solar Procurement Head, Solar Engineering Head	
P6	Prepare the RFQ	Procurement Lead		Engineering Team	
P7	Float the RFQ and collate responses	Procurement Lead			
P8	Share the RFQ responses with Solar Engineering Head (SEH) for technical evaluation	Procurement Lead			Solar Engineering Head

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

#	Key Task	Responsible	Accountable	Consulted	Informed
P9	Perform technical evaluation and shortlist vendors	Solar Engineering Head			Procurement Lead
P10	Review vendor proposals and highlight 2-3 vendors in order of preference	Procurement Lead			
P11	Share the highlighted vendors' proposals with SPH for finalization and approval to initiate contract negotiations	Procurement Lead		Solar Procurement Head	
P12	Finalize vendor and direct Procurement Lead to initiate contract negotiations	Solar Procurement Head			Procurement Lead
P13	Prepares the Framework Agreement basis negotiated terms with vendor	Procurement Lead		Selected Vendor, Legal Team	
P14	Share the Framework Agreement with SPH for approval	Procurement Lead		Solar Procurement Head	
P15	Review the Framework Agreement and provide comments	Solar Procurement Head			Procurement Lead
P16	Incorporate any feedback and re-share for approval	Procurement Lead		Solar Procurement Head	
P17	Ensure signature of Framework Agreement by signatories from both sides	Procurement Lead			Solar Procurement Head
E	Share the signed Framework Agreement with SPH and Chief Procurement	Procurement Lead			Chief Procurement, Solar Procurement Head

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

3b.1.3 – Process Map



¹ Map Glossary - SPH: Solar Procurement Head

Chapter 3b.2 – Purchase Requisition Execution under Framework Agreements

3b.2.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
S	– Project Manager raises a Purchase Requisition (PR) for an item under the framework agreement, to a Procurement Lead					-
P1	– Procurement Lead checks the framework agreement if it can satisfy the PR, in terms of quantity, specifications and timeline <i>If framework agreement cannot satisfy the PR, a new RFQ is floated by the process outlined in chapter 3a.1</i> – Procurement Lead prepares a Purchase Order (PO) and raises it to the vendor – Procurement Lead can serve as the Order Manager for the given PO	I1	PR	O1	PO	0.5
		I2	Framework Agreement			
P2	– Order Manager updates the PO Tracker					-
P3	– SCM Chief aligns the schedule with the Vendor and informs Project Manager and Site Team					0.5
P4	For goods ¹ in the TPI list, – SCM Chief sends ² a third-party inspection (TPI) agency to inspect goods at manufacturing site			O2	Inspection Checklist	1 ³
P5	– Once the inspection is complete, Chief SCM grants approval for all components under evaluation and issues the Quality Release Note (QRN) to the vendor	I3	Inspection Checklist	O3	Quality Release Note	

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ For services, Order Manager schedules the kick-off meeting between Technical Team and Contractor.

² TPI hiring and onboarding procedure is the same as for other service contractors

³ For inspections outside India, additional 2-3 days to be taken

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P6	– Order Manager receives the payment invoice from the vendor and confirms the QRN with Chief SCM	I4	Quality Release Note	O4	Payment Invoice	-
P7	– Order Manager coordinates with the Finance Team to release payment to the Vendor and requests the vendor to release the items for dispatch					-
P8	– Goods are dispatched to the project site – Delivery is tracked by the Store Manager in the Delivery Tracker – If item is delayed, the PO gets added to the Delayed Items Tracker					-
P9	– Store Manager receives the delivery on-site and informs the Chief SCM					-
P10	– Chief SCM issues the Goods Received Note (GRN) to the Order Manager			O5	Goods Received Note	-
E	– Order Manager updates the PO tracker					Total – 2 – 3 weeks + delivery lead time

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

3b.2.2 RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Raise a Purchase Requisition (PR) for an item under the framework agreement to a Procurement Lead	Project Manager			Procurement Lead, Solar Procurement Head ¹
P1	Check the framework agreement to see if it can satisfy the PR, and raise a PO to the vendor	Procurement Lead			Solar Procurement Head
P2	Update the PO tracker	Order Manager			
P3	Align delivery schedule with vendor	Chief SCM			Project Manager, Site Team
P4	Send a third-party inspection (TPI) agency to inspect goods at manufacturing site	Chief SCM			SCM Team, Order Manager
P5	Issue the QRN to the Vendor	Chief SCM			Project Manager
P6	Receive the payment invoice from the vendor and confirm the QRN with Chief SCM	Order Manager		Chief SCM	
P7	Coordinate with the Finance Team to release payment to the Vendor and request the release of the items for dispatch	Order Manager			Finance Team

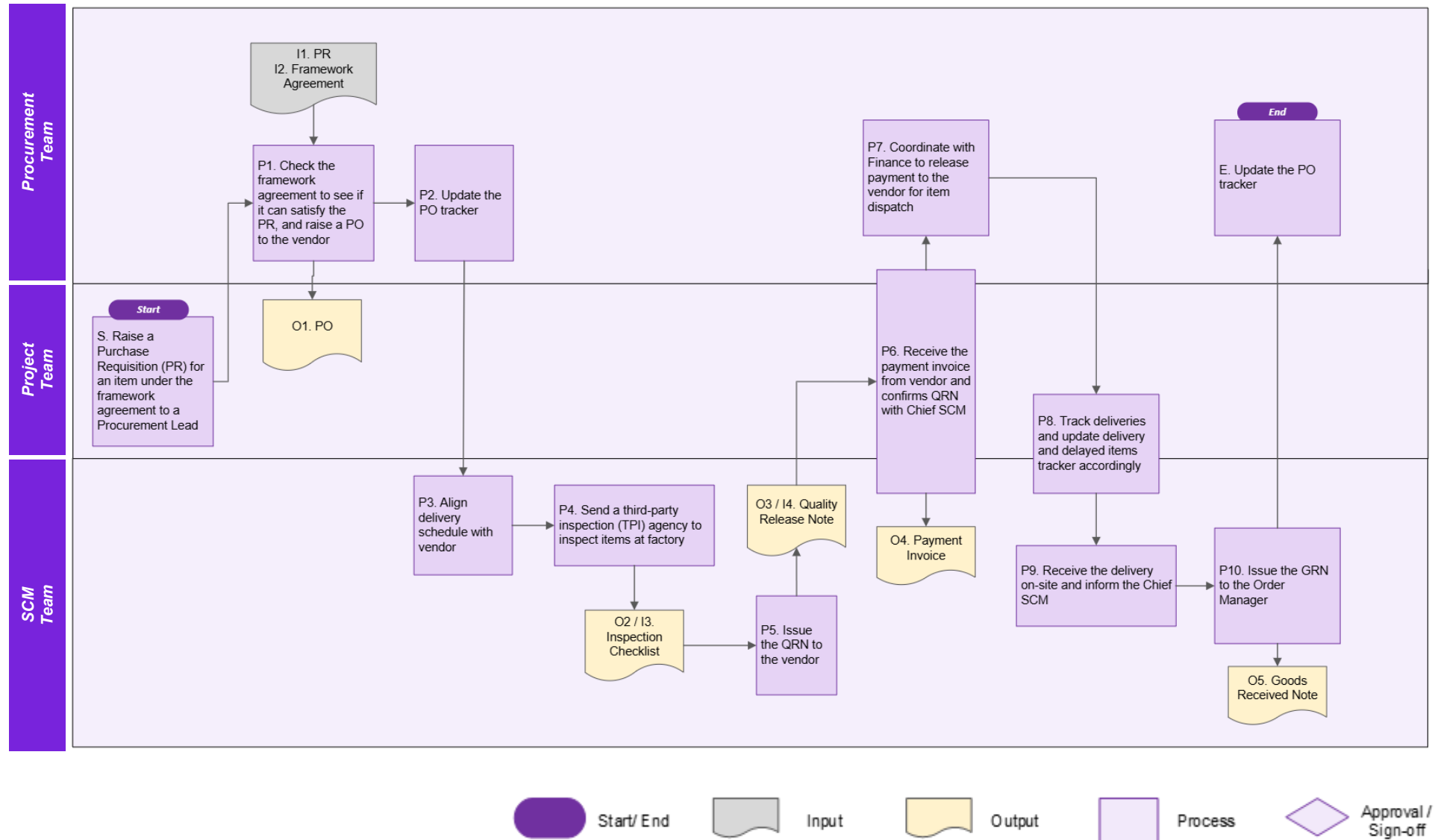
KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ For packages under the scope of ESC (Evacuation, Substation, Connectivity) Procurement Head (EPH), EPH will be informed instead

#	Key Task	Responsible	Accountable	Consulted	Informed
P8	Track deliveries and update delivery and delayed items tracker accordingly	Store Manager		Chief SCM	Order Manager
P9	Receive the delivery on-site and inform the Chief SCM	Store Manager			Chief SCM
P10	Issue the GRN to the Order Manager	Chief SCM			Order Manager, Project Manager
E	Update the PO tracker	Order Manager			

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

3b.2.3 – Process Map



¹ **Map Glossary** - **PR**: Purchase Requisition | **TPI**: Third-Party Inspection | **QRN**: Quality Release Note

Chapter 4 – Contractor Management

Chapter 4.1 – Issue Escalation and Resolution

4.1.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
S	– Project Manager ¹ (PM) identifies an issue with a contractor that may impact schedule or cost					-
P1	– PM attempts immediate resolution with the contractor – If unsuccessful, PM escalates it to the Order Manager (OM)					0.5
P2	– OM holds a discussion with the contractor to resolve the issue					0.5
P3	– OM implements a short-term fix to minimize schedule delays or cost overruns <i>E.g. arranging temporary alternate vendors to supply goods or provide services</i>					
P4	– For recurring issues, OM conducts Root Cause Analysis (RCA) prepares a report and shares it with Solar Procurement Head (SPH)			O1	RCA Report	0.5
P5	– SPH consults respective team ² and ensures process enhancements and preventive actions					0.5
P6	– Based on the terms laid out in the contract, SPH calculates penalties / assesses grounds for formal warning – If there are grounds for contract termination, SPH escalates to Chief Procurement	I1	RCA Report			-
		I2	Vendor Contract			
KEY - S: Start P: Process Steps I: Input O: Output E: End						

¹ Engineering, Project, Land or Supply Chain Management (SCM) Manager, depending on the issue

² Engineering, Project, Land or Supply Chain Management team based on which team the contractor works with

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P7	<ul style="list-style-type: none"> – Chief Procurement assesses the situation and decides on contract termination <i>If contract size > 10% of capex budget, Chief Procurement seeks approval from Chief Commercial Officer for contract termination</i> 					1
P8	<ul style="list-style-type: none"> – Chief Procurement accordingly issues a formal warning, penalty or letter of termination 			O2	Formal Notice	
E	<ul style="list-style-type: none"> – Chief Procurement adds the notice to vendor record and shares it with SPH and OM 					Total – 2 - 3 weeks

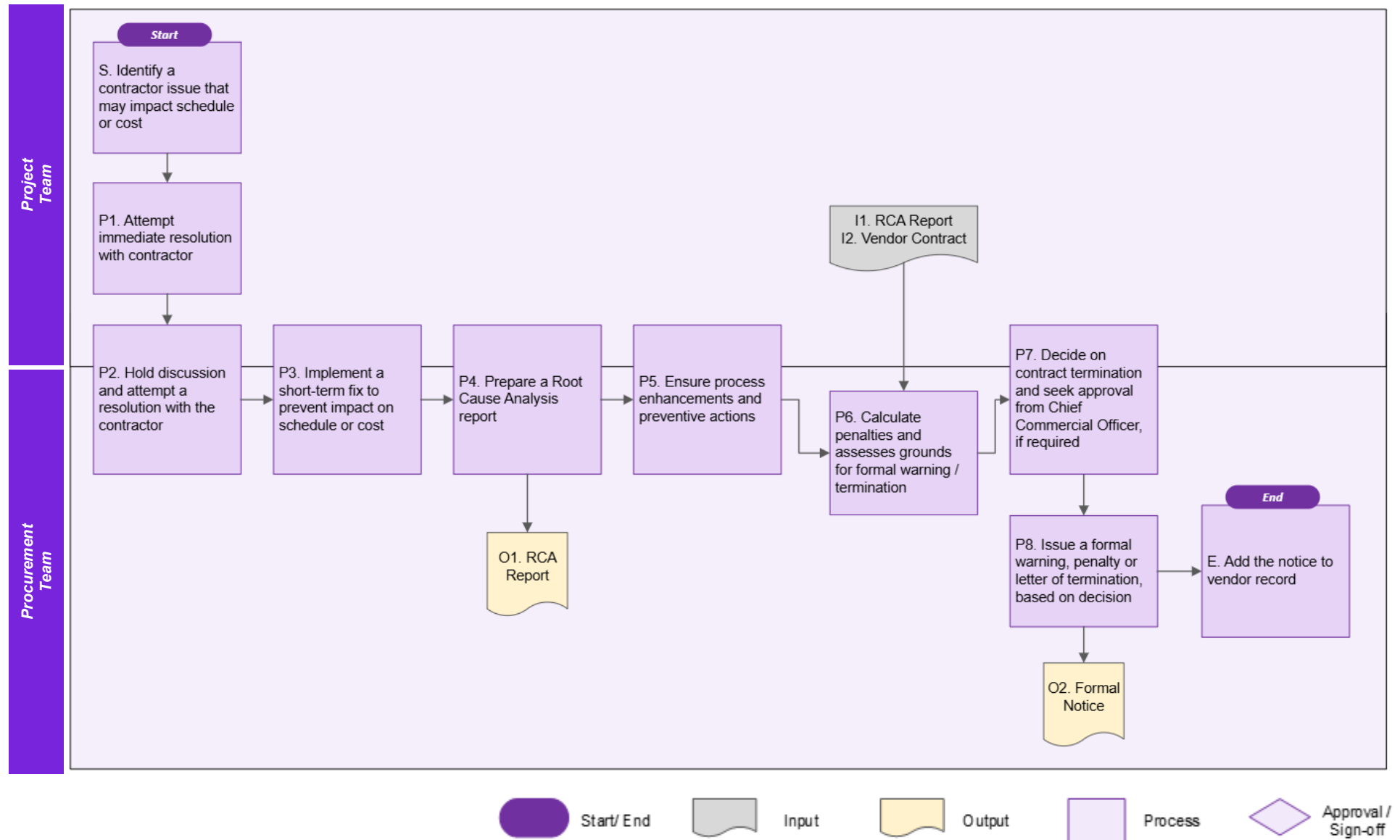
KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

4.1.2 RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Identification of a contractor issue that may impact schedule or cost	Project Manager			
P1	Attempt immediate resolution with the contractor	Project Manager			Order Manager
P2	Hold discussion and attempt a resolution with the contractor	Order Manager		Project Manager	
P3	Implementation of a short-term fix to prevent impact on schedule or cost	Order Manager		Project Manager	Project Manager
P4	Prepare a Root Cause Analysis (RCA) report and share it with SPH	Order Manager		Project Manager	Solar Procurement Head
P5	Ensure process enhancements and preventive actions	Solar Procurement Head		Project Manager	Order Manager
P6	Calculate penalties and assesses grounds for formal warning / termination	Solar Procurement Head			Chief Procurement
P7	Decide on contract termination and seek approval from Chief Commercial Officer, if required	Chief Procurement	Chief Procurement	Project team	
P8	Issue a formal warning, penalty or letter of termination, based on decision	Chief Procurement			Solar Procurement Head
E	Add the notice to vendor record and share it with SPH and OM	Chief Procurement			Solar Procurement Head, Order Manager

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

4.1.3 – Process Map



¹ **Map Glossary - RCA:** Root Cause Analysis

Chapter 4.2 – Amendment of Contract

4.2.1 Process Steps

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
S	– Project Manager (PM) ¹ encounters a situation that requires amendment of a contractor's contract					-
P1	– PM requests Solar Engineering Head (SEH) for Technical Scope Change Note, to capture any technical deviation <i>For changes in quantity, this note is not required</i>					-
P2	– SEH prepares the Technical Scope Change Note and shares it with the PM	I1	Technical Section of Vendor RFQ	O1	Technical Scope Change Note	0.5
P3	– PM prepares a follow-up PR and shares it with the Order Manager (OM)	I2	Technical Scope Change Note	O2	Follow-up PR	-
P4	– Order Manager calculates the Value at Risk ² for the given contract – Approval authority for the PR is determined by a matrix ³ that has tiers basis the Value at Risk calculated					0.5
P5	– Order Manager shares the PR with the appropriate Approving Authority, basis the matrix					
P6	– Approving Authority reviews the Follow-up PR and provides the approval					2

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

¹ Project Manager, Engineering Manager or Land Manager, depending on the contractor

² Value at Risk is calculated as the sum of the current contract's remaining payout value and any additional value charged post amendment

³ Approval requirement escalates in the order, Project Manager, Chief Solar, Chief Project, Chief Operating Officer, Chairman. The Value at Risk amount at each tier are determined by the Commercial and Projects Team at the start of the project.

#	Activity	#	Inputs	#	Outputs	Timeline (in weeks)
P7	– Order Manager incorporates any feedback and re-shares for approval					0.5
P8	– Order Manager prepares a Purchase Order (PO) basis the follow-up PR	I3	Follow-up PR	O3	Purchase Order	
E	– Order Manager issues the PO to the contractor					Total – 3 - 4 weeks

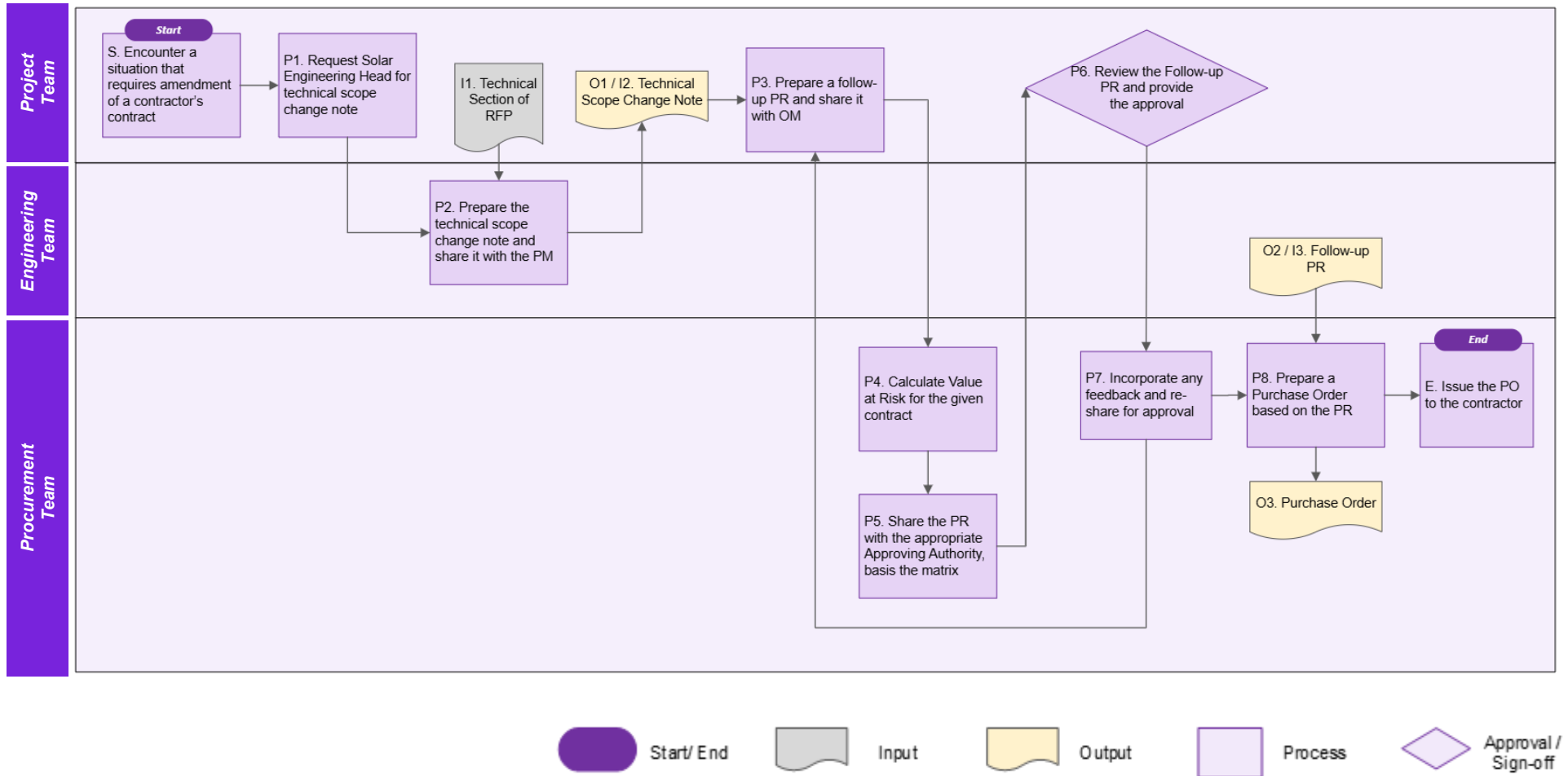
KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

4.2.2 RACI

#	Key Task	Responsible	Accountable	Consulted	Informed
S	Encounter a situation that requires amendment of a contractor's contract	Project Manager			
P1	Request Solar Engineering Head for technical scope change note	Project Manager			Solar Engineering Head
P2	Prepare the Technical Scope Change Note and share it with the PM	Solar Engineering Head			Project Manager
P3	Prepare a follow-up PR and share it with the Order Manager (OM)	Project Manager			Order Manager
P4	Calculate Value at Risk for the given contract	Order Manager		Project Manager	
P5	Share the PR with the appropriate Approving Authority, basis the matrix	Order Manager			Approving Authority
P6	Review the Follow-up PR and provide the approval	Approving Authority			Order Manager
P7	Incorporate any feedback and re-share for approval	Order Manager			Approving Authority
P8	Prepare a Purchase Order (PO) basis the follow-up PR	Order Manager			
E	Issue the PO to the contractor	Order Manager			Solar Procurement Head, Project Manager

KEY - S: Start | P: Process Steps | I: Input | O: Output | E: End

4.2.3 – Process Map



¹ Map Glossary – SPH: Solar Procurement Head

Key Performance Indicators

Metric	Definition	How to Calculate
Cost Variance <i>(calculated as a %)</i>	Variance in the actual cost paid for an item, with respect to the budgeted cost.	Calculated as the difference in the actual cost paid for an item and budgeted cost for the item, divided by the budgeted cost for the item, and taken as a percentage.
Supply Schedule Variance <i>(calculated as a %)</i>	Variance in the actual delivery schedule, with respect to the planned delivery schedule.	Calculated as the difference in the actual number of days and the planned number of days for delivery, divided by the number of planned days, for delivery and taken as a percentage.
Vendor Empanelment Time <i>(measured in days)</i>	Average number of days taken to empanel a vendor.	Calculated as the number of days between receipt of Gap Assessment Report by Commercial Team and empanelment of respective vendor.
Procurement Cycle Time <i>(measured in days)</i>	Average number of days taken to complete the procurement process.	Calculated as the number of days between purchase requisition being raised to procurement team and purchase order being raised to the vendor.
Issue Resolution Time <i>(measured in days)</i>	Average number of days taken to resolve a contractor issue.	Calculated as the sum of days spent resolving issues, for all resolved issues, divided by the number of resolved issues. <i>Days spent to resolve an issue is the number of days between issue being logged and issue being resolved.</i>
Service Contract Issue Rate <i>(calculated as a number)</i>	Average number of issues per service contract.	Calculated as the total number of issues in the issue log divided by the total number of service contracts.
Quality Observation Rate <i>(calculated as a number)</i>	Likelihood of a shipment failing an inspection.	Calculated as the total number of rejected shipments divided by the total number of shipments.
Non-Conformity Reports Issued <i>(calculated as a number)</i>	Number of NCRs for a given contract.	Calculated as the total number of NCRs issued to a contractor.

Glossary

Abbreviation	Expanded
BD	Business Development
BOQ	Bill of Quantities
BOS	Bill of Services
C&P	Contracting and Procurement
CCO	Chief Commercial Officer
CP	Chief Procurement
DPR	Daily Progress Report
EPH	ESC (Evacuation, Substation, Connectivity) Procurement Head
KPI	Key Performance Indicator
MDC	Material Dispatch Certificate
OM	Order Manager
PM	Project Manager
PO	Purchase Order
PPA	Power Purchase Agreement
PPP	Project Procurement Plan
PQC	Pre-qualification Criteria
PR	Purchase Requisition
RACI	Responsible, Accountable, Consult, Inform
RCA	Root Cause Analysis
RFI	Request for Information
RFQ	Request for Quotation
SCM	Supply Chain Management
SEH	Solar Engineering Head
SPH	Solar Procurement Head
SPOC	Single Point of Contact
TPI	Third-Party Inspection

Appendix

Items Requiring Third-Party Inspection

Sr. No	Item
1	AC HT Cable
2	AC LT Cable
3	Aux Transformer
4	Auxiliary Cable
5	Battery Charger
6	Communication Cable
7	Control Cable
8	DC Cable
9	ICOG Panel
10	Inverter Duty Transformer (IDT)
11	Lightning arrester
12	LT Panel
13	Main HT Panel
14	MMS: i) MMS Prototype ii) Docking Station for Robotic Cleaning
15	Module Cleaning Robot
16	Power plant controller (PPC)
17	SCADA System
18	UPS
19	WMS

Required Documentation for Service Contracts

Sr. No	Item	Technical Requirements	Team
1	Land Aggregators	LA Requirements Document	Land
2	Technical Consultant for Land Feasibility	Technical Consultant Requirements Document	Land
3	Site Survey Consultant	Preliminary Works Document	Engineering
4	Owner's Engineer	Owner's Engineer Requirement List	Engineering
5	Third Party Inspection	TPI Requirements Document	Engineering
6	Engineering, Procurement, Construction (EPC)	EPC Requirements Document	Engineering, Project