

**RESOLUTION NO. 2021-137**

**A RESOLUTION AUTHORIZING PAYMENT TO SIEMENS ENERGY, HOUSTON, TEXAS, FOR REPAIRS TO CLAYVILLE GENERATING ENGINE IN ACCORDANCE WITH A LONG TERM MAINTENANCE AGREEMENT**

**WHEREAS**, the City of Vineland has entered into a Long Term Service Agreement with Siemens Energy, Inc. Houston TX.(Siemens) for parts, repairs and repair project management to the Unit 11 and Clayville Generating Stations; and

**WHEREAS**, the services to be provided are proprietary in nature and are in furtherance of a Long Term Service Agreement and therefore are exempt from public bidding in accordance with N.J.S.A. 40A:11-5 et seq.; and

**WHEREAS**, Siemens has provided project management to consider the root cause of the malfunction of the Clayville generator engine, ESN118 as well as necessary parts and repairs in accordance with an invoice and scope of work attached hereto dated February 25, 2021 in the amount of \$2,462,651.75; and

**WHEREAS**, the Vineland Municipal Electric Utility is requesting authorization for Siemens expenses as attached hereto in accordance with the Long Term Maintenance Agreement; and

**WHEREAS**, N.J.S.A. 52:15C-10a requires a contracting unit to provide notice to the State Comptroller no later than 20 business days after the award of a contract involving consideration or an expenditure of more than \$2,000,000.00 but less than \$10,000,000.00; and

**WHEREAS**, the availability of funds for payment to Siemens in accordance with the Contract have been certified by the Chief Financial Officer; and

**NOW THEREFORE BE IT RESOLVED**, by the Council of the City of Vineland that payment in the amount of \$2,462,651.75 shall be made in accordance with the Long Term Service Agreement.

**BE IT FURTHER RESOLVED** that a copy of this Resolution and cost proposal be forwarded to the State Comptroller no later than 20 business days after the adoption of this Resolution.

Adopted:

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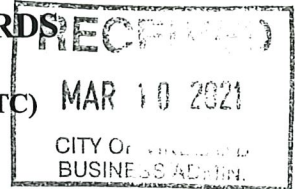
President of Council

ATTEST:

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City Clerk

**REQUEST FOR RESOLUTION FOR CONTRACT AWARDS  
UNDER 40A:11-5 EXCEPTIONS  
(PROFESSIONAL SERVICES, EUS, SOFTWARE MAINTENANCE, ETC)**



3-10-21

(DATE)

1. Service (detailed description): Siemens repairs to Clayville Engine ESN118 as per attached scope and quotation.

2. Amount to be Awarded: \$ 2,462,651.75

- Encumber Total Award  
 Encumber by Supplemental Release

3. Amount Budgeted: \$ \_\_\_\_\_

4. Budgeted: By Ordinance No. \_\_\_\_\_  
Or Grant: Title & Year \_\_\_\_\_

5. \*\*Account Number to be Charged: T-22-00-000-0000-80302

6. Contract Period: Repairs to take two month`s--

7. Date To Be Awarded: March 23, 2021

8. Recommended Vendor and Address: Siemens Energy Inc. 1200 West Sam Houston Parkway North, Houston TX 77043

9. Justification for Vendor Recommendation:(attach additional information for Council review)  
please see attached pricing-- page 10 of 17---full report and scope of work on file with the City Clerk.

- Non-Fair & Open (Pay-to-Play documents required)  
 Fair & Open: How was RFP advertised? \_\_\_\_\_

10. Evaluation Performed by: S August, Tom Dunmore

11. Approved by: *John Lelli*

*40A:11-5(1)(i)*

12. Attachments:

- Awarding Proposal  
 Other: Cost Breakdown /work scope

- Send copies to:  
Purchasing Division  
Business Administration *(initials)*

\*\* If more than one account #, provide break down

## 4. Commercial

### 4.1 Pricing Table

Item	Description	Quantity	Total Price (USD)
1	Engine Strip and Inspect (Proposal SF201705770 R0 issued in December 2020) – <b>PO C20-0107 Received</b>	1	\$618,000.00
2	SF201705811 Engine Repair as described in Section 3.2	1	\$2,592,265.00
3	Project Management	-	Included
<b>Sub-Total for Item 2</b>			<b>\$2,592,265.00</b>
Less 5% Discount on Item 2			(\$129,613.25)
<b>Total for Item 2</b>			<b>\$2,462,651.75</b>
<b>Grand Total</b>			<b>\$3,080,651.75</b>

N/A

N/A

### 4.2 Pricing Basis

Prices are Firm and based on the pricing notes provided below.

- Price is provided assuming all scope proposed is ordered together. Siemens reserves the right to re-issue pricing if scope is not ordered together.
- Siemens reserves the right to make any changes and re-issue pricing should the scope change or the validity date lapses.
- Price is at 2021 cost level.
- Price is based on the solution as described in the Section 3.2. Additional services and/or supply will incur additional costs.
- Price does not include site services including any supervision which shall be offered separately.
- Storage charges at the rate of USD 1250 per month will be applicable if a PO is not received from the Customer within the validity date of this repair proposal.
- All rejected parts will become Siemens property 30 days after the repaired equipment is provided back to the Customer, for normal disposal, unless otherwise advised differently by the Customer in advance.
- Where completion of the scope of work includes replacement parts, the contractor may as an option supply new, refurbished, or used parts. Refurbished or used parts may come from a parts pool and not the original supplied asset.

### 4.3 Delivery Terms

The following delivery terms are applicable:

- Delivery of engine is CIP Customer site, INCO terms 2010.
- The current project schedule estimates the repaired engine to be ready for dispatch at Siemens workshop on April 22, 2021.

**SIEMENS**  
**ENERGY**

**We energize  
society**



**Repair of ESN118 SGT-A65 Engine**

**Vineland Municipal Electric Utility**

**SF201705811 R0**

**25-Feb-21**

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**Proprietary Information**

This proposal, including all of its attachments, exhibits, appendices, etc. ("Proposal") is provided "as-is" for your evaluation of Siemens Energy, Inc. ("Siemens") as the provider of work discussed therein and contains information that is confidential to and solely owned by Siemens. Your acceptance, viewing or storage of this Proposal is an acknowledgment of a confidential relationship between you and Siemens. We require that this Proposal be returned or destroyed when no longer required for the purpose identified herein. This Proposal and any information obtained from this Proposal may not be reproduced, transmitted, disclosed, or otherwise used, in whole or in part, without the prior written authorization of Siemens.

**Bapat Chandrahas**  
Digitally signed by Bapat Chandrahas  
DN: cn=Bapat Chandrahas, o=Siemens, email=cp.bapat@siemens.com  
Date: 2021.02.25 17:38:22 -06'00'

**Koussa Randa**  
Digitally signed by Koussa Randa  
DN: cn=Koussa Randa, o=Siemens, email=randa.koussa@siemens.com  
Date: 2021.03.01 11:40:29 -05'00'

Issue	Date	Author	Summary of Changes
RO	25-Feb-21	TJM	Release of Firm Proposal

## 1. Project Overview

### 1.1 Project Summary

Vineland Municipal Electric Utility ("Customer") operates a Siemens SGT-A65 gas turbine unit for power generation at its Clayville site in Vineland, New Jersey. During a scheduled borescope inspection of the engine ESN 118, HPC stage 6 blades were found damaged. The unit since then has been inspected in Montreal and Gate 1 report has been released. Scope includes replacing the HPC stage 6 blades, Engine performance restoration and installing Mods as described below.

### 1.2 Value Proposition

As the OEM and with its global structure, Siemens is able to apply its unparalleled equipment knowledge and experience to provide the most cost effective, on time solution. Repair of the engine and replacement of parts will be carried out as per strict OEM standards.

### 1.3 Equipment Summary

<b>Customer Name</b>	Vineland Municipal Electric Utility
<b>Location</b>	Vineland, Onshore
<b>Equipment</b>	SGT-A65, Dual Fuel, WLE
<b>Number of Units</b>	One
<b>Original Project Numbers</b>	M.A916

### 1.4 Site Information

The unit is located onshore in Vineland, New Jersey. Assumed Air Quality (GTES10324), Water Quality (GTES10153). This is a power generation peaking unit operating between 100-2000 hours/year.

## 2. About Siemens Energy

Siemens is pleased to present to Customer the following proposal for the Modernizations and Upgrades (M & U) Services to cover the Siemens equipment at Customers' Clayville site.

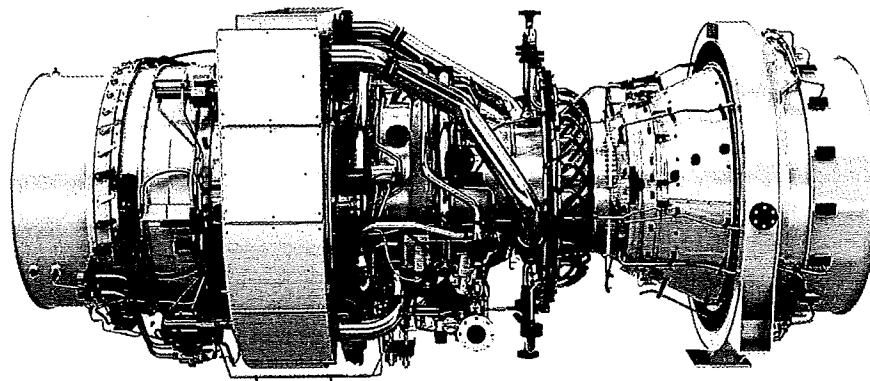
As the Original Equipment Manufacturer (OEM) of the package and maintainer of a large fleet of Gas Turbines, Compressors and Generators, Siemens is uniquely qualified to provide the maintenance services, technical expertise and resources required to successfully deliver the modifications and upgrades for these units.

Siemens Modernizations and Upgrades (M & U) Services solutions utilizes an experienced and dedicated aftermarket services team who will work alongside Customer personnel and provide the level of technical services and financial structure best suited to Customers' operation and coverage request. All Siemens personnel are well trained and skilled to ensure that the Installation and commissioning maintenance work will be carried out on schedule and meets aligned Environment, Health, and Safety (EHS) and quality requirements. This is only applicable if Customer has opted for this option.

The M & U Services offers some significant differences to conventional maintenance agreements. Therefore, most operators will find a more attractive option compared to a conventional maintenance agreement.

Siemens main value propositions include:

- Maximized availability
- Reduced failures and downtimes
- Reduced lifecycle costs
- Latest technology improving efficiency
- Guaranteed performance



SGT-A65

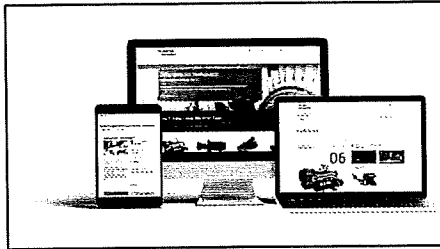


## MyAdvisor

MyAdvisor is an online service that identifies potential improvements applicable to your Siemens rotating equipment.

It's our priority to provide the latest in-service support available to match your operational priorities, from power increase and emissions reduction to reduced operating costs through greater efficiency.

By inputting your equipment data and operating profile, MyAdvisor will recommend the latest technology offerings related to our Modernization and Upgrade products.



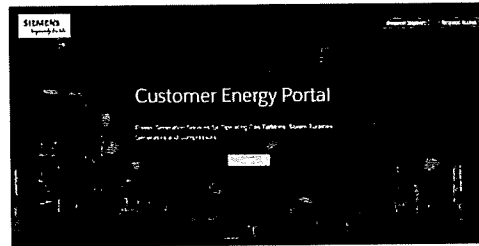
<https://siemens-energy.secure.force.com/myAdvisor/>

## Customer Energy Portal

Customer Energy Portal (CEP) is an innovative platform which integrates access to various digital functionalities for Siemens customers.

This collaborative platform provides safety bulletins, product improvements, equipment documentation and the ability to raise tickets against your assets.

In addition, CEP enables access to several unified tools and applications: MyHealth, Personalized MyAdvisor and Training & compliance.



<https://siemens-energy.secure.force.com/CEP>

### 3. Scope of Supply

#### 3.1 Requirements

##### 3.1.1 Customer Provided Design Inputs

Since Siemens has not received any request to review Customer specifications for this project, we are basing our proposal on Siemens standards and specifications.

#### 3.2 Detailed Scope of Supply

##### 3.2.1 Engine Work Scope

- Engine and modules to be stripped for investigation.
- Bulk strip engine to remove Modules 01, 02, 03, 04, 05, 06 & 08.
- Engine external dressings to be stripped as required to remove modules.
- EGB M03 interface to be inspected for oil coking
- Investigate and perform engine power loss restoration.
- The following issues to be addressed:
  - Replace HP/IP Bleed Valve Manifold Solenoid TRN17601 Block #1.
  - Replace TGT#16 Thermocouple.
  - Broken nut plate on upper rear corner of starboard side BOV duct center panel to be replaced and missing rivet on nut plate at same location to be replaced.
- Rebuild engine when cleared from DI.
- Embody the following Mods:
  - E1B100401102 - Introduction of TGT Thermocouple Mounting Plate
  - E1B100307713 - Introduction of Engine, Modular & Super Modular Nameplates
  - E1B100335051 - Introduction of Silicone P Clamps on T30, T42 & TBH Thermocouple
  - Re-embody MOD TRT0693 - New Axial Setting Instruction.

##### 3.2.2 M01 LPC

- Carry- out EMP Level 1 SIP Inspection.
- Embody MOD TRT0710 - Modified Siemens Engine Nameplates.
- E1B100307713 - Introduction of Engine, Modular & Super Modular Nameplates.

##### 3.2.3 M02 IPC

- Bulk strip M02 to expose the IPC rotor and cases.
- Assess as-received condition to understand the level of performance restoration required.
- Rebuild module.
- E1B100307713 - Introduction of Engine, Modular & Super Modular Nameplates.

**3.2.4 M03 Intermediate Case Assembly**

- Carry-out EMP Level 1 SIP inspection.
- Bulk strip the module 03 to remove and replace the LP (1668 01 095), IP (1668 01 300) & HP (1010 01 130) Location bearings.
- Strip to remove tubes (1661 01 752) (1661 01 778) (1661 01 794) (1661 01 806) and visually inspect and borescope for signs of corrosion. Replace if corrosion found. Process IAW PCI if no corrosion found.
- Carry out EMP Level 2 inspection of all exposed areas.
- E1B100307713 - Introduction of Engine, Modular & Super Modular Nameplates.
- Rebuild module.

**3.2.5 M04 HP System**

- Bulk strip M04 to remove M04/1, M04/2 & M04/3 mini modules from one another.
- Carry-out EMP Level 1 SIP inspection to M04/2 & M04/3.

**M04/1 HPC Mini-Module:**

- Bulk strip M04/1 to expose the HPC Rotor and cases sufficiently to allow the required Mods to be embodied.
- Carry-out any additional strip as instructed by the DI lead for the RCA.
- Carry-out inspection of all exposed areas IAW EMP Level 2.
- Repair/replace damaged stage 6 blades.
- Rebuild module when cleared by DI lead.
- Check balance module.
- Replace the HPC to HPT joint hardware:
  - E1B100081713 - HPC Stator Vane Foot Stg 3,4,5 - Spotweld Solution.
  - E1B100059120 - Introduction of the New HPC Stage 5 Vane Assembly.
  - E1B100039805 - Removal of Seal Strips and Replacement of Thermal Blankets.

**M04/3 HPT Mini-Module:**

- Remove M04/3 HPT Mini-Module from ESN118 due to TLR972475 rejection. Strip & process HPT disc IAW TLR972475.
- Re-build with new M04/3 HPT mini-module S/No.165.

**3.2.6 M05 IPT**

- E1B100307713 - Introduction of Engine, Modular & Super Modular Nameplates.
- Carry-out an EMP Level 2 bulk strip and inspection.

**3.2.7 M06 Gearbox**

- Carry- out EMP Level 1 SIP Inspection.

**3.2.8 M08 LPT**

- Carry- out EMP Level 1 SIP Inspection.
- E1B100307713 - Introduction of Engine, Modular & Super Modular Nameplates.

**3.3 Project Management**

Siemens will nominate a Project Manager for execution and completion of the project. The Project Manager will act as the primary liaison for all activities during execution phase. It is expected that the customer will supply a single point of contact for the project manager to interface with.

No off-site meetings are included in the quoted price and will be charged on a time and material basis should such be required.

**3.4 Installation and Commissioning**

Installation and Commissioning is excluded from the scope of supply of this proposal; however, it will be provided separately.

## 4. Commercial

### 4.1 Pricing Table

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### 4.2 Pricing Basis

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- Siemens reserves the right to make any changes and re-issue pricing should the scope change or the validity date lapses.
- Price is at 2021 cost level.
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- Price does not include site services including any supervision which shall be offered separately.
- Storage charges at the rate of USD 1250 per month will be applicable if a PO is not received from the Customer within the validity date of this repair proposal.
- All rejected parts will become Siemens property 30 days after the repaired equipment is provided back to the Customer, for normal disposal, unless otherwise advised differently by the Customer in advance.
- Where completion of the scope of work includes replacement parts, the contractor may as an option supply new, refurbished, or used parts. Refurbished or used parts may come from a parts pool and not the original supplied asset.

### 4.3 Delivery Terms

The following delivery terms are applicable:

- Delivery of engine is CIP Customer site, INCO terms 2010.
- The current project schedule estimates the repaired engine to be ready for dispatch at Siemens workshop on April 22, 2021.

- Delivery lead times are subject to engineering and shop capacity at the time of acceptance of Purchase Order.
- Siemens will publish a schedule to Customer once an acceptable Purchase Order is received, a Siemens project manager is assigned, and the Outage planned dates established.
- Customer witness is acceptable in the workshop however a Siemens escort will be required and will be based on local COVID policies. Committed turn time does not provide for customer hold points or other delays caused by witness activities.

#### **4.4 Payment Terms & Security**

All payments shall be net 30 days from the date of the invoice. The following payment milestones are applicable to SF201705811 (i.e. this proposal) total for item 2 as shown in the pricing table:

- 50% of contract price upon placement of PO
- 40% of contract price upon notification of readiness to ship/dispatch
- 10% of contract price upon submission of final repair report

If requested by Siemens at any time prior to acceptance of the Purchase order for this proposal, Customer will demonstrate its financial capability to continue to carry out its obligations under this Contract. This demonstration may require that Customer furnish adequate payment security (which may include a confirmed irrevocable letter of credit, parent guarantee or surety bond in a form and amount reasonably acceptable to Siemens).

#### **4.5 Validity**

The proposal is firm and valid for 60 days from the date of issuance of this proposal.

## 5. Terms and Conditions

This proposal shall be governed by the following terms and conditions, which shall be construed in the order of priority according to which the documents are listed below:

- i. This Proposal; and
- ii. Article 6.7 of LTSA No. 0426 Submitted 02-17-2016 signed between Siemens Energy Inc. and Vineland Municipal Electric Utility.

In addition, the following Clauses are also applicable.

### 5.1 Warranty

The scope of work offered in this proposal is subject to a warranty of 12 months from installation or 18 months from delivery whichever is earlier.

### 5.2 Cancellation

Customer may cancel this Agreement at any time on thirty (30) days written notice. Customer shall have no right to defer shipment of Product. Except for Siemens right to terminate in accordance with Article 16 of LTSA No. 0426, either party may terminate this Agreement for material breach of the other party, provided that the breaching party has not remedied the breach or commenced to cure the breach within a reasonable period, having due regard to the nature of the breach. In the event of a termination or cancellation, Customer is liable for cancellation charges, including without limitation: (i) the full price for any completed Siemens Products and Services; (ii) the allocable portion of the price as determined by Siemens for any partially completed Siemens Product and Services, including reasonable overhead and profit, (iii) reasonable demobilization costs, and (iv) payments due to subcontractors which cannot be: (1) cancelled without any payment obligation; or (2) refunded.

### 5.3 Novation

Siemens may, in its sole discretion, transfer, assign, or novate the Contract or any part of it to an affiliated company ("Affiliate"), being any legal entity ("Company") which directly or indirectly is controlled by Siemens, controls Siemens or is controlled by a Company which directly or indirectly controls Siemens. Siemens shall further be entitled to assign the whole Contract or a part of it to any third party, in the event of a sale or other transfer of the business or a part of the business of Siemens to a third party. Buyer shall be bound by such novation or assignment. Buyer agrees to be a party to any novation or assignment, if so, requested by Siemens and to execute all relevant documents in connection therewith.

### 5.4 COVID-19

The Parties acknowledge the worldwide outbreak of the Corona Virus/Covid-19 Virus disease, which affects or is likely to affect usual business activities and/or the execution of the contract. The Parties agree that Siemens will be granted reimbursement of costs, extension of time or any other reasonably required adjustment of the contract, all if required to overcome the consequences directly or indirectly caused by the outbreak of the coronavirus disease

## 6. Appendix

### 6.1 Appendix 1 – General Exclusions

Items excluded from the scope of supply include, but are not limited to the following:

- Any repair work or parts for the repair of the engine.
- Long term storage and Preservation – Please refer to GER 102, GEM 143 & GEM 144
- Reference GEM 023, GEM 141, GEM 142, GEM 145, GEM 200 and GER 078, GER 201
- All documentation and graphics will be supplied in the English language unless otherwise specified in this proposal.
- Items not specifically listed as included in this proposal are excluded
- Siemens reserves the right to re-quote if the specifications or requirements differ from what was offered.
- Siemens Energy Engineering complies with internal procedure LOP C.4 – Hardware Design Review process which outlines a gated internal peer review and approval process focusing on baseline deviations, integration, and safety. External processes are excluded unless noted otherwise.
- Siemens Energy Engineering complies with internal procedure LOP C.3 – Software Design Review process which outlines a gated internal peer review and approval process focusing on baseline deviations, integration, and safety. External processes are excluded unless noted otherwise.



## 6.2 Appendix 2 – Siemens Energy Cabling and Grounding requirements and practices

The customer shall ensure that the Siemens Energy requirements within GER0035, GER0070, GER0018, GER0142 and GER00198 are complied with prior to the installation of the UCP. Some of these requirements are as follows:

### GER 0035: Guideline to cable and wire specification

- Customer must ensure all control circuitry and DC voltages are within 5%.
- To minimize radiating noise in the panel:
  - Run it in conduit, fully shielded or armored cable. Separate it in a ferrous metal box until it reaches the panel
  - Enter the cabinet close to the point where the power is filtered (no more than a few inches)
  - Keep all other wiring away from the incoming power

### GER 0070: Grounding / Earthing Design and Application

Due to ground differences across the installation site, EMC grounds shall be isolated on one end.

All cables with shields must be tied through to the control panel ground.

Grounding/earthing wire has a special color coding and is used from grounding of equipment, cable trays, junction boxes and individual devices. The color is given below:

- \*Green-Instrumentation (I/S and non-I/S),
- \*Green with a yellow stripe-earth grounds

Grounding cables are to be replaced unless certified compliance to SIEMENS ENERGY baseline. Qty 2 each properly sized conductors for Safety, Instrument, and intrinsic circuits PER PANEL routed directly back to platform grounding buss plate.

### GER 0198: Signal Separation Requirements for Panels, Packages, and Cross-site Wiring

Incoming power should have no more than 5% drop, or no more than the local standard, or no more than the contract specific requirement, as measured from the power distribution source to the panel.

### 6.3 Appendix 3 – General Exceptions to Industry Specifications

The below lists Siemens Energy general exceptions to Industry Specifications, the referenced documentation can be provided upon request.

#### Gas Turbine

Siemens Energy global engineering requirements and specifications pertaining to design, constructability, and product technical integrity including all relevant industry standard exceptions to API 616 latest edition shall take precedence over any other industry standards.

- GER 0022: Engineering comments and exceptions to API 616, Gas Turbines for Petroleum, Chemical and Gas Industry Services for Siemens Energy Industrial Gas Turbines
- GER 0127: Engineering comments and exceptions to ISO 2314, Gas Turbine Acceptance Test.
- GER 0128: Engineering comments and exceptions to ASME, Performance Test PTC-22 on Gas Turbines.
- GER 0130: Engineering comments and exceptions to API (Recommended Practice) 11 PGT, Packaged Combustion Gas Turbines.
- GER 0225: Engineering comments and exceptions to API 616, for 501 / 601 Gas Turbines.
- GER 0269: Engineering comments and exceptions to API 616, for Gas Turbines for Petroleum, Chemical and Gas Industry Services for SIEMENS ENERGY RB211 Industrial Gas Turbines

#### Fire and Gas

Siemens Energy global engineering requirements and specifications pertaining to design, constructability, and product technical integrity including all relevant industry standard exceptions to NFPA shall take precedence over any other industry standards.

- GER 0011: Engineering comments and exceptions to NFPA 12, Standard on Carbon Dioxide Extinguishing Systems.
- GER 0012: Engineering comments and exceptions to NFPA 750, Water Mist Fire Protection Systems.

#### Coupling Upgrade

Siemens Energy global engineering requirements and specifications pertaining to design, constructability, and product technical integrity including all relevant industry standard exceptions to API 671 latest edition shall take precedence over any other industry standards.

- GER 0133: Engineering comments and exceptions to API 671, for Special-Purpose Couplings for Centrifugal Compressor and Power Generation Application.

#### Gearbox Upgrade

Siemens Energy global engineering requirements and specifications pertaining to design, constructability, and product technical integrity including all relevant industry standard exceptions to API 613 latest edition shall take precedence over any other industry standards.

- GER 0137: Engineering comments and exceptions to API 613, for Special-Purpose Gears for Power Transmission Application.

- GER 0190: Engineering comments and exceptions to API 613, for Special-Purpose Gears Units.

**Lube Oil Systems**

Siemens Energy global engineering requirements and specifications pertaining to design, constructability, and product technical integrity including all relevant industry standard exceptions to API 614 latest edition shall take precedence over any other industry standards.

- GER 0129: Engineering comments and exceptions to API 614, for SIEMENS ENERGY GT Lube Oil Systems, Main Lube Oil System, and the RB211 Gas Generator Lube Oil Console.
- GER 0224: Engineering comments and exceptions to API 614, for The Avon Gas Generator Lube Oil Console.
- GER 0242: Engineering comments and exceptions to API 614, for SIEMENS ENERGY Industrial Trent Gas Turbine Lube Oil System.
- GER 0252: Engineering comments and exceptions to API 614, for SIEMENS ENERGY RB211 Gas Generator Lube Oil Console and Main Lube Oil System.

**Miscellaneous**

- Siemens Energy global engineering requirements and specifications pertaining to design, constructability, and product technical integrity including all relevant industry standard exceptions shall take precedence over any other industry standards.
- GER 0125: Engineering comments and exceptions to ANSI/API 610/ISO 13709, Centrifugal Pumps for General Refinery Services.
- GER 0126: Engineering comments and exceptions to API 670, Machinery Protection Systems.
- GER 0134 & GER 0188: Engineering comments and exceptions to API 661, Air Cooled Heat Exchangers for General Refinery Service.
- GER 0161: Engineering comments and exceptions to API 662, Plate Heat Exchangers for General Refinery Service.

## 6.4 Appendix 4 – Siemens Energy AGT Safety Policy

### Siemens Energy AGT Safety Policy

Siemens Energy Sector products and subsystems for gas turbine packages are subjected to a rigorous safety process that establishes safety requirements and then assesses compliance against those requirements. The safety process is governed internally by corporate safety policies, which drawn from industry best practice and generally accepted standards, such as IEC61511 & IEC61508. Potential hazards that require risk reduction through electronic control systems are mitigated by safety functions designed to an appropriate integrity, in line with the SIL defined in IEC61511.