



**GTI ENERGY**

*solutions that transform*

# Pre-bid Review Meeting for Engineering-Scale ROTA-CAP™ Test Unit

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August 25, 2025



# Agenda

- High-level Project Summary
- Introduction to GTI Energy
- Details on Test Unit Operation
- Bid Package Details
- Design and Installation Considerations
- Bid Schedule

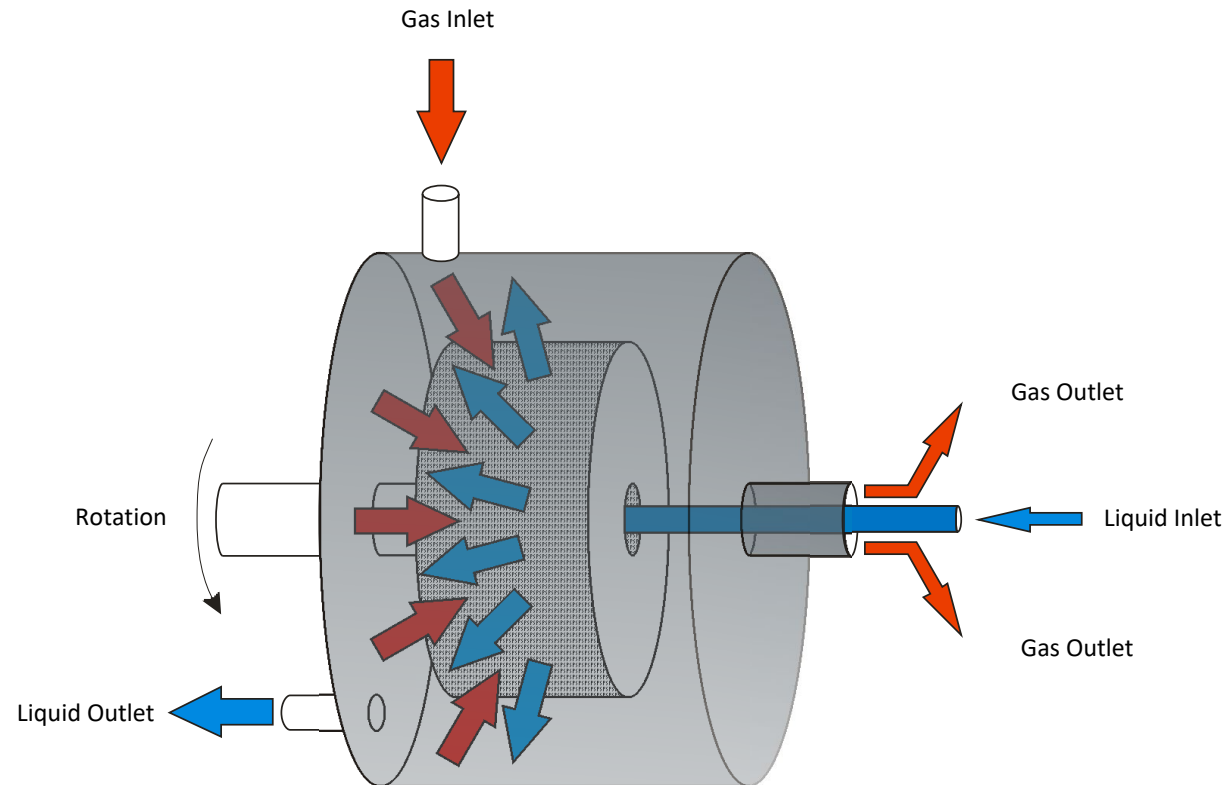
# High-level Summary

- The test Skid shall be utilized to meet technical objectives of GTI Energy's (GTI) project (DE-FE0032466), funded by the Department of Energy (DOE)/National Energy Technology Laboratory (NETL). Objectives include:
  - Design, fabrication, installation, and testing of an engineering-scale, post-combustion CO<sub>2</sub> capture system based on GTI's transformational ROTA-CAP™ technology which utilizes rotating packed bed (RPB) contactors
  - Perform parametric testing to establish the operating conditions at which a carbon capture efficiency of 95% or greater can be achieved, with a CO<sub>2</sub> purity of 95% or greater (% vol.)
  - Achieve continuous, steady-state operation for a minimum of two months
  - Validate a reduction of carbon capture cost of at least 30% compared to the DOE baseline technology
  - Attain a Technology Readiness Level (TRL) of 6 and demonstrate readiness for further scale-up



# ROTA-CAP™ Technology Background

- ROTA-CAP™ uses compact rotating packed bed (RPB) absorber and regenerator units for contacting flue gas with advanced solvents for carbon capture.
- RPB technology substantially reduces the size and therefore the cost and footprint of CO<sub>2</sub> capture plants.
- Counter-current contact:
  - Solvent is distributed from the inner radius to outer radius under centrifugal force generated by rotation.
  - Gas flows from outer radius to inner radius.





# Introduction to GTI Energy

# GTI Energy: 80-year history of turning raw technology into practical energy solutions



**500+**  
Employees

World-class piloting  
facility in Chicago area

Across the entire energy value chain

SOURCE

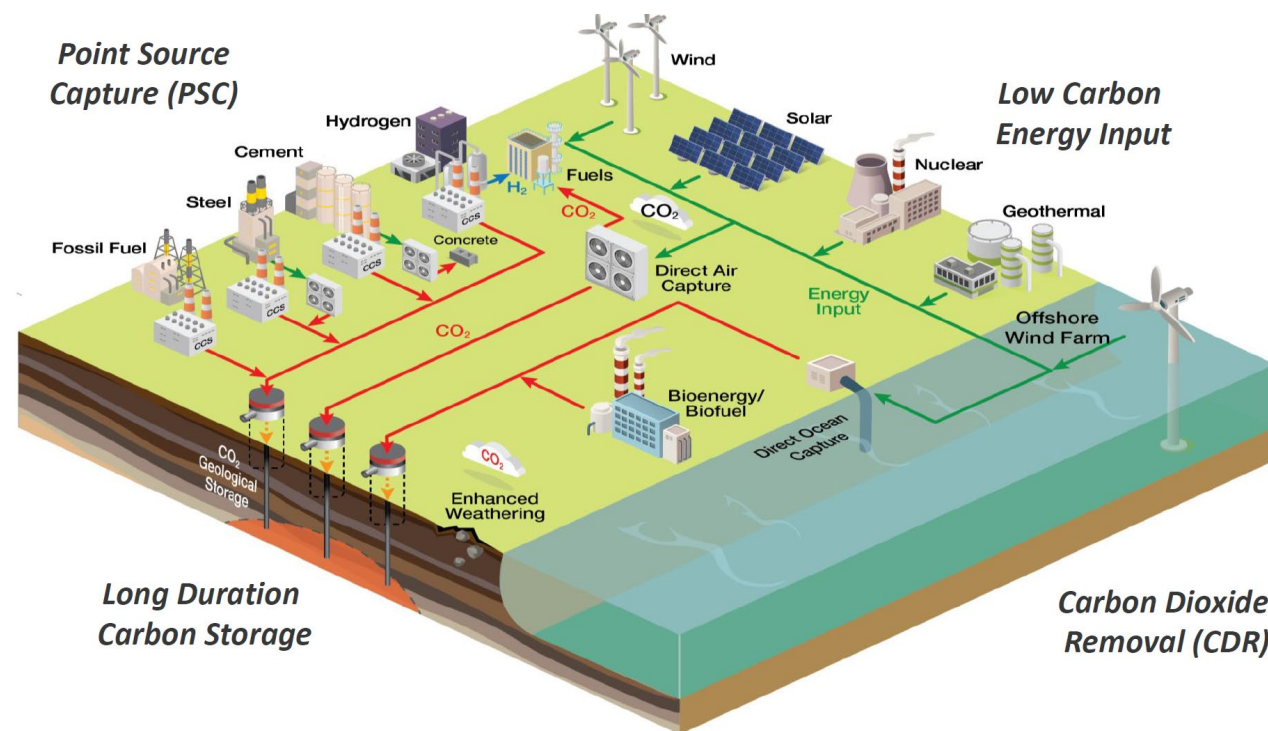
MAKE

MOVE

STORE

USE

CCUS is one of GTI Energy's Strategic Focus Areas



Dan Hancu, NETL Carbon Management and Oil and Gas Research  
Project Review Meeting, August 18, 2021

# At-a-Glance

- We move energy systems solutions from **concept to market**
- We are where partners go to **de-risk experimentation**
- We have expertise in integrated systems and **low-emission gases, liquids, infrastructure and efficiency**

## Partners in Active Collaborations

# 175+

80+ years of experience and leadership in energy production, storage, delivery and use

## Research & Development

# \$1B+

In the past decade

Leading and convening collaborative R&D

## Innovation & Commercialization

# 1,300+

Patents

**500**  
Products

**750+**  
Licensing  
Agreements

## 10+ Industry Collaboratives





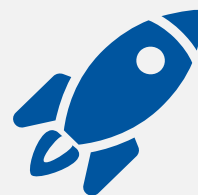
# Our Vision, Mission & Values



## VISION

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A world  
where every person  
can access resilient,  
low-emission energy



## MISSION

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We progress  
energy systems  
to benefit the people  
they serve



## VALUES

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- Empower People
- Prioritize Safety
- Act with Integrity
- Impact a Greater Good
- Drive Innovation
- Collaborate to Accelerate Progress

# GTI Energy Points of Contact

- Points of Contact
  - Mark Stevens
    - Role: Procurement Coordinator
    - Office: (847) 768-0568
    - [mstevens@gti.energy](mailto:mstevens@gti.energy)
  - Alex Koutsostamatis
    - Role: Technical Lead
    - (847) 768-0956
    - [akoutsostamatis@gti.energy](mailto:akoutsostamatis@gti.energy)
- Answers to any questions from individual bidders will be shared with other bidders via an addendum(s) to the RFP



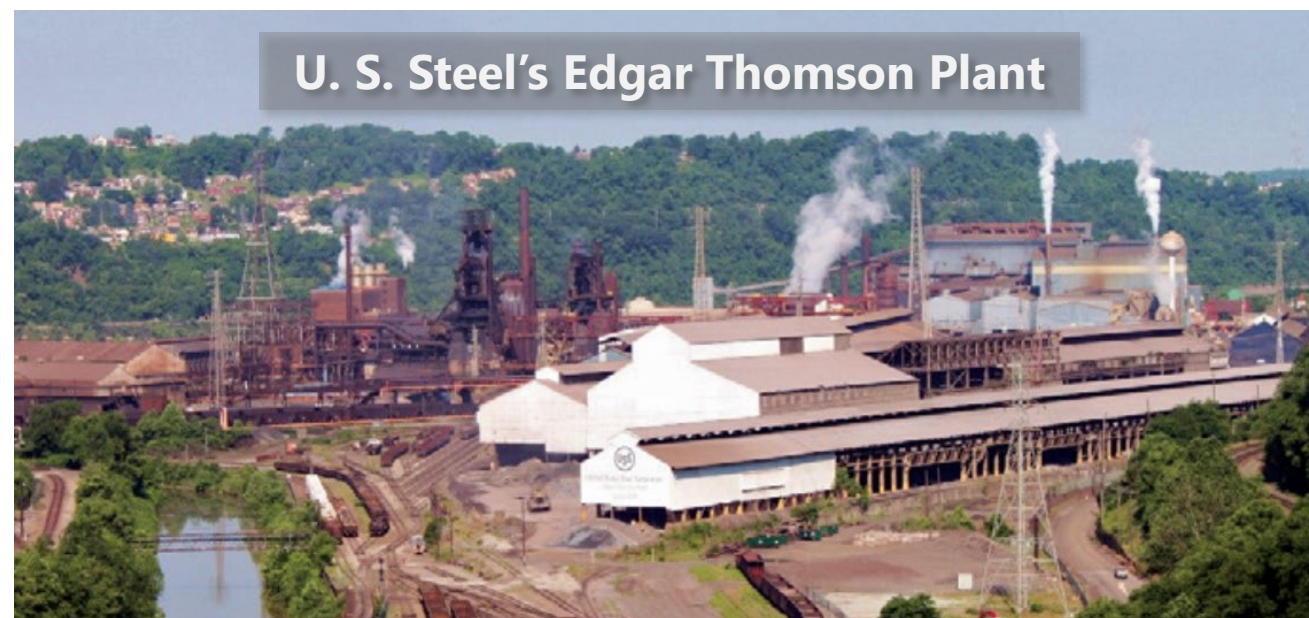
## Details on Test Unit Operation

# Project Objectives

- Design and fabricate an engineering-scale ROTA-CAP™ system for post-combustion CO<sub>2</sub> capture, which refers to a system capable of capturing 10 metric tonnes of CO<sub>2</sub>/day (MTPD)
- Install and commission the system at the Host Site and test the system using real flue gas
- Perform parametric testing to establish the operating conditions at which a carbon capture efficiency of 95% or greater can be achieved with a CO<sub>2</sub> purity of 95% or greater (% vol.)
- Achieve continuous, steady-state operation for a minimum of two months
- Collect and report inlet and outlet criteria pollutant emissions data (e.g., NO<sub>x</sub>, SO<sub>x</sub>, and particulate matter) during parametric and continuous testing
- Collect and report technology-related emissions data (e.g. amine slip, nitrosamines, solvent degradation, etc.) to assess the non-CO<sub>2</sub> co-benefit emissions reduction of utilizing carbon capture technology
- Attain a Technology Readiness Level (TRL) of 6 and demonstrate readiness for further scale-up

# Overview of Host Site

- Host Site: **U. S. Steel's Edgar Thomson Plant**
  - Industrial iron and steel production facility.
  - Located in Braddock, Allegheny County, PA.
- ROTA-CAP™ testing skid will be designed for testing with **blast furnace stove stack gas** (~20% CO<sub>2</sub> by vol.).



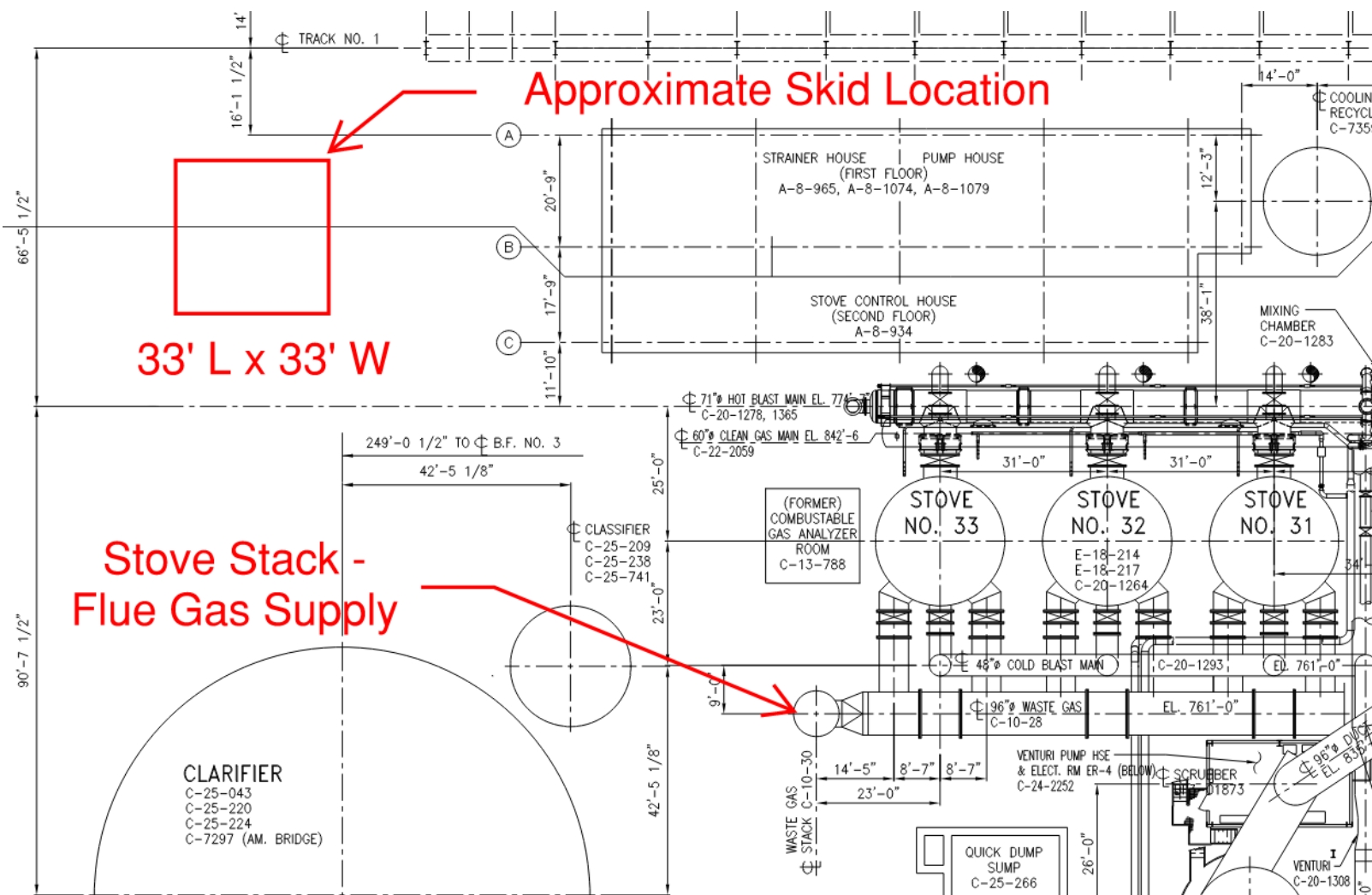


# Overview of Host Site – Skid Location

- Area at Host Site identified for Skid placement (debris to be cleared)
  - Approximately 33' x 33' X 50' (L x W x H)
- Current site is not paved:
  - Foundation drawings/specifications to be provided as part of Bidder scope
  - Foundation installed by Host Site
- Some space within the adjacent roadway is also expected to be available for use
  - Can accommodate 40-foot-long shipping container-sized modules if needed
- No site area classification



# Overview of Host Site



# Flue Gas Supply Conditions

Parameter	Units	U.S. Steel No. 3 Stove Stack		
		Average	Minimum	Maximum
<b>Pressure</b>	In. W.C.	-1.0	--	--
<b>Temperature</b>	°F	520	440	580
<b>Flue Gas Composition (Dry Basis):</b>				
<b>O<sub>2</sub></b>	Mol Frac	0.039	0.029	0.104
<b>CO<sub>2</sub></b>	Mol Frac	0.216	0.192	0.237
<b>N<sub>2</sub></b>	Mol Frac	0.743	--	--
<b>CO</b>	Mol Frac (ppmv)	0.0013 (1,313.87)	0.0000 (2.27)	0.0066 (6,595.36)
<b>NO<sub>x</sub></b>	ppmv	11.27	7.41	16.80
<b>SO<sub>2</sub></b>	ppmv	59.80	42.05	74.43
<b>HCl</b>	ppmv	0.28	0.25	0.31
<b>Total Hydrocarbons (THC) – As C<sub>3</sub>H<sub>8</sub></b>	ppmv	0.68	0.00	6.70
<b>Moisture Content</b>	Mol Frac	0.104	0.102	0.107
<b>Total Particulate Emissions</b>	ppmw	8.2	7.5	8.7



# Comments on Test Site - Utilities

- Electrical feeds typically available from Host Site:
  - 480 VAC, 60 HZ, 3-Phase (Delta configuration)
  - 240 VAC, 60 Hz, 3-Phase or 1-Phase
- Cooling Water: Water from adjacent river is available as a utility
  - Temperature of water supply varies with ambient river temperature (Design max – 85°F)
  - Lightly treated to prevent microbial and algae growth
- Process Steam: 150 psig, 500°F
- Compressed Air: 60 psig, 70°F (oil free but not dry, air dryer included in Bidder scope)
- Potable Water: Supply pressure of ~70 psig
- Flue Gas Supply: Routed to Skid battery limit by Host Site, 6" butterfly valve at tie-point

# Comments on Test Site – Waste Collection

- Cooling Water Return and Steam Condensate:
  - Routed to tie-points at Skid battery limit
  - Piping to appropriate drains supplied by Host Site
- Non-amine waste:
  - Collected and neutralized within system scope, disposed of by Host Site
  - Tie Point at Skid battery limit
- Amine waste:
  - Collected in a tote for periodic disposal by Host Site
- Flue gas return to Host Site's waste gas stack, tie point at Skid battery limit.

# Key Measurements & Performance Parameters

- Absorber RPB:
  - Gas and Liquid stream flow rates and composition
  - Gas stream humidity and contaminant content
  - Pressure drop across beds
- Regenerator RPB:
  - Gas and Liquid stream flow rates
  - Temperature and pressure
  - Heat duty and operating temperature of reboiler
- CO<sub>2</sub> Product
  - Flow rate, temperature, pressure, and composition
  - Water condensed/collected
- Flue Gas Return
  - Composition & technology-related emissions data (e.g. amine slip, nitrosamines, solvent degradation, etc.)

# Variables for Demonstration Unit

Key parameters that influence the carbon capture rate and efficiency are as follows:

1. Flue Gas Supply Rate
2. Liquid: Gas Flow (L/G) Ratio
3. Solvent and Flue Gas Supply Temperature
4. Rotational speed of the Absorber and Regenerator RPBs
5. Reboiler Operating Temperature & Pressure (regeneration temperature/pressure)
6. Rich Solvent Feed Temperature to Regenerator
7. Solvent Type
8. Solvent Concentration



## Bid Package Details

# Bid Package Contents

## **Request for Proposal (RFP) – Part 1 of 3**

- Background and Bid Information, Primary Technical Specifications, Scope of Supply
- **Note:** After the Selected Bidder is chosen, GTI will provide the terms and conditions for the contract between GTI and the Selected Bidder.

## **Request for Proposal (RFP) – Part 2 of 3**

- Appendix 1 – Technical Design Package Documents
- Includes process description, drawings, controls narrative, equipment & instrumentation lists, datasheets

## **Request for Proposal (RFP) – Part 3 of 3**

- Appendix 2 – Existing Blower Specifications
- Appendix 3 – Host Site Requirements & Documentation
- Appendix 4 – Flow Through Requirements from DOE Sponsor
- Appendix 5 - Buy American Requirements

# RFP Technical Documents

- Basis of Design
- Process Description and Operations Philosophy
- Process Diagrams (BFD, PFD, P&IDs)
- Control Narrative and Cause & Effect Diagram
- Heat and Material Balances (H&MBs)
- Lists (Equipment, instrumentation, alarms, interlocks, etc.)
- Preliminary Equipment Datasheets
- Preliminary Pipe Specifications
- Safety:
  - HAZOP topical reports and recommendation trackers

# High-level Scope of Work for Detailed Design

- Final system drawings, diagrams, and 3D model
- Design calculations for equipment, vessels, and relief valves
- Final datasheets for equipment and instrumentation
- Piping and material specifications
- Control system design and programming
- Procurement and fabrication
- HAZOP review
- Operating procedures (developed in conjunction with GTI)
- Foundation design
- Lifting/shipping plans



# Bid Schedule

## Planned Bid Schedule

- Issue RFP: 8/15/25
- Pre-Bid Meeting: 8/25/25
- Final Clarification Questions: 9/5/25
- Bids Due: 9/12/25
- Analysis, Recommendation: 9/26/25
- Negotiations, Approvals: 10/3/25 (tentative)
- PO with Selected Bidder: Week of 10/6/25 (tentative)

# Bid Evaluation Criteria

- **Project Costs**
  - Overall expected cost and cost breakdowns
- **Approach to Quality Control**
  - Corporate quality assurance (QA) / quality control (QC) approach, how QC is incorporated in daily workflow, sample checklists
- **Project Management Team, Experience, References**
  - Demonstrated ability to deliver similar equipment that worked, project references, proposed team, resumes & experience
- **Ability to Manage the Project**
  - Ability to meet GTI's overall project schedule, maintain the project within the cost estimate, change order control, etc.
- **Ability to Provide Expected Deliverables**
  - Compliance with GTI's statement of work (SOW), number and type of exceptions
- **Intangibles**
  - GTI perception, safety, responsiveness, workload, etc.

# Bid Form Template

ROTA-CAP™: Engineering-Scale Testing of Carbon Capture Technology in Iron and Steel Production			
BID FORM			
COST ELEMENT DESCRIPTION	COST ELEMENT - PROPOSAL ESTIMATE		TOTAL ESTIMATED COST
	LABOR COSTS	NON-LABOR COSTS	
Detailed Engineering & Design Work			
Equipment Costs (Per the Equipment List & Datasheets)			
Pumps			
Blowers			
Heat Exchangers			
Vessels, Drums, Tanks			
Columns			
Filters			
Equipment Costs with Optional Considerations Detailed in RFP			
Blowers - Modification of GTI's Existing Blower			
Scrubber Column & Caustic System - Impact of Reduced SO <sub>2</sub> Concentration Target			
Valves (Per the Manual Valve List)			
Instrumentation Costs (Per the Instrument List)			
Control Valves and Transmitters			
Pressure Relief Valves			
Flow Instruments			
Level Instruments			
Pressure Instruments			
Temperature Instruments			
Analyzers (Gas & Liquid Analyzers - Per Instrument List & Scope of Supply)			
Electrical and Control Costs			
Fabrication and Assembly of the Skid			
Shipment of Skid to Host Site			
Commissioning/Testing Support			
Subcontractor Costs, (if applicable)			
Project Management (Weekly Teleconferences, Documentation, Administrative)			
<b>TOTAL PROPOSAL COST</b>			

- GTI requests that all vendors submit bids using the bid form template provided in the RFP (Part 1)
- Template will allow GTI to accurately compare costs for all bidders
- Additional information can be added to the Bid Form if applicable, or detailed in a supporting narrative

# Reviews and Approvals

Description	Timing					Review Required	Review Method	Hold Point	Hold Description
	With Proposal	After Contract Award	Detailed Design	Procurement /Fabrication	Testing/ Commissioning				
Bidder Proposed Document and Drawing Lists	X					X	Proposal Review		
QA/QC Procedures and Certificaitons (Per RFP)	X					X	Proposal Review		
Estimated Total Weight and Sizes	X					X	Proposal Review		
Requirements & Configuration Review		X				X	Meeting	X	Initial Review prior to start of Detailed Design.
Engineering Design Calculations & Documents			X			X	Document Review	X	Approval required before release for Procurement/Fabrication.
Equipment Vendor Data			X			X	Document Review	X	Approval required before release for Procurement/Fabrication.
Instrument Vendor Data			X			X	Document Review	X	Approval required before release for Procurement/Fabrication.
Complete Equipment & Instrumentation Datasheets			X			X	Document Review	X	Approval required before release for Procurement/Fabrication.
Finalized Design Drawings			X			X	Document Review	X	Approval required before release for Procurement/Fabrication.
Bill of Materials			X			X	Document Review	X	Approval required before release for Procurement/Fabrication.
HAZOP Review			X			X	Meeting		
Detailed Design Review & Approval			X			X	Meeting	X	Approval to proceed with fabrication based on acceptance of the design deliverables.
Equipment Performance & NDE Records/Reports				X		X	Document Review		
Instrument Calibration Records				X		X	Document Review		
As-Built Drawings				X		X	Document Review	X	Approval required before FAT can be considered complete.
Operating Procedures				X	X	X	Document Review	X	Approval required before release to begin FAT.
Operation and Maintenance (O&M) Manuals				X	X	X	Document Review	X	Approval required before release to begin FAT.
Installation Instructions				X		X	Document Review	X	Approval required before release for shipment to Host Site.
Field Assembly Instructions and Drawings				X		X	Document Review	X	Approval required before release for shipment to Host Site.
Testing Procedures (For FAT & SAT)				X		X	Document Review	X	Approval required before release to begin FAT.
Commissioning Plan				X	X	X	Document Review	X	Approval required before release to initiate commissioning.
Shipped Loose Item Packing List				X		X	Document Review		
Finalized Total Weight and Sizes				X		X	Document Review		
Priced Spare Parts List				X		X	Document Review		
Shipping Plan					X	X	Document Review	X	Approval required before release for shipment to Host Site.
Factory Acceptance Testing (FAT) of Skid					X	X	Witness	X	Approval required before release for shipment to Host Site.
Site Preparation Review w/ Host Site					X	X	Witness	X	Confirmation that Host Site is ready to accept system. Required before release for shipment.
Site Acceptance Test (SAT) / Facility Readiness Review (FRR)					X	X	Witness	X	Approval required to confirm installation is complete before starting commissioning.
Test Readiness Review (TRR)					X	X	Witness	X	Approval required to confirm commissioning is complete and system is operational.

# GTI Energy QA/QC Approach

- Periodic design and safety reviews (as defined in Review & Approval Matrix)
- Factory Acceptance Test (FAT)
- Pre-safety Startup Review (PSSR)
  - Facility Readiness Review (FRR)
  - Test Readiness Review (TRR)
- Bi-weekly review meetings during construction

# Factory Acceptance Test (FAT)

- The FAT is intended to demonstrate that the system has been fabricated correctly and completely in accordance with the project specifications
- The satisfactory completion of the FAT (witnessed by GTI & Host Site personnel) shall be a prerequisite for shipment to the Host Site
- FAT will include the following:
  - Visual inspection for check of good workmanship and compliance with specifications
  - System recovery from power failures
  - Operation of all peripherals
  - Check of system redundancy, failure of controller, power supply, etc.
  - Complete functional check
  - Verification that any recommendations identified in the HAZOP review that pertain to fabrication, installation, and/or inspection/testing have been adequately addressed

# GTI Energy PSSR Program

- GTI's PSSR program consists of two levels of "readiness review"
- First stage is a Facility Readiness Review (FRR)
  - Conducted after installation at site
- Second stage is a Test Readiness Review (TRR)
  - Conducted after commissioning
- In addition to these, GTI requests the following
  - Follow up HAZOP(s)
  - Participation in DOE review meetings
  - Participate in periodic inspections by GTI Personnel
  - Participate in review and coordination meetings with the RPB supplier
  - Lead review with Host Site for delivery, installation, and foundation requirements

# Facility Readiness Review (FRR)

- Performed after the system has been installed at the Host Site
- Conducted on-site to ascertain that:
  - No damage occurred to the system during shipment
  - The system is correctly installed
  - The system requirements are satisfactory when connected to “live” field inputs/outputs
- The Selected Bidder shall provide personnel to witness and assist in the FRR
- The completion of the FRR shall be used as the verification that the system installation has been adequately completed, and that commissioning of the system can begin



# Test Readiness Review (TRR)

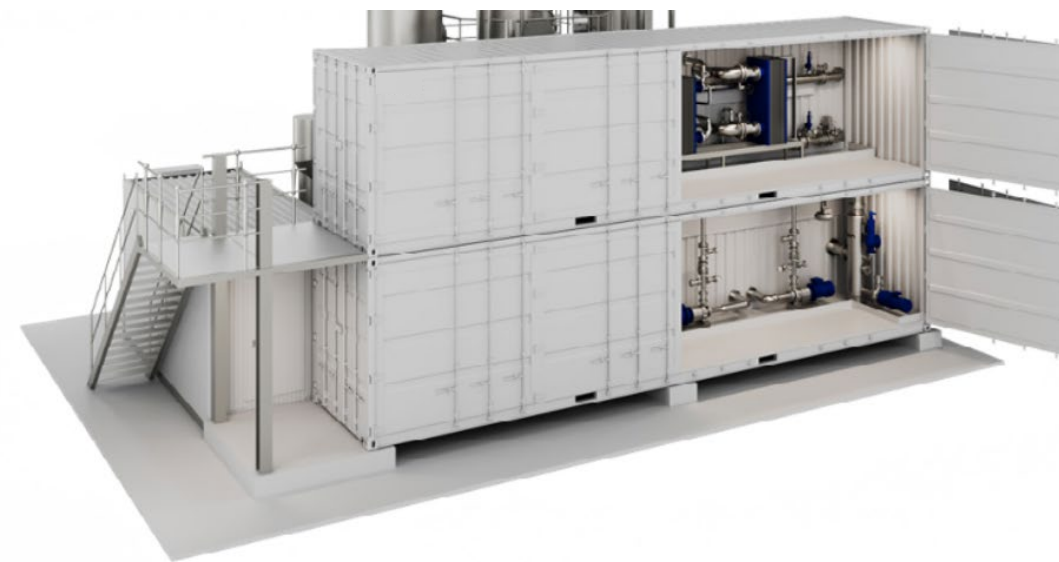
- Formal review to ensure that the system is ready to proceed into testing, following commissioning.
- GTI's TRRs include the following:
  - Ensure any actions items from the FRR have been addressed
  - Ensure all HAZOP recommendations have been addressed
  - Review the Experimental Test Plans & Objectives
  - Review the Operating Procedures
    - Ensure all personnel involved understand how to operate the system in accordance with the Experimental Test Plan/Matrix
- Selected Bidder will need to provide onsite assistance for two 40-hour work weeks plus "on-call" assistance



# Design and Installation Considerations

# Modularization

- GTI's desire is for the system to be modular to facilitate transport of the system modules/skids and installation of the system at the Host Site
- This can involve the use of shipping containers or similar enclosure types to house the individual skids/modules
- The need for freeze protection and winterization of equipment shall be evaluated as required by the modularization/enclosure strategy employed



# Control System / Communications

- The preference of the Host Site is that only Host Site personnel access the plant's control room on a regular basis
  - An appropriate enclosure and control room for the ROTA-CAP™ system's electronics (Personal Computer (PC), HMI, etc.) shall be included in the design of the system
- The Data Acquisition System (DAS) and control system shall be designed such that GTI's home office personnel have real-time, remote access to pertinent data, alarms, and HMI screens
- The Host Site's cybersecurity requirements do not easily facilitate network access by external parties
  - A personal cell network exclusive to GTI shall be considered for connecting to the system, monitoring operations, collecting data, and transmitting data to GTI's home office

# Control System / Communications (Continued)

- Essential software & hardware needed for skid operation includes:
  - Allen-Bradley Controller (ControlLogix 5580 series 1756-L85EP)
  - FactoryTalk HMI latest version (V15 or higher)
  - OPC Communication software (Kepware with OPC & Allen-Bradley Drivers)
  - Data Historization and monitoring software (ParcVIEW)
  - Studio5000 PLC Programming (V37 or higher)
- Each individual skid/module shall have its own control panel supplied with 120VAC power
  - Accommodate components inside the panel (I/O cards, power supplies, relays, etc.) and any other relevant equipment
- The control panels for individual modules will then communicate with the dedicated main panel using ethernet connection.
  - Minimize wiring between the instruments and the main control panel

# Pressure Vessels and Relief Valves

- Pressure vessels
  - Pressure vessels should be designed using ASME codes and stamped
  - Any vessels that meet the U-1 design should have a corresponding report
  - Pressure vessel designs need to be reviewed and approved by GTI prior to fabrication
- Overpressure & Relief valves
  - All relief scenarios should be evaluated during design phase
  - For any protection devices installed on the unit, GTI requests a copy of all the device sizing calculations

# Materials of Construction

- Flue gas is expected to be corrosive to carbon steel (CS). Stainless steel (SS) is recommended for flue gas service
  - The flue gas is wet and contains high concentrations of CO<sub>2</sub> (acidic gas) as well as other contaminants
- Amines pose a corrosion risk to CS materials. CS shall not be used for items in direct contact with amine solvent. Instead, 316 SS is recommended
  - For components not in contact with the working fluid, CS materials may be acceptable
- For elastomers, the use of EPDM is recommended for evaluation
  - Expected to be suitable for this application based on GTI's prior experience.
  - Bidders shall evaluate other elastomer alternatives if EPDM is deemed not to be suitable
- Copper and aluminum are known to react with amines, and therefore the use of copper, copper brazing, or aluminum for items in amine service is prohibited
- Cobalt-based alloys (Stellite) must not be used for hard facing in amine service
- This project is subject to Buy American Requirements (detailed in Part 3 of the RFP)

# Equipment Supplied for Installation

- The Absorber and Regenerator RPBs (D-0102A/B and D-0301) shall be supplied by a separate vendor as specialty Packaged Units
- Selected Bidder to install and integrate into the overall Skid
- The scope of the RPBs and the integration points are defined in the P&IDs and other technical documents (Part 2 of RFP - Appendix 1)
- Rotating Packed Bed Dimensions to be accommodated:
  - Absorber Preliminary Frame Dimensions: 120" X 70" X 80" (L x W x H)
  - Regenerator Preliminary Frame Dimensions: 120" X 60" X 80" (L x W x H)
  - Space for equipment access and installation
- The Regenerator RPB shall be supplied with insulation supports, insulation specifications, and installation instructions
  - Selected Bidder to procure and install the insulation



# Instrumentation Supplied for Installation

- A Fourier-Transform Infrared (FTIR) Spectrometer shall be purchased by GTI and supplied to the Selected Bidder for installation into the Skid
- GTI shall coordinate with the Selected Bidder during detailed design to communicate:
  - Dimensions of the unit to be accommodated
  - Desired installation location in the equipment layout
  - The final gas analysis locations and sampling points based on the equipment layout
    - Preliminary gas analysis locations and sampling points are defined on the P&IDs

# Analytical Equipment

- Gas analyzers shall be procured by the Selected Bidder
  - Defined in the instrument list (Part 2 of RFP - Appendix 1)
- Selected Bidder shall supply and install liquid analysis equipment for amine analysis
  - The analyzers/equipment shall measure amine concentration and carbon dioxide loading
  - The P&IDs indicate manual sample locations for solvent sampling (Part 2 of RFP - Appendix 1)
  - Bidders shall evaluate the implementation of solvent sampling header with selector valves as an option, to streamline the sampling process and minimize the amount of manual sampling required

# Flue Gas Liquid Ring Blower

- As an option in the proposed quote, the Bidder shall evaluate the option of re-using and modifying an existing blower package that GTI has available for use as the Liquid Ring Blower package (K-0102)
- The potential impact on cost and schedule shall be noted in the Bidder's response
- The specifications of the existing unit are supplied in Part 3 of the RFP (Appendix 2)

# Scrubber System (SO<sub>2</sub> Removal)

- GTI's specifications target a residual SO<sub>2</sub> concentration of 10 parts per million by volume (ppmv) or less in the scrubbed flue gas
- Design of the scrubber system shall be completed by the Selected Bidder
- As an option in the proposed quote, the Bidder shall evaluate the impact of targeting a residual SO<sub>2</sub> concentration of 5 ppmv or less
  - The potential impact on cost and schedule shall be noted in the Bidder's response

# Alternate Solvents

- The system specifications provided in the RFP are based on the use of 50 wt.% monoethanolamine (MEA) as the baseline solvent for the carbon capture system
- GTI is also considering the use of CESAR-1 solvent as an alternate, which is comprised of ~27 wt.% 2-Amino-2-methyl-1-propanol, 13 wt.% piperazine, and 60 wt.%
- As an option in the proposed quote, GTI requests that Bidders evaluate the expected impact of the use of CESAR-1 solvent on material selection and equipment design
  - The expected impact on material selection, equipment design, cost, and schedule shall be noted in the Bidder's response

# Chemical & Waste Totes

- Totes are utilized in the system for storage of fresh chemicals and amine waste collection
- Totes shall be located to facilitate personnel access and replacement of totes
- Secondary containment shall be utilized for chemical and waste totes



## Bid Schedule

# High-level Project Summary

Description	Start Date	End Date
Bid Package Release, Review, and Bid Submission	08/15/2025	9/12/2025
Bidder Selection and Contract Negotiation	9/12/2025	10/3/2025 (Estimated, TBD)
Detailed Engineering Design of System	10/3/2025 (Estimated, TBD)	TBD by Bidder
Procurement, Construction, & Factory Acceptance of System	TBD by Bidder	8/31/2026
Skid Delivery, Installation, and Commissioning (no later than)	9/01/2026	2/28/2027





# Questions?