SOEC VENDOR COMPLIANCE CHECKLIST AND MODULAR SCALING REQUIREMENTS

Document Class: Vendor Compliance and Attestation Checklist

Applies To: SOEC Systems, Steam Interface, Balance-of-Plant

Project Scope: Phase 1 through Phase 3 Modular Expansion

Purpose: Mandatory vendor attestation for technical compliance, scalability, and warranty eligibility

1. MODULAR SCALING REQUIREMENTS (MANDATORY)

Vendor shall provide a modular SOEC system architecture capable of staged expansion from Phase 1 initial MGD hydrogen production to Phase 3 full-scale campus requirements without fundamental redesign, technology substitution, or warranty reset.

Phase 1 represents initial deployment. Phase 2 and Phase 3 represent incremental capacity additions using identical or backward-compatible modules, control systems, steam interfaces, and balance-of-plant components.

Requirement	Vendor Response (Y/N)	Notes / Evidence
Modular SOEC stack architecture		
Identical module replication for expansion		
Backward-compatible controls and PLC logic		
Steam interface scalability without redesign		
No warranty reset upon modular expansion		
Single chemistry envelope across all phases		
Defined maximum scalable capacity per module		
Documented Phase 1 to Phase 3 roadmap		

2. CHEMISTRY COMPLIANCE ATTESTATION

Parameter	Compliant (Y/N)	Comments
Silica <= 5 ppb at SOEC inlet		
Degassed conductivity <= 0.15 uS/cm feedwater		
Dissolved oxygen <= 7 ppb feedwater		
Chlorides <= 5 ppb		
Sodium <= 2 ppb in steam		
Single chemistry envelope across all modules		

3. MATERIAL AND INSTRUMENTATION COMPLIANCE

Item	Compliant (Y/N)	Comments
Inconel or 316L steam sampling lines		
Nickel alloy valves above 400C		
Redundant DO and conductivity probes		
Online silica analyzer with trip output		
Sample conditioning per ASME PTC 19.11		

4. WARRANTY AND INSURANCE ATTESTATION

Vendor acknowledges that failure to meet chemistry, material, or modular scalability requirements voids warranty coverage and may disqualify the system from insurance acceptance.

Vendor Signature: _____ Date: _____