PROPOSAL
for
ORGANIC MATERIALS PROCESSING SERVICES
prepared for
Proposal for Organic Materials Processing
prepared for
Sonoma County Waste Management Authority

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<th>Section</th>
<th>Content</th>
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January 15, 2018

Patrick Carter
Executive Director
Sonoma County Waste Management Agency
2300 County Center Drive, B-100
Santa Rosa, CA 95403

Re. Cover Letter—Request for Proposals for Organic Materials Processing Services

Dear Mr. Carter:

Hitachi Zosen Inova USA LLC (HZI) is pleased to submit the following proposal to the Sonoma County Waste Management Agency (SCWMA or Agency) in response to the Request for Proposal for Organic Materials Processing Services.

The Project Team, for purposes of this RFP, has the capabilities and corporate characteristics described herein. If awarded the project, HZI would finalize negotiations on a land lease/beneficial use agreement with the City of Santa Rosa (City), based on the pre-approval and Letter of Intent to Negotiate, received from the City on December 7th, 2017. HZI also would work diligently with SCWMA to finalize the services agreement.

HZI is pleased to present a Project Team that represents the most experienced and talented firms in design, engineering, and construction for the delivery of an organics processing facility. Combined, this group represents the years of experience that ensure a successful project from start to finish and beyond. The Project Team consists of Hitachi Zosen Inova USA, LLC, Pacific Organics and GHD. With this Project Team in place to apply their skills and knowledge to every aspect of the proposed facility, from conception through to operation, the Project Team ensures an on-time, on-budget project that fulfills all the requirements and expectations of SCWMA.

Furthermore it should be noted that HZI is currently developing and constructing an almost identical project in cooperation with the San Luis Obispo County Integrated Waste Management Authority (IWMA) and the local waste hauler, Waste Connections in San Luis Obispo, CA and will be able to utilize the same experienced team and lessons learned to ensure the proper success of the SCWMA Organic Materials Processing project.

HZI is a global technology leader for energy and material recovery from municipal solid waste (MSW), refuse derived fuel and organic waste. HZI acts as engineering, procurement and construction (EPC) contractor, delivering complete, turnkey plants. HZI’s solutions are based on efficient and environmentally sound in-house technology, are thoroughly tested, can be flexibly adapted to user requirements and cover the entire plant life cycle. HZI’s portfolio is rounded off with strong operations and maintenance (O&M) capabilities. HZI’s customers range from municipalities, experienced waste management companies to up and coming developers in new markets worldwide. With HZI’s
Kompogas® Technology in use in over 80 facilities all over the world, HZI offers more than 25 years of experience in this most proven and reliable process as a global market leader.

HZI has experience in developing and servicing projects such as the County’s solicitation, utilizing the Kompogas Anaerobic Digestion technology. HZI will include all of the relevant disciplines such as the role as complete EPC provider (develop, design, engineer, procure and construct), owner and operator of the proposed facility.

Communications regarding this response should be directed to:

Thomas Gratz - Sales Manager US
Hitachi Zosen Inova, USA LLC
3740 Davinci Court, Suite 250
Norcross, GA 30092
Phone: 630-862-1176
E-mail: thomas.gratz@hz-inova.com

As requested in the RFP, the Project Team wishes to confirm the following:

- The project partners certify that they have examined understood and agreed to the draft agreement except as otherwise stated in the RFP submission.
- The project partners warrant that the requirements of the Agreement as described in the RFP document, its enclosures, and all addenda, by listing all addenda and dates received, and the eight documents as listed on page 11 of the RFP have been thoroughly reviewed and the project team has conducted all due diligence necessary to confirm material facts upon which the proposal is based.
- The project partners acknowledge the validity of the proposal contents including proposed tipping and pricing for a period of 260 days.
- The project partners acknowledge that the project team will enter into the Agreement with SCWMA if selected as the Agency’s service provider.
- The project team has appended to the cover letter, the following:
  - Proposal Bond
  - Performance Bond Commitment Letter
  - Receipt of Signed Addenda
  - Table of Contents
  - Executive Summary.

Should the SCWMA or any other stakeholders have any questions or have interest to visit our San Luis Obispo facility, to better understand our approach, please let us know.

Sincerely,

Markus Stangl
CEO
Hitachi Zosen Inova USA, LLC

Mike Canova
Treasurer & Secretary
Hitachi Zosen Inova USA, LLC
PERFORMANCE BOND

COMMITMENT LETTER
RECEIPT of SIGNED ADDENDA
Sonoma County Waste Management Agency
Request for Proposals for Organic Materials Processing Services
Addendum No. 1

THEREFORE: All Applicants are required to sign this page of this Addendum No. 1, and shall submit a signed copy of this page with their Proposal package.

Thank you for your participation,

Sonoma County Waste Management Agency
Patrick Carter
Executive Director

ADDENDUM NO. 1       DATE: July 7, 2017

COMPANY / AGENCY NAME:  Hitachi Zosen Inova USA, LLC
COMPANY ADDRESS:  3780 Pavnic Ct, Ste 250, Norcross, GA 30092
REPRESENTATIVE’S NAME:  Thomas Gratz
SIGNATURE:  
DATE:  1-12-19
All Applicants are required to sign this page of this Addendum No. 2, and shall submit a signed copy of this page with their Proposal package.

Thank you for your participation,

Sonoma County Waste Management Agency
Patrick Carter
Executive Director

ADDENDUM NO. 2       DATE: July 27, 2017
COMPANY / AGENCY NAME: Hitachi Zosen Inova USA, LLC
COMPANY ADDRESS: 3740 Davinci Ct, Ste 250, Novacross, CA 30092
REPRESENTATIVE’S NAME: Thomas Gratz
SIGNATURE: [Signature]
DATE: 1-12-18
All Applicants are required to sign this page of this Addendum No. 3, and shall submit a signed copy of this page with their Proposal package.

Thank you for your participation,

Sonoma County Waste Management Agency
Patrick Carter
Executive Director

ADDENDUM NO. 3       DATE: September 22, 2017

COMPANY / AGENCY NAME:  Hitachi Zosen Inova USA, LLC
COMPANY ADDRESS:        3740 Parmer Ct, Ste 250, Novato, CA 94949
REPRESENTATIVE’S NAME:  Thomas Gratz
SIGNATURE:              [Signature]
DATE:                  1-12-18
Addendum No. 4

All Applicants are required to sign this page of this Addendum No. 4, and shall submit a signed copy of this page with their Proposal package.

Thank you for your participation,

Sonoma County Waste Management Agency
Patrick Carter
Executive Director

ADDENDUM NO. 4  DATE: November 21, 2017

COMPANY / AGENCY NAME: Hitachi Zosen Inova USA, LLC

COMPANY ADDRESS: 3740 Pauwai Ct, Ste 250, Novato, CA 94949

REPRESENTATIVE’S NAME: Thomas F. Gralz

SIGNATURE: 

DATE: 1-12-18
Executive Summary

Hitachi Zosen Inova, U.S.A. LLC (HZI) is honored to participate in the SCWMA Request for Proposal for Organic Materials Processing Services. With HZI extensive experience in developing and executing Waste to Energy and Anaerobic Digestion projects worldwide, we can offer SCWMA a proven, long term solution for processing organics materials, achieving the County’s recycling and diversion goals, producing renewable energy and creating valuable soil amendments for local use. With over 80 years of experience we are a trusted partner to our clients and stakeholders all over the world.

Based on HZI’s recent experience with developing, permitting and constructing a similar facility in San Luis Obispo, CA, we can lead this project to successful completion and offer options to SCWMA that are economically beneficial, environmentally sound and will be a benefit to the rate payers of the region.

HZI is a global technology leader for energy and material recovery from municipal solid waste (MSW), refuse derived fuel and organic waste. HZI acts as engineering, procurement and construction (EPC) contractor, delivering complete, turnkey plants. HZI’s solutions are based on efficient and environmentally sound in-house technology, are thoroughly tested, can be flexibly adapted to user requirements and cover the entire plant life cycle. HZI’s portfolio is rounded off with strong operations and maintenance (O&M) capabilities.

HZI’s customers range from municipalities, experienced waste management companies to up and coming developers in markets worldwide. With HZI’s Kompogas® Technology in use in over 80 facilities all over the world, we offer more than 25 years of experience in this most proven and reliable process as a global market leader.

HZI has experience in developing and servicing projects such as the SCWMA’s solicitation, utilizing the Kompogas® Anaerobic Digestion technology and can include all the relevant disciplines from finance, complete EPC provider (develop, design, engineer, procure and construct) to operation and maintenance.

The patented Kompogas® high solids anaerobic digestion process is based on continuous dry fermentation of organic feedstock using a horizontal plug-flow digester, operated at thermophilic temperatures. This proven process ensures that organic substrate is fully converted to biogas and that digestate is completely sanitized and free of pathogens.

With HZI’s North American Headquarters located in Norcross, GA and in-state locations in San Luis Obispo, CA and Sacramento, CA we can offer a thorough understanding of the California marketplace and legislative environment, paving the way for a smooth and on-time delivery of the proposed long term organics management solution.

Our operations support team located in San Luis Obispo, CA will ensure trouble free and continuous operation and provide maintenance for the facility.
HZI, as part of the global Hitachi Zosen Corporation conglomerate, brings the necessary financial strength and the financial qualifications to reliably support the SCWMA project during the development, construction and operations phase and perform the work described in the RFP.

Proposal:

HZI proposes a long term solution (minimum 20 years) based on a 70,000 tons per year Kompogas High Solids Dry Anaerobic Digestion facility, fully enclosed and odor controlled and plans to utilize the produced Biogas in the CHPs of the nearby Santa Rosa Waste Water Treatment plant.

The proposed solution is based on $89.- USD per ton processing rate for the organic material. Adjustments to the rate will be considered as outlined in Exhibit A of the Long Term SCWMA Agreement for Organic Materials Processing Services.

HZI has included a compost giveaway program in line with SCWMA’s request in the RFP. HZI will make available three hundred and fifty (350) cubic yards of compost twice per year at no additional cost to the SCWMA or the ratepayers for use by residents and Member Agency(ies), in parks and facility landscaping.

HZI has foreseen a training and education center as part of the overall facility to invite schools, associations and other interested parties to tour the site and learn about the diversion of organic material from landfill through Anaerobic Digestion and the subsequent production of Renewable Energy and Green House Gas reduction.

Proposed Tentative Time Schedule:

Key Milestones and the proposed tentative schedule of the project are based on an expected project award date with Notice to Proceed (NTP) on July 2\textsuperscript{nd}, 2018.

Depending on the permitting process and required approvals, a start of construction date is anticipated by August 1\textsuperscript{st}, 2019.

Expected begin of hot commissioning with start of feedstock receiving is expected on December 3\textsuperscript{rd}, 2020 with Commercial Operation starting on March 1\textsuperscript{st}, 2021.

Thank you for allowing HZI to provide Sonoma County Waste Management Authority the enclosed proposal to their RFP.

Sincerely,

Markus Stangl, CEO
2. Qualifications

2.1 Team Organizational Chart
Hitachi Zosen Inova, U.S.A. LLC (HZI) will be the project team lead. HZI has extensive experience to lead this project to a very successful completion and offer options to SCWMA that are economically beneficial, environmentally sound and will be a benefit to the rate payers of the region. It will work together along with the other members of the Project Team and additional vendors as needed to execute this project.

It shall be stated at this point that HZI has in the past year successfully permitted and commenced construction of an almost identical organics processing facility in San Luis Obispo County, CA (SLO Project). The SLO project is being executed in close collaboration with the local San Luis Obispo County Integrated Waste Management Authority (IWMA) and local waste haulers. All necessary permits have been granted and the project has been awarded grant funding from CalRecycle and the California Energy Commission.

All members of the HZI project team as proposed for this submission have been integrally involved in the SLO project and will be assigned to the SCWMA Organics Management Project in case of award.

2.2 Key Staff Persons
2.2.1 Hitachi Zosen Inova USA, LLC

Hitachi Zosen Inova is a global technology leader for energy and material recovery from municipal solid waste (MSW), refuse derived fuel and organic waste. HZI acts as engineering, procurement and construction (EPC) contractor, delivering complete, turnkey plants. HZI’s solutions are based on efficient and environmentally sound in-house technology, are thoroughly tested, can be flexibly adapted to user requirements and cover the entire plant life cycle. HZI’s portfolio is rounded off with strong operations and maintenance (O&M) capabilities, as required. HZI’s customers range from municipalities, experienced waste management companies to up and coming developers in new markets worldwide. With HZI’s Kompogas® Technology in use in over 80 facilities all over the world, HZI offers more than 25 years of experience in this most proven and reliable process as a global market leader.

HZI has experience in developing and servicing projects such as the County’s solicitation, utilizing the Kompogas Anaerobic Digestion technology can include some or all of the relevant disciplines such as a
role as complete EPC provider (develop, design, engineer, procure and construct) to operation and maintenance provider.

2.2.1.1 **Staff Responsibilities**

**MARKUS STANGL** is HZI’s CEO and is responsible for all day to day tasks and general oversight of the US operations. He will be directly involved in all decisions related to the development and execution for this project.

**THOMAS GRATZ** is the Sales Manager US and with experience in developing similar projects, Mr. Gratz will support and coordinate the team’s efforts to ensure the project’s success.

**WILLIAM SKINNER** as Director of Operations & Maintenance AD will be actively involved in all permitting and environmental work and will work closely with the City and SCWMA through the rezoning and permitting process. Mr. Skinner will also head up all matters related to the Conditional Use Permit, California Environmental Quality Act (CEQA), CalRecycle permits, air permits and will work closely with the sub-consultants identified here. He also will be the lead with all building permits as the project progresses.

**MARKUS BURRI** is a Senior Process Engineer and has been involved in the biogas industry with Kompogas for over 5 years. His core responsibilities have been Anaerobic Digestion plant design, engineering and commissioning. In his current position as Proposal Manager for HZI he leads the design and cost estimate for Anaerobic Digestion plants.

**JOE SZCZEJKOWSKI** is the Director of Engineering for HZI and will lead his team members in the design and implementation of the HZI Kompogas facility. Mr. Szczepkowski is currently completing the engineering on the HZI Kompogas facility located in San Luis Obispo, so is very familiar with California requirements; seismic, fire, and construction. This most recent experience further lends itself to a successful project implementation and completion in Santa Rosa.

**STEPHAN KOHLER** as Project Manager will work directly with Mr. Stangl in the implementation of the project schedule as it relates to construction and coordination following all permitting and environmental activities.

**SEAN HONEGGER** in his position of Director of Civil & Construction will be in charge of all construction activities as the project progresses. Mr. Honegger brings years of construction experience to the project and has built many projects if similar complexity and size in California.

**MIKE CANOVA** is the Secretary/Treasurer for HZI, and is responsible for all Human Resources for the company. Mr. Canova will ensure all required bonding is in place, necessary financial requests/requirements are taken care of in a timely manner and any other matters related to insurance or financial posting are handled expeditiously.
2.3 References

As Appendix C, HZI is submitting their complete worldwide reference listing of all Kompogas Anaerobic Digestion projects. Detailed references are as follows.

2.3.1 REFERENCE #1 – SAN LUIS OBISPO COUNTY AD PROJECT

Reference #1 (San Luis Obispo) is still under construction, all of the permits have been obtained, demonstrating the ability to permit this project under similar regulatory conditions. See below for more details of these projects.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>San Luis Obispo County Anaerobic Digestion Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>4338 Old Santa Fe Road</td>
</tr>
<tr>
<td></td>
<td>San Luis Obispo, CA</td>
</tr>
<tr>
<td>Owner/Operator</td>
<td>HZIU Kompogas SLO, Inc.</td>
</tr>
<tr>
<td>Status</td>
<td>Under Construction, Expected startup Q 1 / 2018</td>
</tr>
<tr>
<td>Project Name</td>
<td>San Luis Obispo County Anaerobic Digestion Project</td>
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### Description of Services

The facility will process up to 36,500 tons of Source Separated Organics and Green Waste from the county’s residential collection program as well as Fats, Oils, and Greases (FOG) utilizing the Kompogas High Solids Anaerobic Digestion (HSAD) technology. The resulting biogas will be utilized in an onsite Combines Heat and Power (CHP) unit, to produce renewable energy in form of electricity that will be exported to the utility power grid.

### Development

- HZI has developed this project on a Finance, Design, Build, Own, Operate (FDBOO) basis
- Facility utilizes the proven HZI own Kompogas High Solids Technology
- HZI has negotiated feedstock contract with the local waste hauler to secure a long term feedstock agreement
- HZI in conjunction with Oasis Associates has applied for and successfully obtained all necessary permits for construction and operation
- HZI has negotiated and secured a long term Power Purchase Agreement with the Pacific Gas and Electric
- The facility has been qualified for the 30 % Investment Tax Credit program
- HZI in conjunction with The Grant Farm has applied for and successfully been awarded two grants from CalRecycle and CEC EPIC totaling 8 MM USD.
- HZI has secured both, equity and debt financing for the project

### Description of Facility

**Facility Specifications:**

- **Feedstock:** Source separated Organics and Green Waste from residential collection program, commercial food waste collection and FOG.
- **Proven Kompogas High Solids Anaerobic Digestion Technology**
- **Design Capacity:** 36,500 tons/year **Energy Production:** 835 kW installed capacity
- **Soil Amendment:** 13,000 tons/year to local agriculture
- **Pre-treatment of feedstock via slow moving shredder, mechanical separation via star sieve and metals removal.**
- **Thermophilic process technology, ensuring pathogen free digestate by products**
- Digestate resulting from the anaerobic digestion process is dewatered via HZI’s own KOMPRESS dewatering technology and separated into solids and liquid.
- **Solid digestate will be aerated in specially designed, indoor composting boxes to control**
<table>
<thead>
<tr>
<th>Project Name</th>
<th>San Luis Obispo County Anaerobic Digestion Project</th>
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<tbody>
<tr>
<td></td>
<td>odors and marketed as nutrient rich soil amendment to local agriculture.</td>
</tr>
<tr>
<td></td>
<td>Liquid digestate will be marketed as nutrient rich liquid soil amendment for local agriculture.</td>
</tr>
<tr>
<td></td>
<td>Facility control, monitoring, and performance tracking is accomplished via a supervisory control and data acquisition (SCADA) system.</td>
</tr>
<tr>
<td>Construction</td>
<td>Construction began December 2016, expected substantial completion and startup in April 2018</td>
</tr>
<tr>
<td>Operations</td>
<td>HZIU Kompogas SLO INC, a wholly owned subsidiary of HZI, will own and operate the facility based on the extensive experience from operations of European facilities. The facility will be staffed by three full-time employees.</td>
</tr>
<tr>
<td>Permitting &amp; Regulatory Compliance</td>
<td>Successfully obtained all necessary environmental, building, air and operating permits and approvals from local, regional and state authorities.</td>
</tr>
<tr>
<td>Odor Control</td>
<td>All processing at the facility will be enclosed within negative air pressure process buildings. Odor control will be handled by a state of the art air handling system with approximately 4 air-changes per hour. The digester itself is a completely closed system, as the process operates under anaerobic conditions, i.e. in the absence of oxygen. Therefore, no emissions are released into the surrounding environment by the digestion plant. Waste air collected from the process buildings is moistened with water by means of a special nozzle system operated with compressed air. Reaching humidity levels of 95% guarantees an optimal operation of the subsequent biofilter, requiring minimal maintenance.</td>
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### 2.3.2 REFERENCE #2 – WINTERTHUR AD PROJECT

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Winterthur AD Project</th>
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<tbody>
<tr>
<td>Location</td>
<td>City of Winterthur Switzerland</td>
</tr>
<tr>
<td>Owner/Operator</td>
<td>Kompogas Winterthur AG</td>
</tr>
<tr>
<td>Status</td>
<td>Operating since 2014</td>
</tr>
</tbody>
</table>
### Description of Services

The facility processes 23,000 metric tonnes of Source Separated Organics and Green Waste from the City of Winterthur’s residential “Organics Bin” collection program. The plant utilizes the Kompogas High Solids Anaerobic Digestion (HSAD) technology with a PF 1500 digester. The resulting biogas is upgraded utilizing the HZI own BioMethan upgrading technology and the resulting Renewable Natural Gas (RNG) is exported to the utility gas grid.

### Development

- HZI has been an integral part in development of this facility, being heavily involved in permitting and acting as planning, construction and commissioning entity of the system.
- Facility utilizes one PF 1500 Kompogas Digester based on the proven HZI owned High Solids Technology
- Resulting biogas is upgraded to Renewable Natural Gas utilizing the HZI BioMethan Amine Scrubbing technology

### Description of Facility

**Facility specifications:**
- Feedstock: Source Separated Organics and Green Waste from residential collection program
- Proven Kompogas High Solids Anaerobic Digestion Technology
- Design Capacity: 23,000 tonnes/year
- Energy Production: 2,100,000 Nm3 of biogas per year
- RNG Exported to the grid: 1,050,000 Nm3 per year
- Compost: 10,000 tonnes/year to local agriculture
- Liquid Fertilizer: 10,000 tonnes/year to local agriculture
- Pre-treatment of feedstock via slow moving shredder, mechanical separation via star sieve and metals removal.
- Thermophilic process technology, ensuring pathogen free digestate by product
- Digestate resulting from the anaerobic digestion process is dewatered via HZIU’s own KOMPRESS dewatering technology and separated into solids and liquid.
- Solid digestate is aerated in aeration hall to control odors and marketed as nutrient rich soil amendment to local agriculture
- Liquid digestate is marketed as nutrient rich liquid soil amendment for local agriculture

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Project Name: Winterthur AD Project

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<table>
<thead>
<tr>
<th>Description of Services</th>
<th>Facility specifications:</th>
</tr>
</thead>
</table>
| The facility processes 23,000 metric tonnes of Source Separated Organics and Green Waste from the City of Winterthur’s residential “Organics Bin” collection program. The plant utilizes the Kompogas High Solids Anaerobic Digestion (HSAD) technology with a PF 1500 digester. The resulting biogas is upgraded utilizing the HZI own BioMethan upgrading technology and the resulting Renewable Natural Gas (RNG) is exported to the utility gas grid. | Feedstock: Source Separated Organics and Green Waste from residential collection program  
Proven Kompogas High Solids Anaerobic Digestion Technology  
Design Capacity: 23,000 tonnes/year  
Energy Production: 2,100,000 Nm3 of biogas per year  
RNG Exported to the grid: 1,050,000 Nm3 per year  
Compost: 10,000 tonnes/year to local agriculture  
Liquid Fertilizer: 10,000 tonnes/year to local agriculture  
Pre-treatment of feedstock via slow moving shredder, mechanical separation via star sieve and metals removal.  
Thermophilic process technology, ensuring pathogen free digestate by product  
Digestate resulting from the anaerobic digestion process is dewatered via HZIU’s own KOMPRESS dewatering technology and separated into solids and liquid.  
Solid digestate is aerated in aeration hall to control odors and marketed as nutrient rich soil amendment to local agriculture.  
Liquid digestate is marketed as nutrient rich liquid soil amendment for local agriculture. |
### Project Name: Winterthur AD Project

- Facility control, monitoring, and performance tracking is accomplished via a supervisory control and data acquisition (SCADA) system.

### Construction
HZI acted as EPC for turnkey system with commissioning in early 2014

### Operations
Kompogas Winterthur AG, is operating the facility based on the extensive experience from operations of European facilities. The facility is staffed by four fulltime employees.

### Permitting & Regulatory Compliance
HZI acted as support to Kompogas Winterthur AG in obtaining all necessary environmental, building, air and operating permits and approvals from local, regional and national authorities.

### Odor Control
All processing at the facility are enclosed within the negative air pressure process building. Odor control is handled by a state of the art air handling system with approximately 6 to 8 air-changes per hour. The digester itself is a completely closed system, as the process operates under anaerobic conditions, i.e. in the absence of oxygen. Therefore, no emissions are released into the surrounding environment by the digestion plant. Waste air collected from the process buildings is moistened with water by means of a special nozzle system operated with compressed air. Reaching humidity levels of 95% guarantees an optimal operation of the subsequent biofilter, requiring minimal maintenance.

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### 2.3.3 REFERENCE #3 – HOEGBYTORP AD PROJECT

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Hoegbytorp AD Project</th>
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<tbody>
<tr>
<td>Location</td>
<td>Hoegbytorp Sweden</td>
</tr>
<tr>
<td>Owner/Operator</td>
<td>E.ON Biofor Sverige AB</td>
</tr>
<tr>
<td>Status</td>
<td>Currently under construction, operations to commence Q1 2019</td>
</tr>
</tbody>
</table>
As part of the implementation of Sweden’s new energy policy, HZI is building Scandinavia’s first Kompogas facility near Stockholm, Sweden. The installation with scheduled completion of construction in early 2019 will take organic waste from the local area and convert it into biogas and high grade compost, making a valuable contribution to efforts to harness renewable energy resources and close the material cycle.

**Development**

- HZI has been an integral part in development of this facility, being heavily involved in permitting and acting as planning, construction and commissioning entity of the system.
- Facility utilizes three PF 2100 Kompogas Digesters based on the proven HZI owned High Solids Technology
- Resulting biogas is upgraded to Renewable Natural Gas utilizing the HZI BioMethan Amine Scrubbing technology

**Description of Facility**

*Facility specifications:*

- Feedstock: Source Separated Organics and Green Waste from residential collection program
- Proven Kompogas High Solids Anaerobic Digestion Technology
- Design Capacity: 83,000 tonnes/year
- Energy Production: 12,380,000 Nm3 of biogas per year
- RNG Exported to the grid: 6,800,000 Nm3 per year
- Compost: 6,500 tonnes/year to local agriculture
- Liquid Fertilizer: 52,400 tonnes/year to local agriculture
- Pre-treatment of feedstock via slow moving shredder, mechanical separation via star sieve and metals removal.
- Thermophilic process technology, ensuring pathogen free digestate by product
- Digestate resulting from the anaerobic digestion process is dewatered via HZI’s own KOMPRESS dewatering technology and separated into solids and liquid.
- Solid digestate is aerated in aeration hall to control odors and marketed as nutrient rich soil amendment to local agriculture.
- Liquid digestate is marketed as nutrient rich liquid soil amendment for local agriculture.
- Facility control, monitoring, and performance tracking is accomplished via a supervisory control and data acquisition (SCADA) system.

**Construction**

HZI acted as EPC for turnkey system with commissioning in early 2019

**Operations**

HZI will support the owner/operator E.ON Biofor Sverige AB based on the extensive
Experience from operations of European facilities.

**Permitting & Regulatory Compliance**

HZI acted as support to E.OB Biofor Sverige AB in obtaining all necessary environmental, building, air and operating permits and approvals from local, regional and national authorities.

**Odor Control**

All processing at the facility are enclosed within the negative air pressure process building. Odor control is handled by a state of the art air handling system with approximately 6 to 8 air-changes per hour. The digester itself is a completely closed system, as the process operates under anaerobic conditions, i.e. in the absence of oxygen. Therefore, no emissions are released into the surrounding environment by the digestion plant. Waste air collected from the process buildings is moistened with water by means of a special nozzle system operated with compressed air. Reaching humidity levels of 95% guarantees an optimal operation of the subsequent biofilter, requiring minimal maintenance. In order to reduce odor and ammonia emissions an acid scrubber is installed upstream the biofilter.

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### 2.3.4 REFERENCE #4 – VETROZ AD PROJECT

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Vetroz AD Project</th>
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<tbody>
<tr>
<td>Location</td>
<td>Vetroz, Switzerland</td>
</tr>
<tr>
<td>Owner/Operator</td>
<td>GazEl SA</td>
</tr>
<tr>
<td>Status</td>
<td>Operating since 2014</td>
</tr>
</tbody>
</table>
### Project Name

**Vetroz AD Project**

### Description of Services

The facility processes 20,000 metric tonnes of Source Separated Organics and Green Waste from the City of Vetroz’ and surrounding municipalities residential “Organics Bin” collection programs. The plant utilizes the Kompogas High Solids Anaerobic Digestion (HSAD) technology with a PF 1300 digester. The resulting biogas is upgraded utilizing the HZI own BioMethan upgrading technology and the resulting Renewable Natural Gas (RNG) is exported to the utility gas grid.

### Development

- HZI has been an integral part in development of this facility, being heavily involved in permitting and acting as planning, construction and commissioning entity of the system.
- Facility utilizes one PF 1300 Kompogas Digester based on the proven HZI owned High Solids Technology
- Resulting biogas is upgraded to Renewable Natural Gas utilizing the HZI BioMethan Amine Scrubbing technology

### Description of Facility

**Facility specifications:**

- Feedstock: Source Separated Organics and Green Waste from residential collection program
- Proven Kompogas High Solids Anaerobic Digestion Technology
- Design Capacity: 20,000 tonnes/year
- Energy Production: 1,900,000 Nm3 of biogas per year
- RNG Exported to the grid: 1,050,000 Nm3 per year
- Compost: 10,000 tonnes/year to local agriculture
- Liquid Fertilizer: 10,000 tonnes/year to local agriculture
- Pre-treatment of feedstock via slow moving shredder, mechanical separation via star sieve and metals removal.
- Thermophilic process technology, ensuring pathogen free digestate by product
<table>
<thead>
<tr>
<th>Project Name</th>
<th>Vetroz AD Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Digestate resulting from the anaerobic digestion process is dewatered via HZI’s own KOMPRESS dewatering technology and separated into solids and liquid.</td>
</tr>
<tr>
<td></td>
<td>• Solid digestate is aerated in aeration hall to control odors and marketed as nutrient rich soil amendment to local agriculture.</td>
</tr>
<tr>
<td></td>
<td>• Liquid digestate is marketed as nutrient rich liquid soil amendment for local agriculture.</td>
</tr>
<tr>
<td></td>
<td>• Facility control, monitoring, and performance tracking is accomplished via a supervisory control and data acquisition (SCADA) system.</td>
</tr>
</tbody>
</table>

| Construction      | HZI acted as EPC for turnkey system with commissioning in early 2014                                                                                                                                                 |

| Operations        | GasEL SA, is operating the facility with the support of HZI and their extensive experience from operations of European facilities. The facility is staffed by four fulltime employees. |

| Permitting & Regulatory Compliance | HZI acted EPC to GasEL SA and was integrally involved in obtaining all necessary environmental, building, air and operating permits and approvals from local, regional and national authorities. |

| Odor Control      | All processing at the facility are enclosed within the negative air pressure process building. Odor control is handled by a state of the art air handling system with approximately 6 to 8 air-changes per hour. The digester itself is a completely closed system, as the process operates under anaerobic conditions, i.e. in the absence of oxygen. Therefore, no emissions are released into the surrounding environment by the digestion plant. Waste air collected from the process buildings is moistened with water by means of a special nozzle system operated with compressed air. Reaching humidity levels of 95% guarantees an optimal operation of the subsequent biofilter, requiring minimal maintenance. |

### 2.4 Conflict of Interest Statement

HZI warrants that no gratuities have been or will be offered or given by the Project Team, or any agent or representative of the Project Team to any officer or employee of SCWMA or any participant in the selection of a proposal to furnish the services described in the RFP in order to secure a favorable treatment regarding the evaluation, scoring and Agreement award process.

### 2.5 Litigation notice of Violation History

HZI does not have a history for the last five years of any claims, settlements, arbitrations, litigation proceedings, and civil actions involving $100,000 or more and all criminal actions in which the companies, parent companies subsidiaries, all partners or principals were involved.
HZI does not have any current or threatened legal actions in California against it, their parent companies, subsidiaries, all partners, principals, or joint venture companies by a governmental entity contracting with HZI or its parent company for services related to solid waste management, or against such government entity by HZI or its parent companies or joint venture companies.

HZI does not have any notice of violations and/or enforcement actions taken against it during the last 5 years by any regulatory agency such as, but not limited to, the United States Environmental Protection Agency, Air Quality Management District, a Local Enforcement Agency under the California Integrated Waste Management Act, or Cal/OSHA. HZI has not had any permit, franchise, license, entitlement or business licenses revoked or suspended in the last 5 years.

HZI does not have any liquidated damages, administrative finds, charges or assessments that total $50,000 or greater in any one calendar year during the last 5 years that have been paid by HZI to a public agency as a result of solid waste management services provided by HZI.

HZI does not have any claims against a bid, proposal, or performance bond and the results and failure to receive a bid, proposal or performance bond or any contractual defaults or termination in the last 15 years.

2.6 Supporting Team

To ensure the success of the proposed project, HZI has assembled a Project Team of experienced and qualified firms that include strong project management, engineering, construction, environmental and permitting experience while complementing the team with waste haulers with logistical expertise and knowledge of the local market, as well as innovative food waste processing, digestate management and biogas utilization technology firms. The team has a productive working relationship based on previous experience and is committed to collaborating with the SCWMA to bring the proposed project to a successful outcome. HZI will also involve other vendors as required throughout the project.

2.6.1 GHD

GHD is one of the world’s leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. GHD provides engineering, environmental and construction services to private and public sector clients.

Established in 1928 and privately owned by our people, GHD operates across five continents—Asia, Australia, Europe, and North and South America—and the Pacific region. GHD employs more than 8,500 people in over 300 offices to deliver projects with high standards of safety, quality, and ethics across the entire asset value chain. Driven by a client service led culture, we connect the knowledge, skill, and
experience of our people with innovative practices, technical capabilities, and robust systems to create lasting community benefits.

Our experience in deploying projects of this scale at the municipal level will bring significant benefits to the City and SCWMA from technical and management perspectives. Understanding suitable options, service delivery models, and regulatory and market risks requires hands on knowledge of these facilities and involvement in the development cycle on a day to day basis. Of particular note - within the past 8 years, GHD has been involved in the development of the following organics facilities: City of Toronto’s Disco Road Organics Processing Facility (Ontario, Canada); City of Toronto’s Dufferin Organics Processing Facility expansion (Ontario, Canada); City of Guelph’s Organic Waste Processing Facility (Ontario, Canada); Orgaworld’s composting facilities in London and Ottawa (Ontario, Canada); the Lystek Organic Processing Facility in Fairfield California; enclosed composting facility in Mariposa County California; dozens of landfill, renewable energy and CNG projects throughout the Americas; and many other projects involving alternative energy from waste.

2.6.1.1 Key Staff

**Pat Collins** is a Senior Project Manager with over 30 years of professional experience. Throughout her career, Pat has been extensively involved in public communications and interaction with elected decision makers. She specializes in environmental planning and documentation, environmental permitting, water supply and wastewater planning, and project management. She has substantial experience in northern California with CEQA and NEPA documents for controversial projects, including waste management, wastewater treatment and discharge, recycled water, water supply and distribution, Stormwater and flood control facilities, and groundwater development. Pat is particularly skilled at integrating CEQA and permitting requirements into engineering design and construction documents.

**Kenneth Mierzwa** is an experienced project manager and wildlife biologist specializing in endangered species, wildlife surveys, construction monitoring, and environmental policy. He has more than 26 years of experience throughout the U.S., and especially in Northern California, the Midwest, and the Northeast. Mr. Mierzwa is especially knowledgeable on amphibians and reptiles, and also has extensive experience with mammals, fishes, selected invertebrates, and landscape-level conservation biology including habitat assessment. Mr. Mierzwa is also experienced with wetlands permitting and restoration including development of conceptual mitigation and preparation of final mitigation and monitoring plans. He has prepared biological assessments and habitat conservation plans, and designed of related field studies. He has also conducted biotic inventories, pre-construction surveys, construction monitoring, and designed post-project long term monitoring protocols for construction projects. He is experienced in the preparation of National Environmental Protection Act (NEPA)/ CEQA environmental impact studies.

**Tej Gidda** is a Principal with GHD with more than 12 years of industry experience. His main focus is the investigation of alternative waste processing technologies, including aerobic treatment of source-separated organics (SSO) and anaerobic digestion, energy-from-waste including gasification, mixed waste processing and mechanical biological treatment, and Biosolids management. Tej is also an expert in chemical and biological odor abatement systems as related to waste processing facilities, and has been involved for a significant period of time with biogas to energy facilities. Tej’s work includes the
design, construction, and commissioning of municipal and private waste management facilities, as well as work in greenhouse gas management and emission reduction trading.

**KYLE MUFFELS** has 10 years of experience with GHD commencing after his completion of a B.A.Sc. degree in Environmental (Civil) Engineering from the University of Waterloo. Kyle has worked extensively in the waste management field with a specific focus on civil, mechanical, and energy conservation design relating to landfill, industrial facilities and related processes. Kyle regularly completes a range of services including internal project management of various design disciplines, municipal and federal permitting, construction management, contract administration, and detailed design engineering services involving site development and process.

**DAGAN SHORT** has over 18 years of experience in a variety of civil and environmental engineering projects, encompassing a specific emphasis in construction management. Familiar with the design process, Mr. Short has been involved with all stages of engineering design, from traditional civil engineering projects to developing integrated software platforms, and possesses a strong numerical modeling background in hydrologic and hydraulic forecasting, contaminant transport and fate analyses, geotechnical analyses, and GIS map production. His construction experience covers airports in three states and has been focused on soil/groundwater remediation, wetland mitigation construction, commercial development and infrastructure, and solid and hazardous waste landfills.

**RICK GUGGIANA** is a licensed electrical engineer with over 29 years of experience in the electrical, controls, and instrumentation fields. He has extensive experience in site and building power, medium voltage distribution, lighting, motor controls, electrical system studies, Supervisory Control and Data Acquisition (SCADA) systems, and instrumentation. His background includes a wide spectrum of clients from commercial to industrial to government. Rick was involved in the design and construction management of a 115-kv substation project which won a merit award from the Consulting Engineers and Land Surveyors of California (CELSOC).

**TED WILTON** is a Principal at GHD with over 30 years of experience consulting with public agencies on water resources projects. He has extensive planning and project implementation experience across the water cycle including water supply, wastewater collection, water reuse, flood protection, utility master planning, and asset management. Serving as GHD's Integrated Water Management Service Line Leader for North America, Ted is networked across GHD's global water community sharing industry developments and leveraging technical resources to address specific client needs.

Detailed CVs for the GHD personnel are found in Exhibit B. Additional team members would be brought into the Project depending on the services that were required to support the development, construction, commissioning and operation of the facility.

### 2.6.1.2 Responsibilities

GHD would provide support during the permitting process including CEQA and mitigation measures for the California Tiger Salamander. GHD would also utilize its experience in design and construction of a number of organic waste facilities to support HZI as required. GHD would also provide balance of plant engineering services based on feedback from the Project Team.
2.6.2 Wildlife Research Associates/ Jane Valerius Environmental Consulting

Wildlife Research Associates (WRA) is a small biological consulting firm located in Sonoma County. WRA provides focused surveys for special status wildlife species, habitat assessments, due diligence surveys, habitat enhancement, mitigation design and monitoring, construction monitoring, scientific field research for species management and related services.

Jane Valerius Environmental Consulting is a one-person woman-owned firm that has been in business for 19 years as a sole proprietorship in California. Jane works closely with other independent consultants including WRA and other botanists. Ms. Valerius has extensive experience conducting botanical surveys and wetland delineations and preparing Section 404, Section 401 and Section 1600 permits for the USACE, Regional Water Quality Control Board (RWQCB) and California Department of Fish & Game, respectively.

2.6.2.1 Key Staff

TRISH TATARIAN has a Master of Science degree in Ecology and is a general ecologist experienced with a wide range of taxa. She has conducted several multi-season research projects and also prepares biological assessments, site assessments, and conducts construction monitoring for a wide variety of species.

JANE VALERIUS has a Master of Science degree in Ecology and is a botanist/plant ecologist and wetlands specialist with 35 plus years of highly professional experience both in conducting field studies and in managing projects. Ms. Valerius is proficient in conducting vegetation and biotic surveys, rare plant surveys, and wetland delineations. Ms. Valerius lives in Sonoma County and knows the rules and regulations related to special status plant species in the region and for the Santa Rosa Plain. Ms. Valerius has designed mitigation monitoring plans for wetlands and prepared environmental impact assessments to support development of transmission line, public works projects, residential communities, landfill and mining expansion, and energy and water resource facilities.
3. Statement of Financial Qualifications

HZI has the financial qualifications to perform the work described in the RFP. HZI would utilize internal funding as outlined in the financial capabilities letter.

The attached document provides documentation of the HZI's ability to secure financing for all trucks, facilities, other equipment and labor required to perform all services described in the RFP including the total estimated amount of the expense and financing that is expected to be incurred and utilized in performing the work.

As Appendix D and attached to this statement, HZI has included a letter from its bank BTMU, clearly stating that HZI has the adequate assets and/or irrevocable letters of credit that are sufficient to compensate for all capital costs, equipment costs, start-up costs and a minimum of 3 months of operating costs and all required payments to SCWMA.

HZI has included financial statements in Appendix E. It includes 3 years of business tax returns with supporting schedules.

If SCWMA requires further discussion with HZI's accounting firms, HZI is willing to set up discussions to discuss the financial status including ownership of, or interest in, equipment and facilities prior to the award of the Agreement.

HZI requests that SCWMA keep the information provided in Appendix E – Financial Statements in confidence. This is proprietary information that can be used by competitors in the industry for future bidding processes.
4. Technical Proposal

4.1 Introduction

The Project Team understands that SCWMA issued the RFP to have Proponents provide proposals for organic materials processing services due to the lack of in-county organics management infrastructure and the need for high quality compost. The goal of the Project is for SCWMA to enter into an agreement to process organics starting as soon as possible for the next 20 years. The Project clearly needs to provide up to 70,000 tons per year (tpy) of processing capacity. The Project needs to meet the CDFA composting guidelines and other applicable regulations, standards and guidelines while minimizing the capital costs/operational costs and managing any potential impacts to the community.

Based on this outline, HZI assessed the various technical approaches and developed a proposed solution that would convert the SCWMA’s organics to high quality compost and renewable energy in form of biogas that would meet the SCWMA’s goals. The Project would be completed under a Finance-Design-Build-Own-Operate-Maintain (FDBOOM) solution. The Project Team would be responsible for financing, design, construction, ownership, operation, and maintenance of the infrastructure for the duration of the agreement with the option to extend the feedstock service agreement beyond the 20 years. The facilities would comply with all CDFA requirements as well as the County’s Solid Waste Laws. The Project Team is also responsible for the management of any and all beneficial outputs and by-products including high quality compost and biogas. This solution would provide SCWMA with a facility that would meet its intended objectives and the ability to adapt to new regulations over the life of the facility.

The facilities would accept SCWMA’s organics delivered by collection contractors as well as ICI organics from approved entities. The design concept is developed to manage all residential and ICI organic feedstocks based on SCWMA’s current organics program including seasonal volume and composition variability. The inclusion of thermophilic AD allows for meeting pasteurization requirements as well as future program changes such as change in law for more stringent composting guidelines, inclusion of new feedstocks, a rise in the portion of food waste and other policy changes such as acceptance of grass clippings, compostable ware and pet waste, which would not likely be possible with in-vessel composting operations.

Location of the infrastructure would be at a site adjacent to the City of Santa Rosa wastewater treatment plant. HZI has been awarded a LOI, Letter of Intent to Negotiate by the City of Santa Rosa, in response to the City’s “Request for Proposal for Location of an Organics Processing Facility on the City of Santa Rosa Property”. The LOI, dated December 7th, 2017 is attached as Appendix F to this proposal. With securing this site, the Project Team has ensured the ability to expedite permitting, as siting this facility is also in the City’s interest, the City has indicated to assist in management of the public consultation process for the new facility.

Siting adjacent to the City of Santa Rosa WWTP is a major keystone of HZI’s holistic approach to the overall project and will capitalize on a synergistic approach to local opportunities and interfaces.
In the table below, we outline the synergies:

**Synergistic Use Opportunities/Interfaces**

<table>
<thead>
<tr>
<th>City of Santa Rosa</th>
<th>Project Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Energy</td>
<td>Biogas Supply</td>
</tr>
<tr>
<td>Extraneous Heat in Exhaust/Jacket</td>
<td>Digester Heating</td>
</tr>
<tr>
<td>Recycled Water/Potable Water</td>
<td>Stormwater</td>
</tr>
</tbody>
</table>

**Lease**
- Standard Market Terms
- 20 years with option to renew

**Other**
- Community Action Fund - for residents within 1 mile

The new facility would be capable of accepting organic streams such as residential organics, green waste and ICI organics with a total capacity of 70,000 tpy. From a technological perspective, HZI would provide its own, proven Kompogas® High Solids Anaerobic Digestion technology as it is a pioneer in the field of dry anaerobic digestion and a specialist in the digestion of municipal and commercial organic waste. This commercially proven organics management technology is capable of processing organics from residential and ICI sources similar to SCWMA’s feedstocks. The Kompogas® concept is proven worldwide since 1991 and features a modular plant system that fully meets strict waste management requirements in terms of independence, efficiency, economy and operational aspects. More than 80 dry digestion plants using HZI’s Kompogas® process have been installed worldwide and are operated successfully and reliably. The Kompogas process is based on the dry digestion of solid organic-wastes (i.e. waste biomass from domestic, commercial or industrial activity), in an oxygen-free environment. In this way, CO₂-neutral biogas is produced. This renewable biogas can be used either for the production of renewable electricity through Combined Heat and Power Systems (CHP) or alternatively processed/upgraded to renewable natural gas (RNG) and fed into the natural gas grid or utilized as CO₂-neutral vehicle fuel (CNG). Either of these beneficial uses will contribute towards the County’s goals of reduction of their carbon footprint. Further, the recycling of organic materials through anaerobic digestion also yields digestate, containing valuable plant nutrients with many beneficial uses for the local horticultural and agricultural community. After removal of bacteria, pathogens and spores due to the thermophilic digestion process, the sterilized residue (i.e. digestate) can be utilized directly as a natural fertilizer or as outlined in this response, would be refined to produce high quality compost as well as a liquid fertilizer. Therefore, the organic material cycle is closed.

The site-specific mass and energy balance are provided in Appendix G and H.
The following diagram depicts the described technology for the facility that will be utilized for the project on the City’s site:

<table>
<thead>
<tr>
<th>Waste receiving and storage</th>
<th>Anaerobic digestion</th>
<th>Discharge</th>
<th>Energy utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Waste receiving</td>
<td>4 Shredder</td>
<td>12 Inoculation pipe</td>
<td>17 Biogas upgrading</td>
</tr>
<tr>
<td>2 Waste bunker</td>
<td>5 Sieve</td>
<td>13 Discharge system</td>
<td>HZI BioMethan®</td>
</tr>
<tr>
<td>3 Waste crane</td>
<td>6 Sieve rejects</td>
<td>14 Dewatering press</td>
<td>18 Gas storage</td>
</tr>
<tr>
<td></td>
<td>7 Conveying system</td>
<td>15 Liquid digestate</td>
<td>19 Combined heat and power plant</td>
</tr>
<tr>
<td></td>
<td>8 Feeding system</td>
<td>16 Solid digestate</td>
<td>20 Transformer</td>
</tr>
<tr>
<td></td>
<td>9 Digester</td>
<td></td>
<td>21 Electricity export</td>
</tr>
<tr>
<td></td>
<td>10 Agitator</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11 Biogas pipe</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The HZI concept is designed to mitigate and control odors, noise and other nuisance impacts to adjacent properties and the surroundings. The design would include features such as process buildings with negative pressure, fast acting doors, a ventilation system that would capture emissions at the source within the process buildings with a prescribed number of air changes per hour and a state of the art bio filter. The design would also include all necessary infrastructures to manage and/or treat leachate, wastewater and process water within the enclosed system.

The Project Team assessed the overall objectives of SCWMA. Through this assessment, addressing the following points were driving factors in the approach to the design of this project:

- Long terms solution to address processing of SCWMA organic materials for 20 years, contributing towards the County’s diversion goals;
- Processing of SCWMA organics through proven Anaerobic Digestion Technology;
- Secured siting of proposed facility through LOI with the City of Santa Rosa;
- Receipt and processing of the SCWMA’s organic wastes efficiently, cost-effectively and with minimal odor nuisance and environmental impact in enclosed process buildings;
- Providing additional biogas to the City’s biogas utilization infrastructure that meets stringent quality standards and will not have an adverse impact on the operation of the City’s WWTP digesters; and
- Providing a cost-effective post-processing solution for the organic waste-derived digestate into high quality compost.
4.2 Facility

As requested in the RFP, the detailed description of the technology that would be utilized is outlined below and the technical documentation is attached in the appendices as outlined in this paragraph. It contains all of the relevant information requested with the process narrative and key equipment. The relevant mass/water and energy balances are provided in Appendix G and H, respectively. The Process Schematic/Process Flow Diagrams are provided in Appendix J.

A set of P&IDs of the proposed facility are found in Appendix K while detailed descriptions of key equipment are found in Appendix L.

The aerial/general arrangement drawing and ISO view of the facility is found in Appendix M. In the mass balance, HZI has outlined how different materials would be managed at various stages of processing to ensure that no material is stored on site for longer than allowed under permits.

HZI is proposing a long term agreement (20-years) as described in Section 3 of the RFP. Upon award HZI will establish a Special Purpose Vehicle company (SPV), Kompogas Sonoma LLC, which would be the owner and operator of the proposed facility. The facility would be located adjacent to the City of Santa Rosa WWTP. The proposed organics facility would be designed to encompass approximately 4 acres. This will include the ingress and egress for the facility from Llano Road or Meadow Lane, receiving areas, digesters, final treatment buildings of the digestate, and the biofilter. The exact amount of acreage and usage of each APN depends on the final site layout, but it is anticipated that a portion of each may be
used. The Project Team has reviewed these properties and is aware of the California Tiger Salamander and possible wetlands issues that may be present on these individual sites and has addressed them later in the document.

As requested for long term facilities, HZI has a reference facility that is using equivalent technology that has been permitted and is currently under construction within the United States and California. More information about this facility Kompogas SLO LLC is available in Appendix N.

The Project Team’s approach for the land was to (1) meet the requirements of the RFP; (2) construct a plant that is efficient to operate; (3) minimize the impact on the City’s current operations; and (4) minimize the environmental impact. The project team was also trying to consider whether road improvements would be required (unlikely on Llano Rd however more likely on Meadow Lane or Walker Avenue). It was also trying to consider the local neighbors, decommissioning of well and septic systems, and the intermittent gas and electrical services required to operate the processing facility however, they are available and adequate at the WWTP and the existing composting site.

**Waste Handling**

**Organic waste reception, pre-treatment and intermediate storage**

The organic waste delivered to the plant is scaled on the weigh bridge and then tipped into the designated pit bunker section located in the reception building. The pit bunker acts as an intermediate storage. The feedstocks would include green waste, food scraps, etc. The receiving hours at the facility may be from 7am to 5pm Monday through Saturday (subject to negotiations) while the facility would operate 24/7.

The feedstock is picked up by the automated waste crane as needed and fed into the shredder where it is shredded and screened to approximately 2 inches. Ferromagnetic particles are removed using a magnetic separator. The pre-treated material is then transported to either one of the two digesters via conveyor belts and fed into the vessel via a dosing screw conveyor. These conveyers are equipped with a scale to monitor the amount of material fed into the digester. Oversize material is conveyed back to the waste bunker for reprocessing. Screened out contaminants are deposited into a haul-off container for further treatment or disposal.

The Project Team is planning to use these initial pretreatment steps in combination with post processing screening technologies to remove physical contamination in order to produce a high quality, marketable compost that meets CDFA standards and also meet the less than 10% post processing residual
requirements by SCWMA and would ensure that it was met as measured by outbound tons on a quarterly basis.

**Anaerobic Digestion**

**Kompogas Digester**

The continuously fed, horizontal PF1500 plug-flow digester has a nominal capacity of 53,000 ft.³ (at filling level of 85%). The digester is a patented steel structure with inner dimensions of approximately 112 ft. x 28 ft. (length x diameter).

In order to minimize heat losses, the steel tank is fully enclosed by insulation. The entire digester module is installed outdoors and enclosed by a weatherproof housing.

A central heat distribution system is installed underneath the digester within the enclosure, accessible by doors from both ends.

The anaerobic digestion process is based on thermophilic dry digestion at a temperature of approximately 131°F and a retention time of approximately 14 days. At this process time and temperature, any unwanted seeds, germ buds and microorganisms are reliably eliminated inside the gas tight digester. A slowly turning agitator device results in optimal degasification, whilst sedimentation of heavy matter in the digestion substrate is prevented due to special positioning of the agitator paddles. The longitudinal agitator used in the digester is a fully welded structure without screw connections, thereby designed for a long service life.
Digestate Treatment

After the digestion process, digestate is discharged by a specially designed, heavy duty discharge pump to the dewatering area of the plant.

Dewatering

Screw Press

Dewatering of the digestate is done by a Kompogas® screw press, separating the digestate into a dry fraction and the associated liquid digestate (liquid digestate with a dry matter content of approximately 16%). Initially, the liquid digestate is directed to a small intermediate storage tank. The amount of liquid digestate depends mainly on the dry matter content of the incoming organic waste and the dry matter content of the dewatered solid digestate, which can be adjusted by the pressure in the dewatering press. The press is positioned in an elevated position, so that the dewatered solid digestate falls freely down onto a defined surface inside the solid digestate storage area.
Decanter

The liquid digestate from the intermediate storage tank is processed further by a decanter centrifuge in order to reduce the dry matter content of the liquid digestate to <10% (centrate).

The centrate is firstly directed to a centrate intermediate storage tank. Centrate can subsequently be used to moisturize incoming feedstock if required, eliminating the need for outside process water.

Liquid digestate storage and loading

Liquid digestate from the centrate collection tank is pumped to the liquid digestate storage tanks outside the main building. The storage tank is covered by a gas and odor tight membrane and equipped with a water tight door. It is used as buffer storage so that the liquid digestate can be used as liquid organic fertilizer in the agriculture or as outlined above can be used for moisturizing.

Composting

Aerobization/Curing

The aerobization and curing processes of the solid digestate is based on aerobic processing of the material. The material would be in the aerobization boxes for 21 days to complete the active composting phase and create finished compost. Through the anaerobic digestion and subsequent composting stages, the compost will not reheat and will ensure that the facility produces a compost that meets the regulatory compost standards as well as end market requirements.

The Project Team is planning to use these post steps in combination with the initial processing contamination removal technologies to remove physical contamination in order to produce a marketable compost that meets CDFA standards along with the SCWMA requirement to have less than 10% post processing residual as measured by outbound tons on a quarterly basis.
Biogas System

Biogas Flare

A safety gas flaring system is installed which ensures that any excess biogas is safely incinerated (e.g. when biogas utilization is stopped or in case of an emergency). Typically, a two-stage gas flare is installed, which combusts the biogas in a reliable and environmental friendly way. The flame burns at a minimum temperature of 1560°F in a heat-insulated protective tube, and cannot be seen from the outside. Ignition occurs fully automatically once gas pressure in the digester reaches a range of 0.7 psi.

The gas pressure in the line is monitored by a minimum pressure switch. If the pressure falls below the minimum value, then the flare is disconnected and extinguished. A flame arrester is installed in the gas pipeline before the flare system in compliance with appropriate regulations.

Biogas Analysis

The dry biogas is analyzed for its methane (CH4), carbon dioxide (CO2), oxygen (O2) and hydrogen sulfide (H2S) content. Measurements take place periodically and the values are displayed and recorded in the plant control systems. This allows a close monitoring of the biological process and quick detection of any irregularities, allowing taking early actions.
**Biogas Desulphurization**

The raw biogas from the digesters is directed to a chemical / biological desulfurization unit. The use of special cleaning pellets allows a hydrogen sulphide (H2S) reduction of > 90%.

**Biogas Storage**

The head space in of the digester is used as a storage buffer for the continuously produced biogas. Additional external gas buffering storage is provided on top of the liquid digestate storage tank with a flexible double membrane roof. This ensures optimal operation of the biogas utilization equipment and hence efficient energy use. The biogas is extracted from the buffer biogas storage membrane through stainless steel pipes and fed first into a biogas pre-treatment/cleaning system and subsequently into the biogas utilization system.

The concept of this project is that biogas would subsequently be used as a renewable fuel by the City of Santa Rosa WWTP Combined Heat and Power Units or alternatively utilized through onsite CHP and fed into the local electric grid.

**Electrical Power System and Controls**

The process control system is designed to match with the plant's process concept. The complete control system is located in an air-conditioned electrical room within the plant, together with the low voltage distribution system. A PC-based local operation station for monitoring and controlling the entire plant is also placed here, while a remote control PC, connected via a DSL connection, can be placed in a central control room anywhere else. The entire facility would have instrumentation to allow it to be monitored 24/7 while being fully automated and thus allow it to operate in an unmanned position except during receiving hours. Additional information on the standard controls is provided in the sample P&ID’s that are found in Appendix K.
Buildings and Facilities

All handling of organic materials (reception, pre-treatment, intermediate storage, digestate post-treatment, etc.) occur in the closed, negative pressurized and ventilated halls, therefore minimizing odor emissions to the surrounding environment. Only the digester itself and some auxiliary systems mounted in containers (such as heat distribution, control system, biogas treatment system, etc.) are placed outdoors. Further, some indoor space / rooms are required for auxiliary systems such as compressed air system, pumps for bunker / waste water and rain / service water, etc.

Waste Air Treatment

The digester itself is a completely closed system, as the process operates under anaerobic conditions, (i.e. in the absence of oxygen). Therefore, no emissions are released into the surrounding environment by the AD portion of the facility.
Waste air collected from the various halls through the waste air ventilation system would be moistened with water by means of a special nozzle system operated with compressed air. Reaching humidity levels of >95% guarantees an optimal operation of the subsequent biofilter, requiring minimal maintenance. In order to reduce odor and ammonia emissions, an acid scrubber is installed upstream the biofilter.

All handling of organic materials (reception, pre-treatment, intermediate storage, digestate post-treatment, etc.) occur in the closed, negative pressurized and ventilated halls, therefore minimizing odor emissions to the surrounding environment. Only the digester itself, biofilter and some auxiliary systems, such as switch gear and desulphurization system) are placed outdoors. Auxiliary systems such as control system, ventilation system, compressed air system, heat distribution system and pumps are located inside.

**4.3 Detailed Schedule/Permitting Plan/Construction Approach/Commissioning**

As requested in the RFP, for long term facilities, a detailed schedule and plan for planning and obtaining all necessary permits as well as key dates such as construction start date, start of operations are outlined below. The plan implementation process and timeline is found in Appendix O.

**Key Milestones:**
- Expected Award of Project: July 2nd, 2018
- Expected Start of Construction: August 1st, 2019 (depending on permitting progress and approvals)
- Expected Begin of Hot Commissioning / Start of feedstock receiving: December 3rd, 2020

Upon award of the contract by SCWMA, our permitting approach will initially include meeting with all responsible agencies to define the project description, determine permit requirements, ascertain roles and responsibilities, and discuss a preliminary determinate schedule. If, in the process of meeting with the agencies, there are modifications to regulations or additional requirements, HZI will modify the project, accordingly. The proposed preliminary schedule responds to the operational deadlines outlined by the SCWMA, and all opportunities to expedite permitting will be taken to ensure the project is delivered on time or ahead of schedule. It is anticipated that the SCWMA and the City of Santa Rosa will work to fully support and streamline the permitting process, as the project moves forward.
HZI has recently permitted a similar continuous high-solid anaerobic digestion facility in the County of San Luis Obispo, CA and thus provides an experienced Project Team to work collaboratively with SCWMA and other responsible agencies to entitle, develop, construct, and operate the proposed organics processing facility. The mentioned reference project in San Luis Obispo, which is currently under construction and is nearing mechanical completion, has also been developed on a FDBOOM basis by HZI and therefore all the lessons learned and experience from this project can be applied towards the SCWMA project.

HZI’s operations concept will include receiving of all organic feedstock, pre-processing, dedicated digestion modules and all activities associated with digestate management and fertilizer production, as appropriate. The biogas from the digestion process will be cleaned and, upon agreement with the City, transferred to the City’s WWTP CHP system, which is a currently permitted facility. Alternatively HZI has made provisions to be able to utilize the biogas in onsite CHP units for electricity production and fed into the local electrical grid, thereby potentially benefitting the residents of Sonoma County.

The project will be designed to comply with California Environmental Quality Act (CEQA), other State and local regulations, and incorporate mitigation measures into the project description based upon other successful and similar facilities approved throughout California.

At the time that the City signs a lease with prospective team for this Project, the City will need to approve a CEQA document that identifies the potential environmental impacts of such an operation. However, it will need to be determined if SCWMA has already prepared a CEQA document by the time the lease is negotiated. Therefore, it will be important for the City and SCWMA to coordinate regarding the CEQA strategy and to determine which agency should be the Lead Agency and which agency will be a Responsible Agency. The Project Team through GHD is able to assist with these discussions and either prepares a comprehensive document to be used by both agencies, and assist the appropriate party in its process as a Responsible Agency, in the case where the SCWMA has already prepared the CEQA documentation.

The Project Team has reviewed the IRWP Program EIR which includes a variety of upgrades to the City’s WWTP and has been used for a variety of purposes since its original certification in 2004. The Project Team would need to do further assessment of the main proposal or the impact of the additional options that the Project Team has proposed to the City in its submission on the parcel of land. Once the concept is narrowed down/selected, the Project Team can assist SCWMA in determining whether or not an EIR Addendum or tiered CEQA document may be sufficient for the Project. This approach could potentially allow the stakeholders to save time and money, as no public circulation would be required.

The Project Team believes that it is possible to create and define a project to avoid potentially significant impacts and successfully obtain project approval in a streamlined manner. The Project Team would develop a comprehensive project description based upon a variety of supporting technical and environmental documents. This robust documentation will demonstrate to SCWMA and the City, and other agencies, full compliance under CEQA and other regulatory requirements.

The proposal assumes that the City will initiate and complete the pre-zoning and annexation process, as outlined by the Sonoma Local Agency Formation Commission. The Project Team will work closely with the City during the concurrent process of the land use entitlement and pre-zoning and provide any
necessary documentation to support these efforts. However, further discussions on the parcels of land
that are being considered are laid out in the Technical Proposal section of the RFP Response.

In addition to working with the City for the land use, building and other permits, and the ultimate
annexation of the property, the permitting process involves several other responsible regulatory
agencies that will either influence the project design, be required to update existing regulatory
documents, or be directly responsible for permit issuance.

The Project Team will provide their expertise, experience, and supporting plans and documents to work
with these other responsible agencies. The following is an overview of the other responsible agencies
that may be involved in the process, noting the related documents updates and/or permits:

- Sonoma County Local Agency Formation Commission - Annexation
- County of Sonoma – Update of the Non-Disposal Facility Element
- Sonoma County Integrated Waste Management Plan – Countywide Element Update
- Sonoma County Integrated Waste Management Agency
- North Coast Regional Water Quality Control Board - Section 401, Stormwater Pollution
  Prevention Plan
- U.S. Army Corps of Engineers – Section 404 of the Clean Water Act
- California Fish & Wildlife Service – Section 1603 Streambed Alteration Permit
- U.S. Fish & Wildlife Service – Biological Opinion
- CalRecycle/Sonoma County Environmental Health (LEA) – Solid Waste Facilities Permit
- Bay Area Air Quality Management District – Authority to Construct Permit

The Project Team is well aware that the Sonoma County populations of the California Tiger Salamander
(CTS) are federally endangered and state threatened. The Project Team, through GHD and Wildlife
Research Associates, has extensive experience with California Tiger Salamanders. They have prepared
numerous biological assessments under Section 7 of the Endangered Species Act which have included
this species, and have also addressed the species in CEQA analysis including the Santa Rosa Incremental
Recycled Water Program EIR, and in Caltrans Natural Environment Studies. GHD’s staff has recently
acted as agency pre-approved full time biological monitors during construction projects within known
CTS habitat. GHD senior ecologists have extensive pre-listing field experience with CTS including
handling of adults and larvae, as well as participating in post-listing workshops held near Santa Rosa.

As outlined earlier about the USFWS, GHD is familiar with the U.S. Fish and Wildlife Service (USFWS)
2007 Programmatic Biological Opinion for the California Tiger Salamander and three endangered plant
species on the Santa Rosa Plain, which identifies methods for determining impacts and establishes
mitigation ratios. GHD is also familiar with the recent (2016) Recovery Plan for the Santa Rosa Plain, and
the earlier Santa Rosa Plain Conservation Strategy which was proposed in 2005; although not fully
implemented, this latter document provides useful planning information for the area and was the basis
of some subsequent agency policies.

GHD has extensive experience mitigating project-related impacts, with an entire northern California
team dedicated to habitat restoration. Specific skills include identifying conceptual mitigation
mechanisms, techniques, and locations; preliminary and final design; permitting; and construction
management and monitoring. Mitigation or restoration efforts in the Bay Area have included key CTS habitat types including native grasslands, oak woodlands, and vernal pools and other seasonal wetlands.

A key component of our approach not only includes working with the regulatory organizations/agencies, but recognition of the importance of public input. The Project Team is committed to engaging the public at all phases of the process to educate, avoid conflict, collaborate with and fully disclose all aspects of the project as well as the areas laid out in the Technical Proposal section and the synergistic relationships. Along with the City, County, other Federal, State, and local agencies, the Project Team is keenly aware of the importance to protect the public health, safety, and welfare of the communities in which we work.

4.3.1 Assessment of Site Conditions

As requested in the RFP, HZI has assessed the site conditions including the points listed below. HZI is comfortable with this information and thus believes that the land use is acceptable and it can obtain the permits to operate and understands the site conditions in relation to design, construction and operation of the facility.

The information on the general site condition was obtained from a technical memorandum HZI had initiated through GHD and is based on public sources and knowledge of the area (Appendix P). The site is located in the Santa Rosa Valley within the Coast Range geomorphic province, about midway between Sebastopol and Rohnert Park, California. The Santa Rosa Valley is largely infilled with Quaternary-aged alluvial deposits which consist of clay and silt with some sand and gravel. Therefore, HZI is comfortable that the site is underlain by soft clay which can be compressible when subject to structure loading. The clay can have a moderate to high expansion potential, which can be unstable under heavy loading and can be mildly corrosive to ferrous metals and typical concrete. A very slow infiltration rate is expected however below 20-30 feet, the clay can be underlain by other alluvial deposits such as silt, sand, and gravel. Other relevant information on the specific site and general area include:

Seismic

In regards to the nearest active fault, it is the Rodgers Creek fault, which is about 6 miles northeast of the site, which is capable of an earthquake of 7.25. The site is not within an Alquist-Priolo Earthquake Fault Zone. Since the United States Geologic Survey identifies a peak ground acceleration of 0.51g for design, strong ground shaking should be expected at the site.

Floodplains

The site is not in a FEMA Designated Special Flood Hazard Area; however, it is mapped within Zone X, which has a 0.2% annual chance of flood.

Wetlands

HZI is aware of potential wetlands issues on the proposed property and has contracted with Jane Valerius, a local consultant, botanist/plant ecologist and wetlands specialist, with over 35 years of
experience which is highly experienced both, conducting field studies and in managing projects. Ms. Valerius has reviewed the proposed properties with HZI and closely discussed the potential wetlands and endangered plant life contained within the properties and will provide guidance on mitigation issues as needed.

**Endangered Species Habitat**

HZI has contracted with Wildlife Research Associates, Trish Tatarian since 1991, providing wildlife surveys and services to consulting firms, development, businesses, agencies and individuals for many manners of endangered species; amphibian, bats and raptors. Ms. Tatarian will assist in providing California Tiger Salamander surveys and provide guidance on mitigation measures.

**Unstable Soils**

The site is likely underlain by expansive clay, which could rise vertically during wetting and shrink during drying. This could impact shallow foundations, flat work and pavements thus requiring special provisions such as reinforcement, use of non-expansive fill and/or chemical treatment for mitigation.

HZI has provided our unit price (tipping fee) based on known information typical for this region. HZI requested permission to perform complete Geotech exploration on subject property and was not granted such by the City. HZI has not included any provisions for deep soil foundations, unforeseen conditions, or soil remediation. If these conditions are present, HZI reserves the right to modify our unit price (tipping fee) to reflect these unknown cost increases.

**Major Aquifer Recharge Areas**

The State of California – Department of Water Resources has not identified the site or surrounding vicinity as a Recharge Protection Area.

**Depth of Groundwater**

Groundwater is expected in the range of 5 to 10 feet below the existing ground surface. Thus, excavations deeper than 5 feet require dewatering.

**Permeable Strata and Soils**

The permeable strata are expected to be at depths greater than 20 feet below existing ground surface.
Proximity to Other Industry or Development

The site that is being considered is in close proximity to the City of Santa Rosa WWTP as well as adjacent farmland. It is in relative close proximity to major transportation routes and thus should make it relatively easy to access for feedstocks and transport of compost and liquid fertilizer.

4.3.2 Facility Permitting

As outlined previously, HZI has recently successfully permitted an almost identical Kompogas Anaerobic digestion facility in San Louis Obispo, CA and would apply the same methodology to permitting for the proposed SCWMA Organics Processing facility.

As evidence, we have attached as Appendix R a copy of the San Luis Obispo Conditional Use permit as granted by the San Luis Obispo County. Detailed information on permitting process and permits obtained is available upon request.

In an effort to provide more clarity, HZI can provide feedback on other relevant permits:

- Site plan in conformance with requirements for facility permit
- Report of facility information including odor mitigation plan
- Stormwater runoff management plan
- Erosion and sediment control plan
- Noise control plan

4.3.3 Contamination Protocol

The business case for the facility is designed on receiving feedstock with up to 5% contamination by weight. If the facility receives higher contamination than 5%, then a protocol defined in the O&M Manual would be enacted. This document will address the surcharge and methodology for identifying rejectable loads at the scale house. It also provides details on the contamination monitoring and detailed record keeping that will be maintained at the site at all times.

4.3.4 Overs Management

The project team understands that “overs” from the Organic Materials Processing must not be used as alternative daily cover or for beneficial reuse purposes.
4.3.5 Production of High Quality End Products

HZI brings extensive knowledge and experience to managing outputs from anaerobic digestion systems. This includes beneficial products such as compost and liquid organic fertilizer as well as by-products from the facility such as residues (i.e., front end rejects and overs).

A few of the products that would be considered under the agreement as outputs include:

- Reject Fraction including recovered materials unsuitable for processing “in-line”;
- Ferrous/Non-Ferrous Metals in the form of cans, scrap, etc.;
- Biogas produced from the AD facility;
- Compost resulting from solid digestate from the AD facility to meet CDFA requirements;
- Liquid digestate used as fertilizer

HZI has entered into an LOI with Pacific Organics of Creston, CA, a company whose main business is to manage, distribute and resell organic fertilizer and compost. A copy of this agreement is attached as Appendix Q to this proposal. With this collaboration, the HZI project team will manage the sale and distribution of finished compost and liquid fertilizer. A certain amount of liquid digestate would be used at the front end of the process to moisten feedstock as needed; the remainder will be marketed as liquid fertilizer to local horticulture and agriculture by Pacific Organics. Further information on anticipated product and by-product quantities can be seen in the mass balance information in Appendix G.

As an example, here are pictures of the products that are produced at HZI’s reference facilities:

In relation to meeting consumer standards for these end products, HZI would ensure that it meets the CalRecycle regulations for health and safety (pathogens and metals).

HZI has seen a growing interest in providing organic certified products to the market place and depending on feedstock composition will attempt all reasonable efforts to test and market these materials as such. All marketing of compost and liquid fertilizer would be handled by Pacific Organics of Creston, CA.
4.3.6 Adaptability

The Project Team’s proposed concept allows for the facility to adapt from the current organic waste tonnage and characteristic to expand and accommodate additional tonnage as the new regulations such as AB1826, AB1594, and SB1383 are implemented. It is imperative to understand that the proposed Kompogas high solids anaerobic digestion system provides the necessary flexibility and robustness to handle high levels of contamination in the food and green waste stream contemplated and also is easily adaptable to feedstock variations that might occur over the lifetime of the plant. Thus, it will allow the proposed facility to be developed as long-term, durable, robust infrastructure.

4.3.7 Ancillary Description (Form F)

As outlined earlier, the anticipated permitted capacity of the facility is 70,000 tpy and thus would be able to accommodate SCWMA’s needs over the 20 year term of the services agreement. The appropriate forms have been completed and are found in Section 6 of this RFP Response.

4.3.8 Efforts to Minimize Future Litigation

HZI is very aware that organics processing infrastructure can be a contentious public issue and thus diligence needs to be undertaken on the steps to mitigate these types of concerns. The concerns mainly revolve around odor, truck traffic and noise but can also include job creation/economic development and production of high quality end products.

HZI’s design incorporates a fully enclosed facility to mitigate the chance of odors as well as runoff from the facility. Further the proposed thermophilic anaerobic digestion system will mitigate pathogens and will lend itself to proper maturation of the end products. In regards to the local neighbors, HZI would plan to implement a Community Action Fund, which would allow the neighbors to participate in the success of the facility.

4.3.9 Non-SCWMA Organic Materials

HZI is not planning on accepting non-SCWMA Organic Materials from other parties and thus hasn’t included this in its design concept.
4.4 Safety

As part of the O&M Manual of the proposed facility, HZI will have detailed O&M safety procedures and guidelines in place that specifically address staffing Health and Safety requirements.

HZI’s strategic and operational focus is on providing a safe and healthy working environment for all our employees and partners. With our Health and Safety policies built around the three principles of competence, compliance and community our strategy is to aim for Zero incidents.

Our Health and Safety strategy, policies and procedures provide orientation for all our employees and partners to ensure their safe return home every day.

4.5 Reporting

As part of the O&M manual, detailed reporting procedures for incoming and outgoing materials will be conducted on a daily bases by the plant operator. This information will be shared for invoicing purposes with SCWMA on a monthly basis according to Exhibit B of the SCWMA Draft Services Agreement.

4.6 Operations

4.6.1 Scale procedures

Complete scale procedures will be established as part of the facility O&M Manual and in accordance with the SCWMA Services Agreement. This document also will list procedures to appropriately accept and manage emergency and/or rejected materials. HZI will provide the SCWMA with access to weighing reports promptly upon SCWMA’s request, and no later than three (3) days following such request.

HZI will maintain scale records and reports providing information including date of receipt; inbound time; origin, destination and weight of inbound and outbound loads; inbound and outbound weights of vehicles; and vehicle identification number.

4.6.2 Tipping Procedures / Turnaround Times

Tipping procedures are that inbound feedstock delivery trucks will be weighed in on the truck scale. After weigh-in, the truck will be dispatched by the plant operator to back to one of four designated receiving bays of the receiving building. A Red Light/Green Light system will guide the truck towards the appropriate bay and activate a fast acting overhead door to enable access to the tipping pit. The delivery truck will proceed to dump into the receiving pit and after pulling away from the receiving bay, the fast
acting doors will be closed by the truck operator. Outbound trucks will be weighed–out on the truck scale or alternatively, tare weights will be recorded within the computer system thereby allowing the trucks to exit without weighing, reducing drivers time at the facility. The turnaround times for incoming loads is expected to be less than 30mins after driving off of the scale.

4.6.3 Load Checking Program

The plant operator will witness and check every incoming load according to the Contamination Management Protocol and Methodology established as part of the SCWMA Long Term Service Agreement upon successful award of the project. The operator will determine suitability and conformance with the maximum acceptable contamination level of the plant and the plant operator will reject the load according to the procedures established in the SCWMA Service Agreement.

4.6.4 Fuel Used for On-Site Equipment

The fuel used at the facility would include electricity wherever possible as well as diesel for rolling stock.

4.6.5 Labor Discussions, Terms and History

HZI does not foresee any issues with labor discussions and agreement terms. As part of HZI’s core strategy, we do not tolerate discrimination, conflicts of interest, bribery and corruption, insider trading, political contributions or non-compliance with the law. HZI and its employees respect the rules of fair competition and intellectual property rights.

4.7 Sustainability

4.7.1 Climate Mitigation

HZI is working diligently to minimize and mitigate climate impacts. This includes using electrical equipment for screeners and rolling stock wherever economically feasible. HZI also installs Variable Frequency Drives (VFD), soft starters and other energy efficient measures at its facilities. Given the facility is also including the anaerobic digestion of the feedstocks, it is maximizing methane recovery and planning on supplying the renewable biogas to the existing engine capacity at the adjoining WWTP. HZI will endeavor to source energy from renewable sources however at this point the plan for satisfying parasitic energy for plant operation would primarily come from PG&E, the electricity and gas supplier at the site. Alternatively HZI could apply its own CHPs and utilize the biogas for power production to the PG&E power grid. The parasitic energy will be covered by the CHPs.
4.7.2 Mitigation of Other Environmental Impacts

HZI has outlined earlier that it plans to implement a Community Action Fund to support the local neighbors within 1 mile of the facility. It also plans to include design parameters that would minimize odor, noise and layout of the facility to avoid impacts from traffic.

4.7.3 Environmental Stewardship and Management Policies and Activities

HZI, as outlined above, would undertake measures to use alternative fuel vehicles wherever economically feasible. HZI would assess where possible to include the use of recycling products throughout operations and would endeavor to undertake internal waste reduction and use protocols. Given the facility is enclosed, runoff would be minimized however the use of collected rainwater would be utilized where possible in the process and HZI would comply with laws relating to electrical waste, HHW, U-Waste and the use of non-toxic products when possible. HZI has also included its energy balance for the facility in Appendix H that shows the net energy usage at the facility.

4.7.4 Use of Local Vendors

HZI has included GHD, which has a large office in Santa Rosa as well as Wildlife Research Associates and Jane Valerius Consulting which are local vendors. HZI would endeavor to utilize local vendors throughout the development, construction and operation of the facility wherever possible.

4.7.5 Compost Giveaway Program

HZI has included a compost giveaway program in line with SCWMA’s request in the RFP. HZI will make available three hundred and fifty (350) cubic yards of compost twice per year at no additional cost to the SCWMA or the ratepayers for use by residents and Member Agency(ies), in parks and facility landscaping. HZI will coordinate with SCWMA staff to have Contractor staff present at the event to assist residents and distribute educational materials.

4.7.6 Training and Education Center

HZI has foreseen a training and education center as part of the overall facility to invite schools, associations and other interested parties to tour the site and learn about the diversion of organic material from landfill through Anaerobic Digestion and the subsequent production of Renewable Energy and Green House Gas reduction.
Form A
COMMUNICATION PROTOCOL

The Sonoma County Waste Management Agency (SCWMA) commits to a procurement process for Organics Processing Capacity to be open, objective, and carefully monitored. The following rules will be adhered to and enforced.

Until the SCWMA Board of Directors awards the Organic Materials Processing Services Agreement, all contact between participants, participant’s sub-contractors, participant’s sub-consultants, participant’s affiliates, participants lobbyists, legal or political advisors, or any individual or entity that may be assisting the participant in preparing a response to this request for proposals, or providing work to the participant should participant be selected, and SCWMA, shall be in writing, either by email or mail to:

Patrick Carter
Executive Director, Sonoma County Waste Management Agency
2300 County Center Dr., B-100, Santa Rosa, CA 95403
(707) 565-3579
Patrick.Carter@sonoma-county.org

All communications between the SCWMA and a participant, along with the related responses, will be transmitted simultaneously to all participants that have signed into and attended the MANDATORY pre-proposal conference and will be included as part of the evaluation record.

Any participant who fails to recognize or utilize this process of communication will be notified of its violation and may be subject to disqualification from the selection process at the sole discretion of the SCWMA.

Any attempt to contact or directly interact with any elected or appointed official for the purpose of obtaining information or influencing the Request for Proposal Process, including the selection process, Form A will be grounds for determination of non-compliance and disqualification from the selection process.

All participants must acknowledge and sign this statement as part of the RFP process. All participants must provide a signed ORIGINAL of this statement by the close of the MANDATORY pre-proposal conference. Participants that do not provide this signed statement will be disqualified from this procurement process.

On behalf of my company/agency, I understand and accept the rules established in this statement.

Company Name: Hitachi Zosen Inova USA, LLC
(Print or Type)

Representative: Markus Stangl Title: CEO
(Print or Type)

Signature ____________________________ Date: 1/12/2018
(Sign in Ink)
### Form B
**PROPOSER’S STATEMENT OF ORGANIZATION**

1. **Full Name of Business Concern (Proposer):**
   
   Hitachi Zosen USA, LLC

2. **Principal Contact Person(s):**
   
   Name: Thomas Gratz  
   Phone Number: 678-987-2520

3. **Form of Business Concern:**
   
   ☑ Corporation    ☐ Partnership    ☐ Joint Venture    ☐ Other

4. Provide names of partners or offices as appropriate and indicate if the individual has the authority to sign in name of Proposer. Provide proof of the ability of the individuals so named to legally bind the Proposer (Appendix A).

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Markus Stangl</td>
<td>same as above</td>
<td>CEO</td>
</tr>
<tr>
<td>Mike Canova</td>
<td>same as above</td>
<td>CFO</td>
</tr>
<tr>
<td>Thomas Gratz</td>
<td>same as above</td>
<td>Sales Manager US</td>
</tr>
<tr>
<td>William Skinner</td>
<td>same as above</td>
<td>Director of O&amp;M</td>
</tr>
</tbody>
</table>

5. **If a corporation, in what state incorporated:** Delaware

   Date Incorporated:  
   - Month: April
   - Day: 28th
   - Year: 2011

6. **If a Joint Venture or Partnership, date of Agreement:** n/a
Form B
PROPOSER'S STATEMENT OF ORGANIZATION

7. List all subcontractors participating in this Organic Materials Processing Services Agreement:
   Name                        Address
   a) none – Hitachi Zosen USA, LLC will act as complete EPC provider

   b) _____                       _____
   c) _____                       _____
   d) _____                       _____

8. Outline specific areas of responsibility for each firm listed in Question 7.
   a) n/a

   b) _____
   c) _____
   d) _____

9. Identify the provisions of any agreement between parties which assigns legal or financial liabilities or responsibilities:
   n/a

10. If responding firm(s) are a partially or fully-owned subsidiary of another firm, or share common ownership with another firm, please identify the firms and relationships.

    Please refer to Appendix B
Form C
CERTIFICATION OF NON-GRAUTUITIES

TO: THE SONOMA COUNTY WASTE MANAGEMENT AGENCY

CERTIFICATION

This is a written certification, signed under penalty of perjury, stating that no persons acting on behalf of Hitachi Zosen Inova USA, LLC has paid, or offered or attempted to pay, any elected or appointed official, officer or employee of the SCWMA any compensation or consideration, in any form whatsoever, in connection with obtaining or entering into this Organic Materials Processing Services Agreement.

Markus Stangl
Name

CEO
Title

Signature
1/12/18
Date
Form D
NON-COLLUSION AFFIDAVIT OF PROPOSER and
DISCLOSURE OF NON-COMPETE AGREEMENTS

State of California County of San Luis Obispo

William Skinner, being duly sworn, deposes and says that:

1. He/She is William Skinner of Hitachi Zosen Inova, USA LLC, the Proposer that has submitted the attached proposal;

2. He/She is fully informed respecting the preparation and contents of the attached proposal and of all pertinent circumstances respecting such proposal;

3. Such proposal is genuine and is not a collusive or sham proposal;

4. Neither said Proposer nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, connived, or agreed, directly or indirectly, with any other Proposer, firm or person to submit a collusive or sham proposal in connection with the Organic Materials Processing Services Agreement for which the attached proposal has been submitted or to refrain from proposing in connection with such Organic Materials Processing Services Agreement, or has in any manner, directly or indirectly, sought by agreement or collision or communication or conference with any other Proposer, firm, or person to fix the price or prices in the attached RFP, or of any other Proposer, or to fix any overhead, profit or cost component of the proposal or the response of any other Proposer, or to secure through any collusion, connivance, or unlawful agreement any advantage against The Sonoma County Waste Management Agency or any person interested in the proposed Organic Materials Processing Services Agreement; and

5. The tipping fee proposal in the attached RFP are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Proposer or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

6. Proposer must list the name of any and all other solid waste service providers and/or affiliates that it has a “non-compete” agreement with that prohibits the other solid waste services provider from proposing on services as requested in this RFP. Failure to disclose this information will result in immediate disqualification from this RFP process.

   N/A
Form D
NON-COLLUSION AFFIDAVIT OF PROPOSER and
DISCLOSURE OF NON-COMPETE AGREEMENTS

(Signed)  

West Coast Sales Manager
(Title)

Subscribed and sworn to before me this 9th day of Jan, 2018.

See Attached Form

My Commission Expires: 08/14/2020

Notary Public, State of California
CALIFORNIA JURAT WITH AFFIANT STATEMENT

- See Attached Document (Notary to cross out lines 1-6 below)
- See Statement Below (Lines 1-6 to be completed only by document signer(s), not Notary)

| Signature of Document Signer No. 1 | Signature of Document Signer No. 2 |

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of San Luis Obispo

Subscribed and sworn to (or affirmed) before me on this 9th day of January, 2018, by

(1) William Skinner
Name of Signer
proved to me on the basis of satisfactory evidence be the person who appeared before me.

(2) __________
Name of Signer
proved to me on the basis of satisfactory evidence be the person who appeared before me.

Signature Noah Martinez
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

**Further Description of Any Attached Document**

Title or Type of Document: Affidavit
Document Date: 1/9/18 Number of Pages: 2
Signer(s) Other Than Named Above: N/A
Form E
ORGANIC WASTE TIPPING FEE PROPOSAL
SUMMARY AND SIGNATURE

In preparing the Tipping Fee Proposal Forms Proposers should be aware of the following:

All organic materials processing tipping fees proposed on these forms for Sonoma County Waste Management Agency shall be fixed through December 31, 2020 or one (1) year after the Effective Date and should reflect service requirements as specified in the Organic Materials Processing Services Agreement.

The Undersigned hereby certifies as follows:

That William Skinner has personally and carefully examined the specifications and instructions for the work to be done as set forth in Sections 1 – 6 of this RFP and the Draft Organic Materials Processing Services Agreement (Attachment A or Attachment B).

That William Skinner has made examination of the services as applicable to the proposal, and fully understand the character of the work to be done.

That, having made the necessary examination, the undersigned hereby proposes to furnish all materials, vehicles, plant, equipment and facilities, and to perform all labor and services which may be required to do said work with the time fixed and upon the terms and conditions provided in the Organic Materials Processing Services Agreement, at the tipping fees set forth on the Tipping Fee Proposal Forms set forth below:

PROPOSER: William Skinner
President/Partner/Owner: Markus Stangl
Secretary: Michael Canova
Firm Name: Hitachi Zosen Inova, USA, LLC

Individual: □ Partnership: □ Joint Venture □ Corporation, A Delaware Corporation (State of Incorporation)

Signature Instructions:

If business is a CORPORATION, name of the corporation should be listed in full and both President and Secretary must sign the form, OR if one signature is permitted by corporation by-laws, a copy of the by-laws shall be furnished to the SCWMA as part of the proposal.

If business is a PARTNERSHIP, the full name of each partner should be listed followed by d/b/a (doing business as) and firm or trade name; any one partner may sign the form. If the business is INDIVIDUAL PROPRIETORSHIP, the name of the owner should appear followed by d/b/a and name of the company.

If business is a JOINT VENTURE, the full name of each joint venturer should be listed in full and
Form E
ORGANIC WASTE TIPPING FEE PROPOSAL
SUMMARY AND SIGNATURE

each joint venturer must sign the form, OR if one signature is permitted by the joint venture agreement or by-laws, a copy of the agreement or by-laws shall be furnished to the SCWMA as part of the proposal.

Signature: __________________________ CEO __________________________
Date: 1/12/18

Signature: __________________________ Secretary __________________________
Date: 1/12/18
Form F
ORGANIC WASTE TIPPING FEE PROPOSAL

Form F is provided in an Excel spreadsheet, Attachment C SCWMA RFP Section 6 Form F Excel.

Form F shall be submitted in hard copy format and via USB drive in Microsoft Excel format.

Form F-4 20-Year Term on following page
Form G
PASS/FAIL REQUIREMENTS

PROPOSER NAME:  Hitachi Zosen Inova USA, LLC
(name of the entity that will sign the Organic Materials Processing Services Agreement in the event one
is awarded)

Key Contact Information

Name:  Thomas Gratz
Title:  Sales Manager US
Address:  3740 Davinci Court, Suite 250, Norcross, GA 30092
Telephone Number:  678-987-2520
Fax Number:  Thomas.gratz@hz-inova.com

Required Attachments:

Each Proposer must include the following attachments in the separate sealed “Pass/Fail Requirements”
envelope:

A copy of Form A Communication Protocol, as completed on the date of the MANDATORY pre-
proposal conference.

A written statement acknowledging receipt of any and all addenda to this RFP document, and a signed
copy of each addendum with the date of receipt clearly displayed next to each signature.

The Proposal Bond of $25,000.

A letter from Proposer’s bank/financial institution clearly stating that the Proposer has adequate assets
and/or irrevocable line of credit that is sufficient to compensate for all required payments to the
SCWMA, capital costs, equipment costs, start-up costs, and a minimum of three (3) months’ operating
costs.

The Undersigned hereby certifies as follows (initial next to each statement):

The Proposer has attended the MANDATORY pre-proposal conference held on June 28, 2017
at 11:00 a.m. PDT.

The Proposer certifies that Proposer has personally and carefully examined the specifications
and instructions for the work to be done as set forth in Sections 1 – 6 of this RFP.

The Proposer certifies that Proposer has personally and carefully examined the specifications
and requirements as set forth in the Draft Organic Materials Processing Services Agreement.

The Proposer certifies that Proposer has personally and carefully examined the specifications
and requirements of the Sonoma Countywide Integrated Waste Management Plan.

The Proposer certifies that Proposer has personally and carefully examined the specifications
and requirements of the Sonoma County Waste Management Agency Joint Exercise of Powers
Agreement, and all subsequent amendments.

The Proposer certifies that Proposer has made an examination of the services as applicable to
Form G
PASS/FAIL REQUIREMENTS

the proposal, and fully understands the character of the work to be done.

The Proposer warrants that the requirements of the Draft Organic Materials Processing Services Agreement as described in this RFP, its enclosures, and all addenda have been thoroughly reviewed and the Proposer has conducted all due diligence necessary to confirm material facts upon which the proposal is based.

(For long-term Agreements only) The Proposer agrees to submit a Performance Bond in the amount of **One Million Dollars ($1,000,000)** effective within ten (10) calendar days from the date the SCWMA Board approves the Agreement(s).

The Proposer acknowledges the validity of the proposal contents, including proposed Organic Materials Processing Tipping Fees and pricing for a period of one hundred eighty (180) days from the proposal due date.

Having made the necessary examination, the undersigned hereby proposes to furnish all materials, vehicles, plant, equipment, and facilities, and to perform all labor and services which may be required to do said work within the time fixed and upon the terms and conditions provided in the Organic Materials Processing Services Agreement, at the tipping fees set forth on Form F:

<table>
<thead>
<tr>
<th>PROPOSER NAME</th>
<th>Hitachi Zosen Inova USA, LLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>President/Partner/Owner</td>
<td>Markus Stangl - CEO</td>
</tr>
<tr>
<td>Secretary</td>
<td>Michael Canova</td>
</tr>
<tr>
<td>Firm Name</td>
<td>Hitachi Zosen Inova USA, LLC</td>
</tr>
</tbody>
</table>

Individual: ☐ Partnership: ☐ Joint Venture: ☑ Corporation, A Delaware Corporation (State of Incorporation)

Signature: ________________ CEO ________________ Secretary

Date 1/12/18

**Signature Instructions:**

If business is a CORPORATION, name of the corporation should be listed in full and both President and Secretary must sign the form, OR if one signature is permitted by corporation by-laws, a copy of the by-laws shall be furnished to the SCWMA as part of the proposal.

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If business is a JOINT VENTURE, the full name of each joint venturer should be listed in full and each joint venturer must sign the form, OR if one signature is permitted by the joint venture agreement or by-laws, a copy of the agreement or by-laws shall be furnished to the SCWMA as part of the proposal.
<table>
<thead>
<tr>
<th>A</th>
<th>Signature Authorization Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Organization Chart</td>
</tr>
<tr>
<td>C</td>
<td>Kompogas Plant Reference List</td>
</tr>
<tr>
<td>D</td>
<td>Bank of Tokyo Letter of Credit</td>
</tr>
<tr>
<td>E</td>
<td>Financial Statements Part 1 &amp; 2</td>
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<td>F</td>
<td>City of Santa Rosa LOI</td>
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<td>G</td>
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<td>H</td>
<td>Energy Balance</td>
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<td>J</td>
<td>Process Flow Diagram</td>
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<tr>
<td>K</td>
<td>P&amp; ID Diagram</td>
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<tr>
<td>L</td>
<td>Equipment List</td>
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<tr>
<td>M</td>
<td>General Arrangement Drawing</td>
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<td>N</td>
<td>San Luis Obispo Presentation</td>
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<tr>
<td>O</td>
<td>Project Timeline</td>
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<tr>
<td>P</td>
<td>GHD Technical Memorandum</td>
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<tr>
<td>Q</td>
<td>Pacific Organics LOI</td>
</tr>
<tr>
<td>R</td>
<td>San Luis Obispo Sample Permit</td>
</tr>
</tbody>
</table>
AUTHORIZATION LETTER

To Whom it May Concern:

By means of this letter, I, Michael Canova, Secretary of Hitachi Zosen Inova USA LLC, along with Thomas Gratz, Sales Manager US and William Skinner, Director of O & M Management have requested on behalf of the company for the Sonoma County Waste Management Agency request for proposals for organics processing capacity.

Acknowledged and agreed:

Michael Canova / Officer & Secretary

Date: January 2, 2018
Appendix B

Organization Chart (Partial)

- Hitachi Zosen Corporation
  - Osaka, Japan
    - 100%

- Hitachi Zosen Inova AG
  - Zurich, Switzerland
    - 100%

- Hitachi Zosen Inova USA Holdings Inc.
  - US Headquarters
    - 100% 100%

- Hitachi Zosen Inova USA LLC
  - Norcross, GA USA (EPC)

- HZIU Kompogas SLO Inc.
  - San Luis Obispo, CA

- Kompogas SLO LLC
  - AD Plant

- Kompogas Sonoma LLC
  - Santa Rosa future AD Plant
APPENDIX C

Energy from Waste Reference Projects
Kompogas® Anaerobic Digestion Plants (all)
in chronological order
### SE, Högbytorp
- **Start of operation**: 2018
- **Anaerobic Digestion**: Number of Digester(s) 3, Net volume per digester 2100 m³, Digester Design Steel, Waste Type Bio Waste, Food Waste, Green Waste, Solid Manure, Waste Throughput per Year 83050 t/a, Biogas Utilisation Biomethane for gas-grid injection.

### IT, Bologna
- **Start of operation**: 2018
- **Anaerobic Digestion**: Number of Digester(s) 4, Net volume per digester 1800 m³, Digester Design Steel, Waste Type Bio Waste, Green Waste, Waste Throughput per Year 102000 t/a, Biogas Utilisation Biomethane for gas-grid injection.

### FR, Tarbes
- **Start of operation**: 2017
- **Anaerobic Digestion**: Number of Digester(s) 3, Net volume per digester 1300 m³, Digester Design Concrete, Digestor Type PF1300, Waste Type Organic Fraction of Municipal Solid Waste, Green Waste, Waste Throughput per Year 35000 t/a, Biogas Utilisation Biomethane for gas-grid injection.

### PL, Jarocin
- **Start of operation**: 2015
- **Anaerobic Digestion**: Number of Digester(s) 1, Net volume per digester 1300 m³, Digester Design Concrete, Digestor Type RM18, Waste Type Organic Fraction of Municipal Solid Waste, Waste Throughput per Year 15000 t/a, Biogas Utilisation Combined Heat and Power.

### PL, Olawa
- **Start of operation**: 2014
- **Anaerobic Digestion**: Number of Digester(s) 2, Net volume per digester 1300 m³, Digester Design Concrete, Digestor Type RM18, Waste Type Organic Fraction of Municipal Solid Waste, Waste Throughput per Year 25000 t/a, Biogas Utilisation Combined Heat and Power.
<table>
<thead>
<tr>
<th>Location</th>
<th>Start of operation</th>
<th>Anaerobic Digestion</th>
<th>Number of Digester(s)</th>
<th>Net volume per digester</th>
<th>Digester Design</th>
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<th>Biogas Utilisation</th>
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<td>Location</td>
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<td>Digester Design</td>
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<td>Waste Type</td>
<td>Waste Throughput per Year</td>
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<td>FR, Clermont-Ferrand</td>
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<td>JP, Hofu</td>
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DE, Witten
Start of operation 2012
Anaerobic Digestion
Number of Digester(s) 1
Net volume per digester 1300 m³
Digester Design Concrete
Digester Type PF1300
Waste Type Bio Waste, Green Waste
Waste Throughput per Year 26300 t/a
Biogas Utilisation Combined Heat and Power

DE, Trittau
Start of operation 2012
Anaerobic Digestion
Number of Digester(s) 1
Net volume per digester 1300 m³
Digester Design Concrete
Digester Type PF1300
Waste Type Bio Waste
Waste Throughput per Year 20000 t/a
Biogas Utilisation Combined Heat and Power

IT, Faedo
Start of operation 2012
Anaerobic Digestion
Number of Digester(s) 2
Net volume per digester 1300 m³
Digester Design Concrete
Digester Type PF1300
Waste Type Bio Waste, Green Waste
Waste Throughput per Year 32000 t/a
Biogas Utilisation Combined Heat and Power

IT, Terni
Start of operation 2012
Anaerobic Digestion
Number of Digester(s) 1
Net volume per digester 1300 m³
Digester Design Concrete
Digester Type PF1300
Waste Type Bio Waste, Green Waste
Waste Throughput per Year 17500 t/a
Biogas Utilisation Combined Heat and Power

NL, Weurt
Start of operation 2012
Anaerobic Digestion
Number of Digester(s) 2
Net volume per digester 1300 m³
Digester Design Concrete
Digester Type PF1300
Waste Type Bio Waste, Green Waste
Waste Throughput per Year 38000 t/a
Biogas Utilisation Biomethane for gas-grid injection
## Kompogas® Anaerobic Digestion Plants (all)

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<th>Year of Operation</th>
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<th>Waste Type</th>
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<td>1300 m3</td>
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<td><strong>IT, Belluno</strong></td>
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### DE, Ennigerloh
Start of operation: 2011

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<th>Number of Digester(s)</th>
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### DE, Backnang-Neusčontal
Start of operation: 2011

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<th>Number of Digester(s)</th>
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<th>Digester Design</th>
<th>Digester Type</th>
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### CH, Wauwil
Start of operation: 2011

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### CH, Chavornay
Start of operation: 2011

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### DE, Ingolstadt
Start of operation: 2011

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<th>Net volume per digester</th>
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<td>Net volume per digester</td>
<td>Digester Design</td>
<td>Digester Type</td>
<td>Waste Type</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------</td>
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</tr>
<tr>
<td>ES, Botarell</td>
<td>2009</td>
<td>3</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>PF1300</td>
<td>Organic Fraction of Municipal Solid Waste</td>
<td>54000 t/a</td>
</tr>
<tr>
<td>QA, Doha</td>
<td>2009</td>
<td>15</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>PF1300</td>
<td>Green Waste, Organic Fraction of Municipal Solid Waste</td>
<td>274000 t/a</td>
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<td>CH, Oensingen</td>
<td>2009</td>
<td>1</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>PF1300</td>
<td>Bio Waste, Food Waste, Green Waste</td>
<td>18000 t/a</td>
</tr>
<tr>
<td>FR, Saint Lô</td>
<td>2009</td>
<td>2</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>PF1300</td>
<td>Green Waste, Organic Fraction of Municipal Solid Waste</td>
<td>22000 t/a</td>
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<tr>
<td>CH, Volketswil</td>
<td>2009</td>
<td>1</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>PF1300</td>
<td>Bio Waste, Food Waste, Green Waste</td>
<td>20000 t/a</td>
</tr>
<tr>
<td>Location</td>
<td>Start of operation</td>
<td>Anaerobic Digestion</td>
<td>Number of Digester(s)</td>
<td>Net volume per digester</td>
<td>Digester Design</td>
<td>Digester Type</td>
<td>Waste Type</td>
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<tr>
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<td>------------</td>
</tr>
<tr>
<td>DE, Flörsheim Wicker</td>
<td>2008</td>
<td></td>
<td>3</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>GG20</td>
<td>Bio Waste, Food Waste, Green Waste</td>
</tr>
<tr>
<td>CH, Klingnau</td>
<td>2008</td>
<td></td>
<td>1</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>GG20</td>
<td>Bio Waste, Food Waste, Green Waste</td>
</tr>
<tr>
<td>CH, Lavigny</td>
<td>2008</td>
<td></td>
<td>1</td>
<td>960 m³</td>
<td>Concrete</td>
<td>GG16</td>
<td>Bio Waste, Green Waste</td>
</tr>
<tr>
<td>FR, Montpellier</td>
<td>2008</td>
<td></td>
<td>8</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>PF1300</td>
<td>Organic Fraction of Municipal Solid Waste</td>
</tr>
<tr>
<td>Location</td>
<td>Start of operation</td>
<td>Anaerobic Digestion</td>
<td>Number of Digester(s)</td>
<td>Net volume per digester</td>
<td>Digester Design</td>
<td>Digester Type</td>
<td>Waste Type</td>
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<tr>
<td>--------------</td>
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<td>------------</td>
</tr>
<tr>
<td>NL, Wilp-Achterhoeck</td>
<td>2008</td>
<td>4</td>
<td>1300 m3</td>
<td>Concrete</td>
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<td>Bio Waste, Green Waste, Liquid Waste</td>
<td>60000 t/a</td>
</tr>
<tr>
<td>DE, Amtzell</td>
<td>2007</td>
<td>1</td>
<td>1300 m3</td>
<td>Concrete</td>
<td>GG20</td>
<td>Bio Waste, Green Waste</td>
<td>18000 t/a</td>
</tr>
<tr>
<td>DE, Gröbern</td>
<td>2007</td>
<td>2</td>
<td>1300 m3</td>
<td>Concrete</td>
<td>GG20</td>
<td>Energy Crops</td>
<td>17000 t/a</td>
</tr>
<tr>
<td>DE, Ilbenstadt</td>
<td>2007</td>
<td>1</td>
<td>1300 m3</td>
<td>Concrete</td>
<td>GG20</td>
<td>Bio Waste, Green Waste</td>
<td>18250 t/a</td>
</tr>
<tr>
<td>Location</td>
<td>Start of operation</td>
<td>Year</td>
<td>Number of Digester(s)</td>
<td>Net volume per digester</td>
<td>Digester Design</td>
<td>Waste Type</td>
<td>Waste Throughput per Year</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------</td>
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<td>--------------------------</td>
</tr>
<tr>
<td>CH, Oetwil am See 2</td>
<td>2007</td>
<td></td>
<td>1</td>
<td>340 m³</td>
<td>Steel</td>
<td>Bio Waste, Food Waste, Green Waste</td>
<td>5000 t/a</td>
</tr>
<tr>
<td>DE, Regen</td>
<td>2007</td>
<td></td>
<td>1</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>Bio Waste, Energy Crops, Green Waste</td>
<td>18000 t/a</td>
</tr>
<tr>
<td>DE, Rostock</td>
<td>2007</td>
<td></td>
<td>3</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>Organic Fraction of Municipal Solid Waste</td>
<td>40000 t/a</td>
</tr>
<tr>
<td>CH, Utzenstorf</td>
<td>2007</td>
<td></td>
<td>1</td>
<td>720 m³</td>
<td>Concrete</td>
<td>Bio Waste, Green Waste, Liquid Waste</td>
<td>12000 t/a</td>
</tr>
<tr>
<td>CH, Aarberg</td>
<td>2006</td>
<td></td>
<td>1</td>
<td>1300 m³</td>
<td>Concrete</td>
<td>Bio Waste, Food Waste, Green Waste</td>
<td>20000 t/a</td>
</tr>
<tr>
<td>Location</td>
<td>Start of operation</td>
<td>Anaerobic Digestion</td>
<td>2006</td>
<td>Number of Digester(s)</td>
<td>Net volume per digester</td>
<td>Digester Design</td>
<td>Waste Type</td>
</tr>
<tr>
<td>---------------</td>
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<td>------------</td>
</tr>
<tr>
<td>CH, Langenthal</td>
<td>2006</td>
<td>Anaerobic Digestion</td>
<td>1</td>
<td>240 m³</td>
<td>Steel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH, Ottenbach</td>
<td>2006</td>
<td>Anaerobic Digestion</td>
<td>1</td>
<td>960 m³</td>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH, Pratteln</td>
<td>2006</td>
<td>Anaerobic Digestion</td>
<td>1</td>
<td>960 m³</td>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE, Reimlingen</td>
<td>2006</td>
<td>Anaerobic Digestion</td>
<td>2</td>
<td>1300 m³</td>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE, Weissenfels 2</td>
<td>2006</td>
<td>Anaerobic Digestion</td>
<td>1</td>
<td>960 m³</td>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Kompogas® Anaerobic Digestion Plants (all)

CH, Jona
Start of operation: 2005
Number of Digester(s): 1
Net volume per digester: 330 m³
Digester Design: Concrete
Digester Type: ZAFE
Waste Type: Bio Waste, Food Waste, Green Waste
Waste Throughput per Year: 5000 t/a
Biogas Utilisation: Combined Heat and Power

ES, La Rioja
Start of operation: 2005
Number of Digester(s): 6
Net volume per digester: 1050 m³
Digester Design: Concrete
Digester Type: ZAFB
Waste Type: Organic Fraction of Municipal Solid Waste
Waste Throughput per Year: 75000 t/a
Biogas Utilisation: Combined Heat and Power

CH, Lenzburg
Start of operation: 2005
Number of Digester(s): 1
Net volume per digester: 340 m³
Digester Design: Steel
Waste Type: Bio Waste, Food Waste, Green Waste, Liquid Waste
Waste Throughput per Year: 5000 t/a
Biogas Utilisation: Combined Heat and Power

MQ, Martinique
Start of operation: 2005
Number of Digester(s): 1
Net volume per digester: 750 m³
Digester Design: Steel
Waste Type: Bio Waste, Green Waste
Waste Throughput per Year: 20000 t/a
Biogas Utilisation: Combined Heat and Power

CH, Uzwil 2
Start of operation: 2005
Number of Digester(s): 1
Net volume per digester: 1300 m³
Digester Design: Concrete
Digester Type: ZAFB
Waste Type: Bio Waste, Food Waste, Green Waste, Liquid Waste
Waste Throughput per Year: 20000 t/a
Biogas Utilisation: Combined Heat and Power
### JP, Kyoto 1
- **Start of operation**: 2004
- **Anaerobic Digestion**
  - Number of Digester(s): 2
  - Net volume per digester: 1150 m³
  - Digester Design: Steel
  - Waste Type: Bio Waste, Food Waste
  - Waste Throughput per Year: 15000 t/a
  - Biogas Utilisation: Combined Heat and Power

### DE, Passau
- **Start of operation**: 2004
- **Anaerobic Digestion**
  - Number of Digester(s): 3
  - Net volume per digester: 980 m³
  - Digester Design: Concrete
  - Digester Type: ZAFB
  - Waste Type: Bio Waste, Green Waste
  - Waste Throughput per Year: 39000 t/a
  - Biogas Utilisation: Combined Heat and Power

### CH, Bachenbülach 2
- **Start of operation**: 2003
- **Anaerobic Digestion**
  - Number of Digester(s): 1
  - Net volume per digester: 340 m³
  - Digester Design: Steel
  - Waste Type: Bio Waste, Food Waste, Green Waste
  - Waste Throughput per Year: 10000 t/a
  - Biogas Utilisation: Biomethane for gas-grid injection, Combined Heat and Power

### DE, Weissenfels 1
- **Start of operation**: 2003
- **Anaerobic Digestion**
  - Number of Digester(s): 1
  - Net volume per digester: 980 m³
  - Digester Design: Concrete
  - Digester Type: ZAFB
  - Waste Type: Bio Waste, Green Waste
  - Waste Throughput per Year: 12500 t/a
  - Biogas Utilisation: Combined Heat and Power

### CH, Oetwil am See 1
- **Start of operation**: 2001
- **Anaerobic Digestion**
  - Number of Digester(s): 1
  - Net volume per digester: 750 m³
  - Digester Design: Steel
  - Waste Throughput per Year: 10000 t/a
  - Biogas Utilisation: Combined Heat and Power
**AT, Roppen**

- Start of operation: 2001
- Anaerobic Digestion
- Number of Digester(s): 1
- Net volume per digester: 750 m³
- Digester Design: Steel
- Waste Type: Bio Waste, Green Waste
- Waste Throughput per Year: 10000 t/a
- Biogas Utilisation: Combined Heat and Power

**DE, Alzey-Worms**

- Start of operation: 1999
- Anaerobic Digestion
- Number of Digester(s): 2
- Net volume per digester: 840 m³
- Digester Design: Concrete
- Waste Type: Bio Waste, Green Waste
- Waste Throughput per Year: 24000 t/a
- Biogas Utilisation: Combined Heat and Power

**DE, Frankfurt am Main**

- Start of operation: 1999
- Anaerobic Digestion
- Number of Digester(s): 1
- Net volume per digester: 1300 m³
- Digester Design: ZAM
- Waste Type: Bio Waste, Green Waste
- Waste Throughput per Year: 20000 t/a
- Biogas Utilisation: Combined Heat and Power

**JP, Kyoto Demo**

- Start of operation: 1999
- Anaerobic Digestion
- Number of Digester(s): 1
- Net volume per digester: 100 m³
- Digester Design: Steel
- Waste Type: Bio Waste, Food Waste
- Waste Throughput per Year: 1000 t/a
- Biogas Utilisation: Combined Heat and Power

**CH, Uzwil 1**

- Start of operation: 1998
- Anaerobic Digestion
- Number of Digester(s): 2
- Net volume per digester: 410 m³
- Digester Design: Concrete
- Digester Type: ZAH
- Waste Type: Bio Waste, Green Waste, Liquid Waste
- Waste Throughput per Year: 10500 t/a
- Biogas Utilisation: Combined Heat and Power
**Kompogas® Anaerobic Digestion Plants (all)**

**DE, Braunschweig**
- Start of operation: 1997
- Anaerobic Digestion: Number of Digester(s) 2, Net volume per digester 840 m³, Digester Design Steel, Waste Type Bio Waste, Green Waste, Waste Throughput per Year 20000 t/a, Biogas Utilisation Biomethane for gas-grid injection

**DE, Hunsrück**
- Start of operation: 1997
- Anaerobic Digestion: Number of Digester(s) 2, Net volume per digester 840 m³, Digester Design Steel, Waste Type Bio Waste, Green Waste, Waste Throughput per Year 13000 t/a, Biogas Utilisation Combined Heat and Power

**AT, Lustenau**
- Start of operation: 1997
- Anaerobic Digestion: Number of Digester(s) 2, Net volume per digester 575 m³, Digester Design Steel, Waste Type Bio Waste, Green Waste, Waste Throughput per Year 17000 t/a, Biogas Utilisation Biomethane for gas-grid injection

**DE, München-Erding**
- Start of operation: 1997
- Anaerobic Digestion: Number of Digester(s) 2, Net volume per digester 840 m³, Digester Design Steel, Waste Type Bio Waste, Green Waste, Waste Throughput per Year 32000 t/a, Biogas Utilisation Combined Heat and Power

**CH, Otelfingen**
- Start of operation: 1996
- Anaerobic Digestion: Number of Digester(s) 1, Net volume per digester 840 m³, Digester Design Concrete, Digester Type ZAH, Waste Type Bio Waste, Green Waste, Waste Throughput per Year 12500 t/a, Biogas Utilisation Biomethane for gas-grid injection, Combined Heat and Power
<table>
<thead>
<tr>
<th>Location</th>
<th>Start of operation</th>
<th>Anaerobic Digestion</th>
<th>Number of Digester(s)</th>
<th>Net volume per digester</th>
<th>Digester Design</th>
<th>Waste Type</th>
<th>Waste Throughput per Year</th>
<th>Biogas Utilisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE, Kempten</td>
<td>1995</td>
<td>2</td>
<td>260 m³</td>
<td>Steel</td>
<td>Bio Waste, Green Waste</td>
<td>12500 t/a</td>
<td>Combined Heat and Power</td>
<td></td>
</tr>
</tbody>
</table>
To: Sonoma County Waste Management Agency

Re: Hitachi Zosen Inova U.S.A. LLC (US subsidiary of Hitachi Zosen Corporation, HQ in Osaka, Japan)

At the request of our client, Hitachi Zosen Corporation, whose registered office is located at 7-89, Nanko-kita, 1-chome, Suminoe-ku, Osaka, Japan, we are pleased to inform you of the following:

Hitachi Zosen Corporation has maintained an account with us since August 1, 1963. Their deposit balance with us is ¥21,146 million, and loan balance is ¥23,436 million as of March 31, 2017. We provide Hitachi Zosen Corporation with revolving credit facility in the total commitment amount of JPY20Billion.

We are interested in making additional credit facilities available upon their request for the project, in the event of Hitachi Zosen Corporation being awarded the Kompogas Sonoma AD project contract. Such facilities are subject to our conducting a credit review of the project and our finding that all the necessary requirements are met.

This letter shall not be construed as a commitment, guarantee nor warranty, or otherwise to have any legally binding effect to our bank.

Yours faithfully,

The Bank of Tokyo-Mitsubishi UFJ, Ltd.
Corporate Banking Department No.2
Osaka Corporate Banking Division No. 3
Osaka Corporate Banking Group

Authorized signature
Kenji Iijima, Chief Manager
2016 Annual Report
Integrated Waste Treatment Solutions

Appendix E - Part 1 of 2
Waste is our Energy.
Engineering is our Business.
Sustainable Solutions are our Mission.

Hitachi Zosen Inova AG is a global leader in energy from waste, operating as part of the Hitachi Zosen Corporation Group. We act as an engineering, procurement and construction (EPC) contractor delivering complete turnkey plants and system solutions for energy recovery from waste.

**Hitachi Zosen Inova AG**

<table>
<thead>
<tr>
<th>(in CHF thousand)</th>
<th>2015*</th>
<th>2016**</th>
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</thead>
<tbody>
<tr>
<td>Order intake</td>
<td>609,285</td>
<td>73,920</td>
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<td>Order backlog</td>
<td>662,044</td>
<td>189,418</td>
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<tr>
<td>Net revenues</td>
<td>530,797</td>
<td>501,872</td>
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<tr>
<td>EBITDA</td>
<td>28,852</td>
<td>11,815</td>
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<tr>
<td>EBIT</td>
<td>26,343</td>
<td>8,086</td>
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<tr>
<td>Net income</td>
<td>6,706</td>
<td>7,749</td>
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<tr>
<td>Share capital</td>
<td>40,000</td>
<td>40,000</td>
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<tr>
<td>Net assets</td>
<td>38,655</td>
<td>44,133</td>
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<tr>
<td>Total assets</td>
<td>259,149</td>
<td>250,320</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>15 %</td>
<td>18 %</td>
</tr>
<tr>
<td>Headcount</td>
<td>574</td>
<td>628</td>
</tr>
</tbody>
</table>

* April 1, 2014 – March 31, 2015  
** April 1, 2015 – March 31, 2016
Ladies and Gentlemen

Hitachi Zosen Inova started the fiscal year, ended March 2016, with a substantial backlog of orders that needed to be delivered to our clients, and our primary focus was therefore on project execution and performance improvement.

Thanks to the contract award from Syctom for Ivry – the next large EfW plant in Paris – and significant service activities we were able to maintain our leading market position. In July 2015, we handed over Ferrybridge to the client with a net energy efficiency of over 31%, which was an excellent result. We have received engineering contracts for the new UK project Edinburgh and the order booking for Ferrybridge 2 was secured in June 2016.

The integration of the Kompogas® technology and the AD Team is well on track, with a substantial pipeline of prospects in the global market. With the contract for the Kompogas® plant in Bologna, we started the execution of the largest dry AD plant in Europe. Meanwhile, Hitachi Zosen Inova BioMethan GmbH and Hitachi Zosen Inova Kraftwerkstechnik GmbH both had a successful first year as part of our group.

We have further strengthened our capabilities and resources, allowing us to deliver the solutions needed by our globally active partners.

Yours sincerely,

Minoru Furukawa Franz-Josef Mengede
Chairman CEO
Hitachi Zosen Corporation Hitachi Zosen Inova AG
Review
There was a further decline in the number of projects awarded in Europe last year, continuing the trend from 2014, but HZI was nonetheless able to maintain its leading market position. We have been pre-selected for a number of projects due to be released, opening up the possibility of securing engineering orders going forward.

Having strengthened our Engineering, Civil, Project Management, and Service offerings, we were well-positioned to handle the projects in execution and so bolster confidence among our customers in our ability to deliver.

The positioning of our biogas and biomethane upgrading businesses has been well received in the market, and we see substantial growth opportunities in these areas.

All projects under execution are progressing well, with our increased process and civil engineering capabilities making a positive contribution.

We maintained our keen focus on R&D to further improve the energy efficiency, material recovery, and cost effectiveness of our solutions.

The negative market trend in energy production prices has continued, and this calls for flexible solutions such as CHP as well as affordable efficiency improvements.

Outlook
Our vast installed capacity provides ample opportunity for modernization, bringing best practice performance from recent developments into play.

Notice to proceed for the significant Ferrybridge Multifuel 2 project in June 2016 has proven our role as a reliable EPC contractor in the UK, which is still one of our most important markets. With a number of promising projects ahead, we are confident of strengthening our position in the UK and successfully obtain further projects in FY 2016/2017.

Some very important research and development activities in the domain of material recovery have been successfully implemented and are now undergoing an intensive test. First results have been satisfying and we look forward to implementing further installations.

The globalization of the EfW and AD market is continuing, and we are addressing this with our multinational engineering and execution teams and globalized sourcing of supplies and services.

With our services delivering first-class resource recovery plants, we are ideally placed to support our partners in their local and global activities.
Executive & Supervisory Boards

Axel Greschitz  
CFO  
Member of the Executive Board

Katsuhisa Tsuji  
CTO  
Member of the Executive and Supervisory Board

Franz-Josef Mengede  
CEO  
Member of the Executive and Supervisory Board

Koichiro Anzai  
Chairman of the Supervisory Board

Atsuhiro Idogaki  
Member of the Supervisory Board
Despite the weak global economic outlook, Hitachi Zosen Corporation (HZC) continued to enjoy steady growth in the fiscal year ended March 31, 2016 with the Environment Systems and Industrial Plant businesses leading the way. The company’s overall performance was further bolstered by a sizable order in the Middle East booked by the Desalination plant business.

The Japanese economy showed signs of recovery in the first half of the fiscal year ended March 31, 2016, but subsequently slowed down as it was impacted by rising uncertainty and geopolitical tensions weighing on economies worldwide. In spite of the challenging economic background, Hitachi Zosen Corporation maintained steady growth in the second year of its three-year management business plan “Hitz Vision II”. Order intake totaled JPY 435.4 billion (CHF 3,730 million), slightly below the targeted JPY 450 billion (CHF 3,855 million). However, revenues came in at JPY 387.0 billion (CHF 3,315 million), more than 110% of the Hitz Vision II figure. Operating profit (+17.9% to JPY 15.1 billion/CHF 129 million) and net profit (+14.7% to JPY 5.8 billion/CHF 50 million) both posted double-digit growth year-on-year, but still lagged behind the Hitz Vision II budget.
Environment Systems and Industrial Plant
Order intake decreased by 9.9% year-on-year to JPY 283.7 billion (CHF 2,430 million) owing to the delay in closing several large EfW projects in Europe. The Desalination plant business picked up sharply as HZC was awarded a second order in Qatar. The new order for a Multi-Stage Flash/Reverse Osmosis (MSF/RO) process desalination plant with a treatment volume of 590,000 tonnes per day is the largest plant of this type for HZC. Meanwhile, with steady progress being made on projects in execution, revenues increased by 6.9% to JPY 241.6 billion (CHF 2,070 million) and operating income was 8.8% higher at JPY 14.8 billion (CHF 127 million).

Machinery
Although HZC booked JPY 104.5 billion (CHF 895 million) in revenues, on a par with the previous year, operating loss of JPY 864 million (CHF 7 million) was booked due to the impact of an overseas subsidiary’s loss-making operations.

Infrastructure
Thanks to increased revenues of JPY 30.8 billion (CHF 264 million), coupled with the implementation of structural reforms, operating results were up to JPY 432 million (CHF 4 million), this compared with the loss recorded in the previous fiscal year.

Other Segments
Other segments – namely transportation, warehousing, and port cargo handling – posted revenues of JPY 10.1 billion (CHF 87 million), with operating profit coming in at JPY 752 million (CHF 6 million).

Financial Situation
Consolidated total assets fell by JPY 7.2 billion (CHF 62 million) to JPY 401.6 billion (CHF 3,440 million) attributable mainly to a decrease in cash and cash equivalents of JPY 10.8 billion (CHF 93 million). Consolidated total liabilities fell by JPY 10.3 billion (CHF 88 million) to JPY 281.0 billion (CHF 2,407 million), reflecting the reduction in interest-bearing debt of JPY 14.2 billion (CHF 122 million). Meanwhile, shareholders’ equity increased to JPY 114.2 billion (CHF 978 million), adding to the net profit for the period. The equity ratio thus increased to 28.4% from 26.6% in the previous year.

Forecast for the Next Fiscal Year
In the next fiscal year, order intake of JPY 450 billion (CHF 3,855 million), revenues of JPY 400 billion (CHF 3,426 million) and a recovery in the Machinery business are expected to push up operating profit, ordinary profit, and net profit to JPY 16 billion (CHF 137 million), JPY 12 billion (CHF 103 million), and JPY 6 billion (CHF 51 million) respectively.

(CHF=JPY 116.74 as of March 31, 2016)
## Financial Highlights

**Hitachi Zosen Corporation and Consolidated Subsidiaries**  
**For the Fiscal Years Ended March 31, 2015 and 2016**

<table>
<thead>
<tr>
<th>(in JPY million)</th>
<th>2015</th>
<th>2016</th>
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</thead>
<tbody>
<tr>
<td><strong>Operating results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order intake</td>
<td>452,758</td>
<td>435,435</td>
</tr>
<tr>
<td>Order backlog</td>
<td>557,786</td>
<td>606,177</td>
</tr>
<tr>
<td>Revenues</td>
<td>359,332</td>
<td>387,044</td>
</tr>
<tr>
<td>Operating income</td>
<td>12,819</td>
<td>15,113</td>
</tr>
<tr>
<td>Net income</td>
<td>5,100</td>
<td>5,849</td>
</tr>
<tr>
<td><strong>Cash flows</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash flows from operating activities</td>
<td>9,086</td>
<td>8,148</td>
</tr>
<tr>
<td>Cash flows from investing activities</td>
<td>(14,680)</td>
<td>(3,666)</td>
</tr>
<tr>
<td>Cash flows from financing activities</td>
<td>12,178</td>
<td>(15,948)</td>
</tr>
<tr>
<td>Cash and cash equivalents as of fiscal year end</td>
<td>60,770</td>
<td>49,672</td>
</tr>
<tr>
<td><strong>Financial position</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net assets</td>
<td>117,531</td>
<td>120,666</td>
</tr>
<tr>
<td>Total assets</td>
<td>408,803</td>
<td>401,649</td>
</tr>
<tr>
<td>Investments in property, plant and equipment and intangible assets (account balance)</td>
<td>135,934</td>
<td>127,523</td>
</tr>
<tr>
<td><strong>Financial indicators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shareholders’ equity ratio (%)</td>
<td>26.6</td>
<td>28.4</td>
</tr>
<tr>
<td>Debt-equity ratio (times)</td>
<td>1.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Workforce as of fiscal year end</td>
<td>9,581</td>
<td>9,825</td>
</tr>
</tbody>
</table>
Order intake (JPY billion)

Order backlog (JPY billion)
Revenues (JPY billion)

Export ratio (%)

Operating income (JPY billion)

Operating margin (%)

Net income (JPY billion)

Net income per share (JPY)*

Total assets (JPY billion)

Shareholders’ equity ratio (%)

Revenues by segment

Revenues by region

*HZC consolidated common stocks of the company with a ratio of five shares to one share on October 1, 2013
## Financial Highlights

**Hitachi Zosen Inova AG**  
**For the Fiscal Years Ended March 31, 2015 and 2016**

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating results</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order intake</td>
<td>609,285</td>
<td>73,920</td>
</tr>
<tr>
<td>Order backlog</td>
<td>662,044</td>
<td>189,418</td>
</tr>
<tr>
<td>Net revenues</td>
<td>530,797</td>
<td>501,872</td>
</tr>
<tr>
<td>Operating profit</td>
<td>26,343</td>
<td>8,086</td>
</tr>
<tr>
<td>Net income</td>
<td>6,706</td>
<td>7,749</td>
</tr>
<tr>
<td><strong>Cash flows</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash flows from operating activities</td>
<td>7,944</td>
<td>(24,899)</td>
</tr>
<tr>
<td>Cash flows from investing activities</td>
<td>5,439</td>
<td>2,347</td>
</tr>
<tr>
<td>Cash flows from financing activities</td>
<td>(502)</td>
<td>(696)</td>
</tr>
<tr>
<td>Cash and cash equivalents as of fiscal year end</td>
<td>107,125</td>
<td>86,978</td>
</tr>
<tr>
<td><strong>Financial position</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net assets</td>
<td>38,655</td>
<td>44,133</td>
</tr>
<tr>
<td>Total assets</td>
<td>259,149</td>
<td>250,320</td>
</tr>
</tbody>
</table>
Order intake (CHF million) | Order backlog (CHF million) | Revenues (CHF million)
--- | --- | ---
456 | 534 | 609

2012 | 2013/14* | 2015 | 2016

4 | 5 | 8

2012 | 2013/14* | 2015 | 2016

202 | 421 | 531 | 502

Net income (CHF million)

Total assets (CHF million)

*January 1, 2013 – March 31, 2014
## Financial Statements 2015 and 2016
### Hitachi Zosen Inova AG
### Consolidated Statement of Financial Position*

### As at March 31
(in CHF thousand)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>107,125</td>
<td>86,978</td>
</tr>
<tr>
<td>Other financial assets</td>
<td>4,920</td>
<td>2,031</td>
</tr>
<tr>
<td>Trade and other receivables</td>
<td>10,242</td>
<td>13,474</td>
</tr>
<tr>
<td>Construction contracts in progress</td>
<td>97,730</td>
<td>107,120</td>
</tr>
<tr>
<td>Inventory</td>
<td>4,783</td>
<td>7,313</td>
</tr>
<tr>
<td>Prepayments and accruals</td>
<td>1,866</td>
<td>5,347</td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td>226,666</td>
<td>222,263</td>
</tr>
<tr>
<td>Other financial assets</td>
<td>6,908</td>
<td>3,208</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>8,658</td>
<td>8,608</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>13,117</td>
<td>12,840</td>
</tr>
<tr>
<td>Deferred tax assets</td>
<td>3,800</td>
<td>3,401</td>
</tr>
<tr>
<td><strong>Non-current assets</strong></td>
<td>32,483</td>
<td>28,057</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>259,149</td>
<td>250,320</td>
</tr>
</tbody>
</table>

*The consolidated figures stated herein refer to Hitachi Zosen Inova AG according to IFRS standards and were audited as such by KPMG AG.*
As at March 31 (in CHF thousand)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td>168,186</td>
<td>150,522</td>
</tr>
<tr>
<td>Other payables</td>
<td>5,153</td>
<td>4,858</td>
</tr>
<tr>
<td>Deferred income/revenues</td>
<td>4,356</td>
<td>5,853</td>
</tr>
<tr>
<td>Other financial liabilities</td>
<td>5,422</td>
<td>3,101</td>
</tr>
<tr>
<td>Employee benefits</td>
<td>10,804</td>
<td>10,337</td>
</tr>
<tr>
<td>Provisions</td>
<td>4,177</td>
<td>6,690</td>
</tr>
<tr>
<td>Current income tax payable</td>
<td>650</td>
<td>1,435</td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td>198,748</td>
<td>182,796</td>
</tr>
<tr>
<td>Other financial liabilities</td>
<td>4,089</td>
<td>601</td>
</tr>
<tr>
<td>Employee benefits</td>
<td>11,590</td>
<td>16,817</td>
</tr>
<tr>
<td>Provisions</td>
<td>5,626</td>
<td>5,604</td>
</tr>
<tr>
<td>Deferred tax liabilities</td>
<td>441</td>
<td>369</td>
</tr>
<tr>
<td><strong>Non-current liabilities</strong></td>
<td>21,746</td>
<td>23,391</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td>220,494</td>
<td>206,187</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share capital</td>
<td>40,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Hedging reserves</td>
<td>(1,488)</td>
<td>205</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>143</td>
<td>3,928</td>
</tr>
<tr>
<td><strong>Total equity attributable to the shareholder of the Company</strong></td>
<td>38,655</td>
<td>44,133</td>
</tr>
<tr>
<td><strong>Total liabilities and equity</strong></td>
<td>259,149</td>
<td>250,320</td>
</tr>
</tbody>
</table>

*The consolidated figures stated herein refer to Hitachi Zosen Inova AG according to IFRS standards and were audited as such by KPMG AG.*
## Consolidated Statement of Profit or Loss and Other Comprehensive Income

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net revenues</strong></td>
<td>530,797</td>
<td>501,872</td>
</tr>
<tr>
<td><strong>Cost of materials and services purchased</strong></td>
<td>(409,513)</td>
<td>(383,600)</td>
</tr>
<tr>
<td><strong>Personnel expenses</strong></td>
<td>(66,488)</td>
<td>(80,134)</td>
</tr>
<tr>
<td><strong>Other operating expenses</strong></td>
<td>(28,379)</td>
<td>(33,173)</td>
</tr>
<tr>
<td><strong>Other operating income</strong></td>
<td>2,435</td>
<td>6,850</td>
</tr>
<tr>
<td><strong>Operating profit before depreciation and amortization (EBITDA)</strong></td>
<td>28,852</td>
<td>11,815</td>
</tr>
<tr>
<td><strong>Depreciation and amortization</strong></td>
<td>(2,509)</td>
<td>(3,729)</td>
</tr>
<tr>
<td><strong>Operating profit (EBIT)</strong></td>
<td>26,343</td>
<td>8,086</td>
</tr>
<tr>
<td><strong>Finance income</strong></td>
<td>497</td>
<td>4,061</td>
</tr>
<tr>
<td><strong>Finance costs</strong></td>
<td>(18,301)</td>
<td>(2,631)</td>
</tr>
<tr>
<td><strong>Profit before income tax</strong></td>
<td>8,539</td>
<td>9,516</td>
</tr>
<tr>
<td><strong>Income tax</strong></td>
<td>(1,833)</td>
<td>(1,767)</td>
</tr>
<tr>
<td><strong>Profit for the period attributable to the shareholder of the Company</strong></td>
<td>6,706</td>
<td>7,749</td>
</tr>
<tr>
<td><strong>Other comprehensive income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective portion of changes in fair value of cash flow hedges</td>
<td>(85)</td>
<td>982</td>
</tr>
<tr>
<td>Net change in fair value of cash flow hedges reclassified to profit or loss</td>
<td>(1,633)</td>
<td>1,161</td>
</tr>
<tr>
<td>Foreign currency translation difference</td>
<td>(51)</td>
<td>(104)</td>
</tr>
<tr>
<td>Income tax</td>
<td>361</td>
<td>(450)</td>
</tr>
<tr>
<td><strong>Items that are or may be reclassified to profit or loss</strong></td>
<td>(1,408)</td>
<td>1,589</td>
</tr>
<tr>
<td>Remeasurements of defined benefit liability (asset)</td>
<td>(14,971)</td>
<td>(4,891)</td>
</tr>
<tr>
<td>Income tax</td>
<td>3,131</td>
<td>1,031</td>
</tr>
<tr>
<td><strong>Items that will never be reclassified to profit or loss</strong></td>
<td>(11,840)</td>
<td>(3,860)</td>
</tr>
<tr>
<td><strong>Other comprehensive income for the period, net of tax</strong></td>
<td>(13,248)</td>
<td>(2,271)</td>
</tr>
<tr>
<td><strong>Total comprehensive income for the period attributable to the shareholder of the Company</strong></td>
<td>(6,542)</td>
<td>5,478</td>
</tr>
</tbody>
</table>
Consolidated Statement of Changes in Equity

(in CHF thousand)

<table>
<thead>
<tr>
<th>Share capital</th>
<th>Hedging reserve</th>
<th>Retained earnings</th>
<th>Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance as at April 1, 2014</td>
<td>40,000</td>
<td>(131)</td>
<td>5,328</td>
</tr>
</tbody>
</table>

Profit for the year | 6,706 | 6,706 |

Other comprehensive income

- Effective portion of changes in fair value of cash flow hedges | (85) | (85) |
- Net change in fair value of cash flow hedges reclassified to profit or loss | (1,633) | (1,633) |
- Remeasurements of defined benefit liability (asset) | (14,971) | (14,971) |
- Foreign currency translation difference | (51) | (51) |
- Income tax on other comprehensive income | 361 | 3,131 | 3,492 |

Total other comprehensive income | (1,357) | (11,891) | (13,248) |

Total comprehensive income for the year | (1,357) | (11,891) | (13,248) |

Balance as at March 31, 2015 | 40,000 | (1,488) | 143 | 38,655 |

Profit for the year | 7,749 | 7,749 |

Other comprehensive income

- Effective portion of changes in fair value of cash flow hedges | 982 | 982 |
- Net change in fair value of cash flow hedges reclassified to profit or loss | 1,161 | 1,161 |
- Defined benefit plan actuarial gains (losses) | (4,891) | (4,891) |
- FX effect | (104) | (104) |
- Income tax on other comprehensive income | (450) | 1,031 | 581 |

Total other comprehensive income | 1,693 | (3,964) | (2,271) |

Total comprehensive income for the year | 1,693 | 3,785 | 5,478 |

Balance as at March 31, 2016 | 40,000 | 205 | 3,928 | 44,133 |
Consolidated Statement of Cash Flows

<table>
<thead>
<tr>
<th>(in CHF thousand)</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit before tax</td>
<td>8,539</td>
<td>9,516</td>
</tr>
<tr>
<td>Adjustment for net finance (income) costs</td>
<td>(343)</td>
<td>(92)</td>
</tr>
<tr>
<td>Adjustment for depreciation and amortization</td>
<td>2,509</td>
<td>3,729</td>
</tr>
<tr>
<td>Adjustment for non-cash items</td>
<td>(1,721)</td>
<td>(1,525)</td>
</tr>
<tr>
<td>Adjustment for exchange differences</td>
<td>14,436</td>
<td>(3,352)</td>
</tr>
<tr>
<td>Changes in inventories</td>
<td>165</td>
<td>(2,450)</td>
</tr>
<tr>
<td>Changes in trade/other accounts receivables</td>
<td>(55,542)</td>
<td>(15,505)</td>
</tr>
<tr>
<td>Changes in trade/other accounts payables</td>
<td>34,170</td>
<td>(17,426)</td>
</tr>
<tr>
<td>Changes in employee benefits</td>
<td>5,354</td>
<td>(265)</td>
</tr>
<tr>
<td>Changes in provisions</td>
<td>434</td>
<td>2,491</td>
</tr>
<tr>
<td>Interest received</td>
<td>434</td>
<td>238</td>
</tr>
<tr>
<td>Interest paid</td>
<td>(63)</td>
<td>(147)</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td>(234)</td>
<td>(111)</td>
</tr>
<tr>
<td><strong>Cash flows from operating activities</strong></td>
<td>7,944</td>
<td>(24,899)</td>
</tr>
<tr>
<td>Acquisition of property, plant and equipment</td>
<td>(903)</td>
<td>(1,011)</td>
</tr>
<tr>
<td>Acquisition of intangible assets</td>
<td>(2,582)</td>
<td>(1,327)</td>
</tr>
<tr>
<td>Acquisition of businesses, net of cash acquired</td>
<td>(9,227)</td>
<td>367</td>
</tr>
<tr>
<td>Acquisition of shares</td>
<td>(1,084)</td>
<td>5,449</td>
</tr>
<tr>
<td>Repayment of loans</td>
<td>(502)</td>
<td>(696)</td>
</tr>
<tr>
<td>Payment (repayment) of cash collaterals</td>
<td>12,120</td>
<td>(47)</td>
</tr>
<tr>
<td>Repayment (purchase) of term money</td>
<td>6,031</td>
<td>2,347</td>
</tr>
<tr>
<td><strong>Cash flows from investing activities</strong></td>
<td>5,439</td>
<td>2,347</td>
</tr>
<tr>
<td>Finance lease</td>
<td>(502)</td>
<td>(696)</td>
</tr>
<tr>
<td><strong>Cash flows from financing activities</strong></td>
<td>(502)</td>
<td>(696)</td>
</tr>
<tr>
<td><strong>Net increase in cash and cash equivalents</strong></td>
<td>12,881</td>
<td>(23,248)</td>
</tr>
<tr>
<td><strong>Cash and cash equivalents at the beginning of the period</strong></td>
<td>107,861</td>
<td>107,125</td>
</tr>
<tr>
<td>Changes in cash and cash equivalents</td>
<td>12,881</td>
<td>(23,248)</td>
</tr>
<tr>
<td>Effects of changes in foreign exchange rates on cash held</td>
<td>(13,617)</td>
<td>3,101</td>
</tr>
<tr>
<td><strong>Cash and cash equivalents at the end of the period</strong></td>
<td>107,125</td>
<td>86,978</td>
</tr>
</tbody>
</table>
Waste is our Energy.
Engineering is our Business.
Sustainable Solutions are our Mission.
December 7, 2017

William Skinner  Brandon Moffatt
West Coast Sales Manager  VP- Development
Hitachi Zosen Inova  USA LLC StormFisher, Ltd.
3740 Davinci Court, Suite 250  1087 Green Valley Road
Norcross, GA 30092  London, Ontario

Re: Letter of Intent to Negotiate

Dear Mr. Skinner and Mr. Moffatt,

The City of Santa Rosa ("City") is pleased to issue this Letter of Intent to Negotiate (LOI) to StormFisher Ltd and Hitachi Zosen Inova USA LLC. This LOI is based on the City's Board of Public Utilities ("Board") selection of your proposal ("Proposal") which is hereby deemed to include your written proposal, submitted on August 18, 2017, all answers to follow-up questions via email correspondence, and the oral presentations made in response to the City's "Request for Proposals for Location of an Organics Processing Facility on City of Santa Rosa Property" dated July 18, 2017, and all addendum thereto.

The purpose of this LOI is to provide written documentation confirming that you may include the use of City property in your response to the Sonoma County Waste Management Agency's ("Agency") "Request for Proposals for Organic Materials Processing" dated May 31, 2017. If you are successful in the Agency's selection process, the City agrees to enter into an exclusive right of negotiation in an effort to reach an agreement for the use of City property for an organics processing facility in line with the parameters set forth in your Proposal.

Any agreement will require the review and approval of the Board as well as environmental review of the proposed project under the California Environmental Quality Act, and therefore this LOI is only an agreement to negotiate in good faith and not a guarantee of, or commitment to, a final agreement or project approval. This LOI is not a guarantee of selection by the Agency, which is a process separate and apart from the City's process.

Sincerely,

Daniel Galvin
Chair of the Board of Public Utilities
The substrate data is subject to seasonal fluctuations (in particular, DS, oDS, oDSan such as substrate properties, material flows and performance data such as plant throughput and biogas yield are given as year average values and should be expressly understood as expected values. The substrate data provided in the mass balance shall be understood as average values and should be expressly understood as expected values.

1. The values given in the Mass Balance are expected values.
2. The total throughput is limited to the specific biogas production per input material and the maximum daily gas production of the digester.
3. Hitachi Zosen is responsible only for the scope of supply within its interface boundaries.
4. The values given in this Mass Balance are expected values.
5. The substrate data is subject to seasonal fluctuations (in particular, DS, oDS, oDSan such as substrate properties, material flows and performance data such as plant throughput and biogas yield are given as year average values and should be expressly understood as expected values.

The substrate data provided in the mass balance shall be understood as average values and should be expressly understood as expected values.

### Pre-treatment

- **Design Case 10% FW**
  - DS: 10% FW, wet
  - Total: 16,050 ton/yr

### Digester

- **Design Case 10% FW**
  - DS: 10% FW, wet
  - Total: 16,050 ton/yr

### Dewatering

- **Design Case 10% FW**
  - DS: 10% FW, wet
  - Total: 16,050 ton/yr

### Decanter

- **Design Case 10% FW**
  - DS: 10% FW, wet
  - Total: 16,050 ton/yr

### Fine treatment / Screening

- **Design Case 10% FW**
  - DS: 10% FW, wet
  - Total: 16,050 ton/yr
# Energy balance

(All units are US units)

**Project:** Sonoma County CA  
**Client:** Sonoma County

**Variant:** Full stream  
**Originator:** M. Burri  
**Issue:** 6/27/2017  
**Doc-No.:** Y-3321 - EB - 5.0

![Energy balance](image)

## AD Plant

**Basic data digester input**

<table>
<thead>
<tr>
<th></th>
<th>Design Case 10% FW</th>
<th>20% FW</th>
<th>10% FW, wet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total input material</td>
<td>68,389</td>
<td>68,179</td>
<td>68,389</td>
</tr>
<tr>
<td>Dry substance (DS)</td>
<td>29,445</td>
<td>28,021</td>
<td>26,358</td>
</tr>
<tr>
<td>Volatile solids (VS)</td>
<td>18,166</td>
<td>17,810</td>
<td>16,314</td>
</tr>
<tr>
<td>Usable volume</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td></td>
<td>792,516</td>
<td>792,516</td>
<td>792,516</td>
</tr>
</tbody>
</table>

*(expected values)* *(all "ton" are "short ton") *("scf" @ 70°F or 21.111°C, 1013.25 mbar, 0% RH)*

## Biogas

**Total production**  
220,069,613 scf/yr

<table>
<thead>
<tr>
<th>Specific on input</th>
<th>Design Case 10% FW</th>
<th>20% FW</th>
<th>10% FW, wet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific on input</td>
<td>3,218</td>
<td>3,228</td>
<td>3,218</td>
</tr>
<tr>
<td>Specific on DS</td>
<td>7,474</td>
<td>7,854</td>
<td>8,349</td>
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<tr>
<td>Specific on VS</td>
<td>12,114</td>
<td>12,357</td>
<td>13,490</td>
</tr>
<tr>
<td>Methane content</td>
<td>56.0%</td>
<td>56.0%</td>
<td>56.0%</td>
</tr>
<tr>
<td>Lower heating value (LHV)</td>
<td>502</td>
<td>502</td>
<td>502</td>
</tr>
<tr>
<td>Higher heating value (HHV)</td>
<td>556</td>
<td>556</td>
<td>556</td>
</tr>
</tbody>
</table>

**Energy yield (LHV)**  
110,573 MMBtu/yr

**Energy yield (HHV)**  
122,420 MMBtu/yr

## CHP

**Cogeneration unit**

<table>
<thead>
<tr>
<th></th>
<th>Design Case 10% FW</th>
<th>20% FW</th>
<th>10% FW, wet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power cogeneration unit(s)</td>
<td>1,550</td>
<td>1,550</td>
<td>1,550</td>
</tr>
<tr>
<td>Theor. electrical efficiency</td>
<td>41.9%</td>
<td>41.9%</td>
<td>41.9%</td>
</tr>
<tr>
<td>Theor. thermal efficiency</td>
<td>40.4%</td>
<td>40.4%</td>
<td>40.4%</td>
</tr>
<tr>
<td>Technical availability</td>
<td>97.0%</td>
<td>97.0%</td>
<td>97.0%</td>
</tr>
</tbody>
</table>

**Energy output expected**

<table>
<thead>
<tr>
<th></th>
<th>Design Case 10% FW</th>
<th>20% FW</th>
<th>10% FW, wet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Energy</td>
<td>13,170,660</td>
<td>13,170,660</td>
<td>13,170,660</td>
</tr>
<tr>
<td>Thermal Energy</td>
<td>43,331</td>
<td>43,331</td>
<td>43,331</td>
</tr>
</tbody>
</table>
### Energy Input

<table>
<thead>
<tr>
<th></th>
<th>Design Case 10% FW</th>
<th>20% FW</th>
<th>10% FW, wet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AD Plant</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Electrical Energy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretreatment, AD, incl. Waste air treatment</td>
<td>2,985,068</td>
<td>2,975,902</td>
<td>2,985,068 kWh/yr</td>
</tr>
<tr>
<td>Total</td>
<td>2,985,068</td>
<td>2,975,902</td>
<td>2,985,068 kWh/yr</td>
</tr>
<tr>
<td><strong>Thermal Energy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretreatment, AD, incl. Waste air treatment</td>
<td>16,974</td>
<td>16,922</td>
<td>16,974 MMBtu/yr</td>
</tr>
<tr>
<td>Total</td>
<td>16,974</td>
<td>16,922</td>
<td>16,974 MMBtu/yr</td>
</tr>
</tbody>
</table>

Depending on the operation the own consumption can vary ca. +/- 5%.

### Energy Output

<table>
<thead>
<tr>
<th></th>
<th>Design Case 10% FW</th>
<th>20% FW</th>
<th>10% FW, wet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AD plant</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Electrical Energy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHP</td>
<td>13,170,660</td>
<td>13,170,660</td>
<td>13,170,660 kWh/yr</td>
</tr>
<tr>
<td><strong>Thermal Energy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHP</td>
<td>43,331</td>
<td>43,331</td>
<td>43,331 MMBtu/yr</td>
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</table>

### Energy Balance

<table>
<thead>
<tr>
<th></th>
<th>Design Case 10% FW</th>
<th>20% FW</th>
<th>10% FW, wet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electrical Energy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>2,985,068</td>
<td>2,975,902</td>
<td>2,985,068 kWh/yr</td>
</tr>
<tr>
<td>Output</td>
<td>13,170,660</td>
<td>13,170,660</td>
<td>13,170,660 kWh/yr</td>
</tr>
<tr>
<td>Total</td>
<td>10,185,592</td>
<td>10,194,758</td>
<td>10,185,592 kWh/yr</td>
</tr>
<tr>
<td><strong>Thermal Energy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td>16,974</td>
<td>16,922</td>
<td>16,974 MMBtu/yr</td>
</tr>
<tr>
<td>Output</td>
<td>43,331</td>
<td>43,331</td>
<td>43,331 MMBtu/yr</td>
</tr>
<tr>
<td>Total</td>
<td>26,357</td>
<td>26,409</td>
<td>26,357 MMBtu/yr</td>
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# Appendix K

**P&ID DRAWING LIST**

<table>
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<th>Drawing Number</th>
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<th>Title</th>
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<td>1 of 1</td>
<td>A</td>
<td>Drawing Unit</td>
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<tr>
<td>Y-3321 1 312 002</td>
<td>1 of 1</td>
<td>A</td>
<td>Digester</td>
</tr>
<tr>
<td>Y-3321 1 312 004</td>
<td>1 of 1</td>
<td>A</td>
<td>Pit Bunker Facility Delivery &amp; Processing</td>
</tr>
<tr>
<td>Y-3321 1 312 006</td>
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<td>Pit Bunker Facility Processing</td>
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<tr>
<td>Y-3321 1 312 007</td>
<td>1 of 1</td>
<td>A</td>
<td>Digester Feed Conveying System</td>
</tr>
<tr>
<td>Y-3321 1 312 011</td>
<td>1 of 1</td>
<td>A</td>
<td>Decanter</td>
</tr>
<tr>
<td>Y-3321 1 312 012</td>
<td>1 of 1</td>
<td>A</td>
<td>Heating System</td>
</tr>
<tr>
<td>Y-3321 1 312 013</td>
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<td>Digestion Discharge Piping, Organic Waste, Single Pump</td>
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<td>Y-3321 1 312 014</td>
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<td>A</td>
<td>Hydraulic System, Organic Waste, Single Pump</td>
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<tr>
<td>Y-3321 1 312 015</td>
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<td>A</td>
<td>Screw Press</td>
</tr>
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<td>Y-3321 1 312 016</td>
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<td>Decanter</td>
</tr>
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<td>Y-3321 1 312 017</td>
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<td>A</td>
<td>Liquid Digestate Collecting Tank</td>
</tr>
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<td>A</td>
<td>Centrate Tank</td>
</tr>
<tr>
<td>Y-3321 1 312 019</td>
<td>1 of 1</td>
<td>A</td>
<td>Sump System</td>
</tr>
<tr>
<td>Y-3321 1 312 020</td>
<td>1 of 1</td>
<td>A</td>
<td>Ventilation System</td>
</tr>
<tr>
<td>Y-3321 1 312 021</td>
<td>1 of 1</td>
<td>A</td>
<td>Biogas Collector</td>
</tr>
<tr>
<td>Y-3321 1 312 022</td>
<td>1 of 1</td>
<td>A</td>
<td>Biogas Collector</td>
</tr>
<tr>
<td>Y-3321 1 312 023</td>
<td>1 of 1</td>
<td>A</td>
<td>Biogas Collector</td>
</tr>
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<td>1 of 1</td>
<td>A</td>
<td>Biogas Collector</td>
</tr>
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<td>1 of 1</td>
<td>A</td>
<td>Biogas Collector</td>
</tr>
<tr>
<td>Y-3321 1 312 026</td>
<td>1 of 1</td>
<td>A</td>
<td>Biogas Collector</td>
</tr>
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<td>Biogas Collector</td>
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<td>Biogas Collector</td>
</tr>
<tr>
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<td>1 of 1</td>
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</tr>
<tr>
<td>Y-3321 1 312 030</td>
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<td>A</td>
<td>Biogas Collector</td>
</tr>
<tr>
<td>Y-3321 1 312 031</td>
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<td>A</td>
<td>Biogas Collector</td>
</tr>
<tr>
<td>Y-3321 1 312 032</td>
<td>1 of 1</td>
<td>A</td>
<td>Air Utility</td>
</tr>
<tr>
<td>Y-3321 1 312 033</td>
<td>1 of 1</td>
<td>A</td>
<td>Air Utility</td>
</tr>
</tbody>
</table>

**Diagram:**

[Diagram of P&ID drawings]
San Luis Obispo AD Project

Planning a 36,500 TPY Food and Green Waste AD Facility in California
Hitachi Zosen Inova

Waste is our Energy

- Proprietary EfW, AD, Nutrient Recovery & Biogas Upgrading technologies
- Complete turnkey plants and system solutions
- Operation, maintenance & service business
- 600+ employees in Switzerland, Germany, UK & USA
- More than 600 reference projects worldwide
  - > 500 thermal Energy from Waste plants
  - > 75 biological Energy from Waste plants
  - > 50 biogas-to-methane upgrading plants
- A Hitachi Zosen Corporation subsidiary
Legal Structure and Revenues Hitachi Zosen Inova AG

- Hitachi Zosen Corporation
  - Hitachi Zosen Inova AG
    - Hitachi Zosen KRB AG
    - Hitachi Zosen Inova UK Ltd.
    - Hitachi Zosen Inova Australia Pty Ltd.
    - Hitachi Zosen Inova U.S.A. Holding Inc.
      - Hitachi Zosen Inova U.S.A. LLC
    - Hitachi Zosen Inova Deutschland GmbH
      - Hitachi Zosen Inova Kraftwerkstechnik GmbH
      - Hitachi Zosen Inova BioMethan GmbH
    - Hitachi Zosen India Pvt. Ltd.

Revenues (CHF million)

- 2011: 238
- 2012: 286
- 2013/14*: 421
- 2015: 531
San Luis Obispo (SLO) - AD Project

- SLO county needs to achieve 75% diversion goal (state goal by 2020)
- IWMA manager knows and prefers Kompogas
- Alternative is composting in neighboring counties (with rising compliance requirements in California for open composting)
- HZI is selected by WC to develop a FDBOO project
Strategic Partners
Organics recycling with AD = closing the nutrient cycle while generating energy

- 1 ton of organic waste = ≈ 20 gal gasoline fuel equivalent
- 1 ton food waste = ≈ 600 miles car trip
- 1 hour of light + 50 BTU of heat
- Nutrients source (N, P, K, etc.) + soil conditioner

≈ 30-60% organics
SLO has 27’000 t/year of yard waste (currently composted/ disposed) and want to include 9’500 t/a food waste in the future

Waste Connections (WC) provides disposal services for San Luis Obispo City, County, and the surrounding 9 communities

WC owns a site with office, workshops and truck parking which is foreseen and permitted for composting/ digestion operation

SLO and the surrounding communities waste disposal agreement with WC is extended (20 years) based on AD investment (Plant) required to fulfill new CA 75% diversion rate requirements by 2020 (actual 68%)

WC not interested in ‘technology projects’ – look for third party to finance-design-build-operate the Plant
→ waste supply and land lease contract with WC
**Key Data**

<table>
<thead>
<tr>
<th>Technology</th>
<th>• Kompogas HSAD System with CHP for power production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Type</td>
<td>• FDBOO (Finance, Design, Build, Own, Operate)</td>
</tr>
<tr>
<td></td>
<td>• First Reference Plant in US</td>
</tr>
<tr>
<td>Project Cost</td>
<td>• Approx. US$ 20 MM with Power only concept</td>
</tr>
<tr>
<td></td>
<td>• Financing through HZI and federal/state grants</td>
</tr>
<tr>
<td>Subsidy</td>
<td>• Grants: CalRecycle, <strong>CEC EPIC</strong>, CAEATFA)</td>
</tr>
<tr>
<td></td>
<td>• ITC program (Investment Tax Credit)</td>
</tr>
<tr>
<td>EPC</td>
<td>• HZIU (expected project duration 15 months)</td>
</tr>
<tr>
<td>O&amp;M</td>
<td>• HZIU Kompogas SLO Inc. (duration 20 years)</td>
</tr>
<tr>
<td>Customer</td>
<td>• Waste Connection with its Subsidiaries</td>
</tr>
<tr>
<td>Feedstock</td>
<td>• 36’500 t/a – WC is focusing to increase feedstock from 27’500 to 36’500</td>
</tr>
<tr>
<td>Property</td>
<td>• Owned by WC Subsidiary – leased by HZIU Kompogas SLO Inc.</td>
</tr>
<tr>
<td></td>
<td>• Existing building modified to fit overall plant concept</td>
</tr>
<tr>
<td>Compost &amp; Liquid Digestate Sales</td>
<td>• 10 $/t for compost</td>
</tr>
<tr>
<td></td>
<td>• Usage of liquid digestate as soil amendment for local farming</td>
</tr>
</tbody>
</table>
Kompogas HSAD
First Class Technology combined with HZI Turn-Key Capability

Proprietary Technology from HZI
Engineered by HZI
Managed by HZI

Project, Site and Construction Management

Feeding System
Digester
Discharge System
Dewatering
Gas Utilization

Electrical, Instrumentation and Controls
Balance of Plant and Energy Utilization
Site and Building Services
Civil

Integrated Solution
Maximized Efficiency
Reliable Execution
**Avenues for Organics Recycling**

**Source Segregated Collection vs. Mechanical Separation of MSW**

**Avenue 1: SSO**
Collection of source segregated organic waste and processing in a bio-waste Anaerobic Digestion plant

**Avenue 2: OF MSW**
Collection of MSW and separation of organics in a Mechanical-Biological Treatment (MBT) plant, incl. AD system

[Diagram of the two avenues with labels for MSW, mechanical separation, recyclables, organic fraction, incineration, tunnel composting, Anaerobic Digestion, maturation/composting, landfill, and biological part.]
Kompogas Dry AD
Designed for a large variety of input materials

- Household bio-waste
- Catering and kitchen waste
- Organic fraction of MSW / residual waste
- Green waste
- Market and vegetable waste
- Expired food from supermarkets
Kompogas Dry AD
Designed for a large variety of input materials

Impurities: sand, gravel, stones, plastic bags, plastic foils, cans, ceramics, bottles, flower pots, glass, batteries, video tapes, hard plastics, CDs, electric devices, wooden boxes, metal pieces, garden tools, nails, cutlery, dead animals, lawn mowers, waste bins, etc.
Kompogas Dry AD
The Plug-Flow Advantage

- **Horizontal plug flow**
  - Optimal digestion

- **Thermophile temperature 131° F**
  - Biological activity

- **Longitudinal agitator**
  - Energy saving & tight

- **Internal inoculation**
  - Stable & quick process

- **Internal inoculation**

- **Input**
  - DM: 20-50%

- **Biogas**
  - DM: ~30%

- **Discharge**
  - DM: 25-30%

- **Retention time 14 days @ 131° F → sanitized fertilizer products**

- **Inoculation allows fastest process start, defined & specialized process conditions allow highest conversion efficiency → highest biogas production and quality**
Kompogas steel digester
Robust and reliable, available in various sizes

- Digester sizes: PF1200, PF1500, PF1800, further sizes on request
- Modular design for fast installation
- High and constant biogas yield from anaerobic degradable inputs
- Continuous process and stable biology
- Safe and emissions-free
## Steel digester PF1500

<table>
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<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Feedstock capacity</td>
<td>~30‘000 t/y</td>
</tr>
<tr>
<td>Biogas production</td>
<td>~100 Million scf per year (~200 scfm)</td>
</tr>
<tr>
<td>If converted in a gas engine</td>
<td>~700 kW electricity &amp; 2.4 MMBTU/hr heat</td>
</tr>
<tr>
<td>If used as biogas</td>
<td>~50’000 MMBTU/year biogas energy content</td>
</tr>
<tr>
<td></td>
<td>~500’000 GGE/year (Gasoline Gallon Equ.)</td>
</tr>
<tr>
<td></td>
<td>~440’000 DGE/year (Diesel Gallon Equ.)</td>
</tr>
</tbody>
</table>
What is needed to be profitable?

- Safe and emissions-free
- Low operation and maintenance cost
- High and constant biogas yield from anaerobic degradable inputs
- Mature and reliable technology, long service life, large track record
- Continuous process, stable biology, high flexibility for changing input material stream
Kompogas process – Full stream

- Reception
- Pre-treatment
- Intermediate storage
- Anaerobic Digestion
- Liquid-solid separation
- Impurities
- Biogas
- Liquid digestate
- Sedimentation
- Liquid digestate storage
- Liquid fertilizer
- Solid digestate
- Aerobisation
- Post-rotting
- Compost
Technology – Reception
Technology – Pre-treatment
Technology – Intermediate storage & digester feeding
Technology – Kompogas digester

<table>
<thead>
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<th>Feature</th>
<th>Value</th>
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<tbody>
<tr>
<td>Length</td>
<td>33.8 m</td>
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<tr>
<td>Diameter</td>
<td>8.5 m</td>
</tr>
<tr>
<td>Nominal volume</td>
<td>1500 m³</td>
</tr>
</tbody>
</table>
Technology – Extraction & liquid-solid separation
Technology – Liquid-solid separation & liquid storage
Technology – Liquid-solid separation & aerobization
Selected references of >75 Kompogas plants in operation worldwide

The First

Rümlang (CH) built 1991

The Most Ecological

Rijsenhout (NL) Recovering CH₄ and CO₂ for greenhouses

The Largest

Doha (Qatar) 15 digesters for 301’400 t/y (OFMSW & SSO)

The Compact

Winterthur (CH) PF1500 steel digester & biogas upgrading
Lessons learned - 1

- Modified Use Permit (MUP) was expected to be available for existing site and buildings, however during investigations it turned out that it was not valid for AD projects.

- Conditional Use Permit (CUP) to be applied instead. Positive aspect is that the project size can now be expanded.

- Importance of working with local professionals (consultants, lawyers, engineers) in regards to all permitting activities

- Grant applications are a long and tedious process and some times depended on political schedule and climate

- Availability of grants has significant influence on economics of project
Lessons learned - 2

- Investigated different business cases:
  - CHP for electrical power
  - CHP and Upgrading for Gas Grid Injection
  - CHP and Upgrading for CNG
  - Upgrading for Gas Grid Injection
  - Upgrading for CNG
  - Upgrading for Gas Grid Injection and CNG

- In initial planning stages CNG option with HZIU own Upgrading technology presented itself as most economical solution. Due to extension of time frame for safe harboring of the ITC, the power only option has a significantly higher potential for return of investment.

- HZIU invested upfront time in a complete North Americanization of its technology, making it ready for the US market with parts and service easily available locally.
Lessons learned - 3

- Permitting requires significantly higher engineering effort than comparable projects in other areas in the US, Canada and Europe. The biggest issue was seismic conditions for California, it adds significant costs.

- CEQA (California Environmental Quality Act) Approval takes at a minimum 6 to 8 months by the time all appeal processes have been satisfied (great project, but not in my backyard)

- Liquid Digestate Offtake
  - Project economics depend on liquid digestate not being a liability.
  - Concerns are solids content, odor and low nutrient levels
  - Off-taker identified to take digestate free of charge

- Air permit has taken a bit of time to obtain. It only pertains to the CHP and Flare units but it has taken more than expected.
<table>
<thead>
<tr>
<th>ID</th>
<th>Task</th>
<th>Task Name</th>
<th>Duration</th>
<th>Predecessor</th>
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<th>Finish</th>
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<td>Wed 5/31/17</td>
<td>Mon 3/1/21</td>
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<tr>
<td>2</td>
<td>Milestones</td>
<td>Award Feedstock Supply Agreement by SCWMA</td>
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<td>3</td>
<td>RFP</td>
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<td>Wed 5/31/17</td>
<td>Mon 3/1/21</td>
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<td>Financing Available</td>
<td>0 days</td>
<td>Mon 7/2/18</td>
<td>Thu 8/1/19</td>
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Appendix P

January 8, 2018

To: William Skinner, Sean Honegger
From: Christopher D. Trumbull, P.E., G.E., D.GE

Subject: Geotechnical Feasibility Study, Organic Processing Facility, Santa Rosa, CA

GHD Inc (GHD) is pleased to present this memorandum for proposed organic processing facility on Meadow Lane in Santa Rosa, California. It is our understanding that the project includes the following concepts, as shown below: Truck Scale, Office, Compost Hall, Receiving Hall including pit bunkers, two Digesters, a Biofilter, a storage tank, other smaller treatment pieces, paved access ways, and appurtenant underground utilities.

The scope of work includes a feasibility-level geotechnical desktop study, which is intended to be used for planning purposes and not design.

1. Geotechnical Information

Geotechnical information was gathered from many public sources in addition to in-house geotechnical data.

1.1 Geology

The site is located in the Santa Rosa Valley within the Coast Range geomorphic province, about midway between Sebastopol and Rohnert Park, California. The province is generally characterized by northwest-trending mountains and valleys, which is a result of the northwest structural trend of the bedrock. The Santa Rosa Valley is largely infilled with Quaternary-aged (Pleistocene to Holocene) alluvial deposits, which consist of clay and silt with some sand and gravel.
1.2 **Subsurface Conditions**

Based on subsurface information from a nearby project, the site is likely underlain by soft clay, which can be compressible when subject to structure loading. In addition, the clay can have a moderate to high expansion potential, can be unstable under heavy loading, and can be mildly corrosive to ferrous metals and typical concrete. A very slow infiltration rate should be expected. Once below 20 to 30 feet, the clay can be underlain by other alluvial deposits, such as silt, sand, and gravel.

1.3 **Groundwater**

Groundwater should be expected in the range of 5 to 10 feet below the existing ground surface.

1.4 **Faulting and Seismicity**

The nearest active fault is the Rodgers Creek fault, which is about six miles northeast of the site, which is capable of an earthquake magnitude of 7.25. The site is not within an Alquist-Priolo Earthquake Fault Zone. Since the United States Geologic Survey (USGS) identifies a peak ground acceleration of 0.51g for design, strong ground shaking should be expected at the site.

1.5 **Geologic Hazards**

No fault offset, volcanic activity, earthquake-induced landslides, tsunamis, or seiches should be expected at the site, but the USGS has mapped areas nearby the site as having a high liquefaction potential.

1.6 **Floodplains**

The site is not in a FEMA Designated Special Flood Hazard Area. However, it is mapped within Zone X, which has a 0.2% annual chance of flood.

1.7 **Major Aquifer Recharge Areas**

The State of California, Department of Water Resources has not identified the site, or surrounding vicinity, as a Recharge Protection Area.

2. **Feasibility-Level Conclusions and Recommendations**

Based on the available information, the following feasibility-level conclusions and recommendations are offered for planning purposes only.

2.1 **Geologic Hazards**

Strong ground shaking should be expected in the lifetime of the facility and the design of the facility should include seismic design in accordance with the latest California Building Code. The site could be underlain by sand and high groundwater table, resulting in a high potential for liquefaction during earthquake shaking. A site-specific liquefaction evaluation should be performed to quantify the risk and consequences associated with liquefaction. If the site is underlain by liquefiable deposits, surficial settlement could occur and deep foundation may be required to provide structural support.
2.2 Foundation Support

The site is likely underlain by soft and compressible soil, which could provide marginal foundation support. Medium- to heavily-loaded structures, such as the digesters and storage tank, may require a deep foundation system, such as driven concrete piles, to minimize settlement of the structures. Lightly-loaded structures (other than digesters and tank) will likely derive support from typical shallow foundations, such as spread footing or mat foundations.

2.3 Unstable Soil

The site is likely underlain by expansive clay, which could raise vertically during wetting and shrink during drying. This could impact shallow foundations, flatwork, and pavements; special provisions, such as reinforcement, use of non-expansive fill, and chemical treatment may be required for mitigation.

2.4 Corrosive Soil

The clay can be corrosive and should be confirmed. If corrosive, it could require the use of special cement, such as Type V, in concrete and protection of buried ferrous metal pipelines or structures.

2.5 Permeable Strata and Soils

The permeable strata is expected to be at depths greater than 20 feet below existing ground surface.

2.6 Groundwater

Since the groundwater could be as shallow as 5 feet, excavations deeper than 5 feet may require dewatering.

2.7 Additional Study

The information contained herein is not site-specific and should not be used for design. Once the project is defined, a geotechnical investigation should be performed on the project site to obtain pertinent site-specific geotechnical information that can be evaluated for specific project features, geometry, and loading to develop conclusions and design-level recommendations.

3. Closing

If you have any questions regarding the information contained in this memorandum, or if we may be of further assistance, please do not hesitate to contact us.

Respectfully submitted,

Christopher D. Trumbull, P.E., G.E., D.GE
Senior Geotechnical Engineer
LETTER OF INTENT

This Letter of Intent ("LOI") is entered into the 1st of December 2017 by and between Hitachi Zosen Inova, USA LLC with its principal place of business at 3740 Davinci Court, Suite 250, Norcross, GA, 30092 ("HZI") and Noah Small, dba Pacific Organics, with its principal place of business located in Creston, CA ("Pacific") (hereinafter collectively referred to as the "Parties").

WHEREAS, the Parties desire to enter into a business relationship whereby they will collaborate on the sale and distribution of compost and compost tea (Liquid digestate) generated from the proposed Anaerobic Digestion Facility to be located in Santa Rosa, CA and;

WHEREAS, in order for Pacific to resell the items noted above, HZI must meet certain and definable criteria for the composition of the Compost and Compost tea,

NOW, THEREFORE for valuable consideration, the Parties agree as follows:

1. SCOPE OF WORK

HZI will agree to furnish to Pacific all of the Compost generated at the proposed project. HZI will be responsible for loading trucks at a predetermined schedule as supplied by Pacific. HZI will work to ensure the moisture content of the Compost does not exceed 45% as tested using standard testing methodology, and that the Compost will be certified through the Organics Materials Review Institute (OMRI) and that we will follow the guidelines as set forth by the U.S. Composting Council for their testing known as Seal of Testing Assurance (STA), both of which will help to ensure the quality of the Compost. Additionally, HZI will at their own expense, provide testing results from a qualified compost testing lab in accordance with the permit requirements of the proposed project.

HZI will also agree to furnish to Pacific all of the compost tea (digestate) that is generated from the proposed project. Pacific will agree to remove the compost tea at their cost from the HSAD at intervals to be determined. HZI will provide testing results through a qualified compost testing lab that will specify the constituents and NPK value of the compost tea. HZI will work to reduce or remove the suspended solids in the compost tea in order to make the product more marketable. In lieu of removing the suspended solids, HZI will explore the possibility of purchasing a tank trailer to be used by Pacific for the hauling and reuse of the digestate.

2. TERM OF AGREEMENT

Upon the commissioning and start up of the proposed project, anticipated to be Q1, 2021, the Parties will enter into a formal agreement for the reselling and removal of the compost and compost tea. It is anticipated that HZI will commit to furnishing and Pacific will agree to accept the products noted above for an initial period of not less than two (2) years.
This LOI contains the entire agreement and understanding between the Parties, their agents, and employees as to the subject matter hereof and supersedes in its entirety any and all previous or contemporary communications (whether written or oral) between the parties regarding the subject herein. No amendment, change, or modification of this LOI shall be valid or of any effect except if the same is in writing and executed by a duly authorized representative of each party.

Please indicate acceptance of this letter by signing and returning one copy to me. This letter may be executed in counterparts, each of which shall be an original and all of which constitute but one and the same instrument.

8. BINDING AGREEMENT

Other than this paragraph 8, which is intended to be and is legally binding, this LOI is nonbinding and constitutes an indication of intent only and creates no liability or obligation of any nature whatsoever among the parties hereto with respect to any contemplated transaction or any other matter or action described or referred to herein. Legally binding obligations with respect to the contemplated transaction will only arise upon execution of a definitive agreement and related agreements with respect to the transaction.

Sincerely,

William Skinner
Hitachi Zosen Inova, USA LLC

Pacific Organics
By: [Signature]
Noah Small

Hitachi Zosen Inova, USA LLC
By: [Signature]
Mike Canova, Treasurer
Appendix R

SAN LUIS OBISPO COUNTY
DEPARTMENT OF PLANNING AND BUILDING

August 30, 2016

Hitachi Zosen Inova USA, LLC
3740 Davinci Court, Ste. 250
Norcross, GA 30092

Carol Florence
c/o Oasis Associates
3247 Miguelito Court
San Luis Obispo, CA 93401

NOTICE OF FINAL COUNTY ACTION

SUBJECT: HITACHI ZOSEN INOVA USA, LLC
COUNTY FILE NUMBER: DRC2015-00122

At the meeting of November 8, 2012, the County Planning Commission approved your application and adopted an official resolution. A copy of this resolution is enclosed for your records. The approved Findings, shown in Exhibit A, and the Conditions, shown in Exhibit B, are attached to the resolution. The conditions of approval must be carried out as set forth therein.

If you disagree with this action, pursuant to County Land Use Ordinance Section 22.70.050, you have the right to appeal this decision to the Board of Supervisors up to 14 calendar days after the date of the action, in writing on the proper department appeal form, to the Department of Planning and Building. The appeal fee is $850.00 and must accompany your appeal form. We will only accept the original appeal form with an original signature; a FAX will not be accepted.

If you have any questions regarding this matter, please contact me at (805) 781-5612.

Sincerely,

Ramona Hedges
Secretary, Planning Commission
FINDINGS - EXHIBIT A (REVISED 8/25/16)
HITACHI ZOSEN INOVA USA, LLC – DRC2015-00122

Environmental Determination
A. The Environmental Coordinator, after completion of the initial study, finds that there is no substantial evidence that the project may have a significant effect on the environment, and the preparation of an Environmental Impact Report is not necessary. Therefore, a Negative Declaration (pursuant to Public Resources Code Section 21000 et seq., and CA Code of Regulations Section 15000 et seq.) has been issued on July 21, 2016 for this project. Mitigation measures are proposed to address Air Quality, Geology and Soils, Hazards/Hazardous Materials, Transportation/Circulation, and Water/Hydrology and are included as conditions of approval. Anyone interested in commenting or receiving a copy of the proposed Environmental Determination should submit a written statement. Comments will be accepted up until completion of the public hearing(s).

Conditional Use Permit
B. The proposed project or use is consistent with the San Luis Obispo County General Plan because Commercial Composting (Ag Processing) is an allowed use and as conditioned is consistent with all of the General Plan policies.

C. As conditioned, the proposed project or use satisfies all applicable provisions of Title 22 of the County Code.

D. The establishment and subsequent operation or conduct of the use will not, because of the circumstances and conditions applied in the particular case, be detrimental to the health, safety or welfare of the general public or persons residing or working in the neighborhood of the use, or be detrimental or injurious to property or improvements in the vicinity of the use because the anaerobic digester plant does not generate activity that presents a potential threat to the surrounding property and buildings. This project is subject to Ordinance and Building Code requirements designed to address health, safety and welfare concerns.

E. The proposed project or use will not be inconsistent with the character of the immediate neighborhood or contrary to its orderly development because the anaerobic digester is similar to, and will not conflict with, the surrounding lands and uses.

F. The proposed project or use will not generate a volume of traffic beyond the safe capacity of all roads providing access to the project, either existing or to be improved with the project because the project is located on Santa Fe Road, a local road constructed to a level able to handle any additional traffic associated with the project.

Article 4 Exception
G. Modification of Land Use Ordinance Section 22.30.070.D.3.c. to allow setbacks less than 200 feet from the left and rear property lines is justified because specific conditions of the site make the standard unnecessary. The location of an existing drainage channel (east-west) through the middle of the site and the current location of the existing building proposed to be utilized for this project make it impractical to locate the plant 200 feet from all property lines. Additionally, the rear property line abuts a vacant/undeveloped County-owned parcel that is utilized as a drainage detention basin for the airport, and the left property line neighbors two Industrial properties, making it unnecessary to be located 200 feet from the property line.
Approved Development
1. This approval authorizes
   a. construction and operation of an anaerobic digestion plant (ADP) to process green and food waste from the Waste Connections service area. The project will include the remodel of an existing 13,128 square-foot (sf) warehouse building and construction of a 36,000 sf addition. Other improvements will include a new office trailer, 80-space parking lot, vehicle weighbridge, 5,000 sf digester, 3,500 sf presswater tank, 7,500 sf biofilter, 1,062 kW combined heat and power (CHP) unit with flare, site grading, and stormwater facilities. The project will result in the disturbance of approximately 4.8 acres on two parcels totaling 12.53 acres.
   b. modification to the 200 foot setback requirement for structures to left side and rear property lines to allow a 37 foot left side setback, and a 173 foot rear setback.
   c. maximum height is 45 feet from average natural grade.

Conditions required to be completed at the time of application for construction permits

Site Development
2. At the time of application for construction permits plans submitted shall show all development consistent with the approved site plan, floor plan, and architectural elevations.

3. At the time of application for construction permits, the applicant shall provide details on any proposed signs. The number and area of signs allowed shall comply with Section 22.20.060 of the Land Use Ordinance. Freestanding signs shall be monument signs under six feet in height.

Fire Safety
4. At the time of application for construction permits, all plans submitted to the Department of Planning and Building shall meet the fire and life safety requirements of the California Fire Code. Requirements shall include, but not be limited to those outlined in the Fire Safety Plan, prepared by the Cal Fire/County Fire Department for this proposed project.

Services
5. At the time of application for construction permits, the applicant shall submit evidence that there is adequate water to serve the proposal, on the site.

6. At the time of application for construction permits, the applicant shall submit evidence that a septic system, adequate to serve the proposal, can be installed on the site.
Access
7. At the time of application for construction permits, the applicant shall provide evidence to the Department of Planning and Building that onsite circulation and pavement structural sections have been designed and shall be constructed in conformance with Cal Fire standards and specifications back to the nearest public maintained roadway.

8. At the time of application for construction permits, and in accordance with Streets and Highway Code Section 1480.5 & 1481 the applicant shall submit an application to the Department of Public Works for an Encroachment Permit to reconstruct, if necessary, all deteriorated or non-compliant parent parcel frontage improvements.

Drainage
9. At the time of application for construction permits, the applicant shall submit complete drainage plans and report prepared by a licensed civil engineer for review and approval in accordance with Section 22.52.110 (Drainage) of the Land Use Ordinance. Provide calculations to determine if all drainage must be retained or detained on-site (the design of the basin shall be approved by the Department of Public Works).

Storm Water Control Plan
10. At the time of application for construction permits, the applicant shall demonstrate whether the project is subject to the LUO Section for Storm Water Management. Applicable projects shall submit a Storm Water Control Plan (SWCP) prepared by an appropriately licensed professional to the County for review and approval. The SWCP shall incorporate appropriate BMP’s, shall demonstrate compliance with Storm Water Quality Standards and shall include a preliminary drainage plan, a preliminary erosion and sedimentation plan. The applicant shall submit complete drainage calculations for review and approval.

11. At the time of application for construction permits, if necessary, the applicant shall submit a draft “Private Storm Water Conveyance Management and Maintenance System” exhibit for review and approval by the County.

Conditions to be completed prior to issuance of a construction permit

Fees
12. Prior to issuance of a construction permit, the applicant shall pay all applicable school and public facilities fees.

Air Quality
13. AQ-1: Odor Control. Prior to issuance of construction permits, the applicant shall develop an Odor Control Plan for review and approval by the APCD that identifies potential odor sources and determines control strategies to reduce potential odors. Odor control strategies that can be incorporated into these plans include, but are not limited to, the following:

- Identification and description of the most likely sources of odor;
- A list of odor controls and best management practices that could be implemented to minimize odor releases; These best management practices shall include the establishment of the following criteria:
o Establish time limit for on-site retention of undigested substrates.
o Establish contingency plans for operating downtime (e.g., equipment malfunction, power outage).
o Manage delivery schedule to facilitate prompt handling of highly odorous substrates.
o Protocol for monitoring and recording odor events.
o Protocol for reporting and responding to odor events.

14. AQ-2: Portable Equipment. Prior to issuance of construction permit, the applicant shall obtain all required permits from the APCD for portable construction equipment (i.e. generators).

Hazards and Hazardous Materials
15. HZ-1: Fire Safety. Prior to issuance of a construction permit, the applicant shall provide a copy of the final Fire Safety Plan prepared by Cal Fire for this project and the Preliminary Fire Protection Hazard Evaluation prepared by Collings & Associates, July 30, 2016. The recommendations and requirements of the Fire Safety Plan and Preliminary Fire Protection Hazard Evaluation shall be implemented prior to final occupancy, and/or on-going for the life of the project.

16. HZ-2: Prior to issuance of construction permits, all structures shall be reviewed by the Air Traffic Division of the FAA regional office having jurisdiction over San Luis Obispo County to determine compliance with the provisions of FAR Part 77. In addition, applicable construction activities shall be reported via FAA Form 7460-1 at least 30 days before proposed construction or application for building permit. The applicant shall also coordinate with the FAA on potential structural encroachments into the glideslope critical areas as shown on the draft Airport Layout Plan.

17. HZ-3: Prior to the issuance of construction permits; the applicant shall provide a recorded avigation easement for each property developed within the area included in the proposed local action.

18. HZ-4: Exterior Light Plan. Prior to issuance of construction permits, the Applicant shall submit an Exterior Lighting Plan for both permanent and temporary facilities, for County review and approval. The Plan shall define the height, location, and intensity of all exterior lighting. All lighting fixtures shall be positioned “down and into” the development, and shielded so that neither the lamp nor the related reflector interior surface is visible from surrounding properties or the San Luis Obispo County Regional Airport. All lighting poles, fixtures, and hoods shall be dark colored. When nighttime lighting is required for construction, temporary lighting shall be hooded to the extent consistent with safety. Lighting fixtures shall be directed away from the airport to avoid glare and, when near a residence, shall be pointed away from the residence.

Transportation and Circulation
19. TR-1: Traffic Impacts. In order to mitigate offsite traffic impacts, fees shall be required for San Luis Obispo City transportation impact fees for various programs. These fees shall be paid to the City of San Luis Obispo, and evidence of payment or waiver shall be provided to the County, prior to construction permit issuance. These fees shall include:

a. Citywide Transportation Impact Fee
b. Airport Area Specific Plan Fee

c. Los Osos Valley Road Interchange Mitigation Fee

**Storm Water Control Plan**

20. **Prior to issuance of construction permits,** if necessary, the applicant shall record with the County Clerk the "Private Storm Water Conveyance Management and Maintenance System" to document on-going and permanent storm drainage control, management, treatment, disposal and reporting.

**Conditions to be completed during project construction**

**Site Development**

21. The project shall provide for utilities being placed underground.

**Building Height**

22. The maximum height of the project is 45 feet from average natural grade.

a. **Prior to any site disturbance,** a licensed surveyor or civil engineer shall stake the lot corners, building corners, and establish average natural grade and set a reference point (benchmark).

b. **Prior to approval of the foundation inspection,** the benchmark shall be inspected by a licensed surveyor prior to pouring footings or retaining walls, as an added precaution.

c. **Prior to approval of the roof nailing inspection,** the applicant shall provide the building inspector with documentation that gives the height reference, the allowable height and the actual height of the structure. This certification shall be prepared by a licensed surveyor or civil engineer.

**Air Quality**

23. **AQ-3: Fugitive Dust Mitigation Measures.**

a. Reduce the amount of the disturbed area where possible;

b. Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible;

c. All dirt stock-pile areas should be sprayed daily as needed;

d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities;

e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive grass seed and watered until vegetation is established;

f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;

g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible and building pads should be laid as soon as possible after grading unless seeding or soil binders are used;
h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;

i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;

j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;

k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used when feasible;

l. All of these fugitive dust mitigation measures shall be shown on grading and building plans; and

m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below 20 percent opacity, and to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

n. Since water use is a concern due to drought conditions, the contractor or builder shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control.

24. **AQ-4: Combustion Emission Mitigation Measures.**
   a. Maintain all construction equipment in proper tune according to manufacturer’s specifications;
   b. Fuel all off-road and portable diesel powered equipment with CARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
   c. Use diesel construction equipment meeting CARB’s Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation;
   d. Use on-road heavy-duty trucks that meet the CARB’s 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
   e. Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance;
   f. All on and off-road diesel equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the five minute idling limit;
   g. Diesel idling within 1,000 feet of sensitive receptors is not permitted;
   h. Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors;
   i. Electrify equipment when feasible;
   j. Substitute gasoline-powered in place of diesel-powered equipment, where feasible;
   and
   k. Use alternatively fueled construction equipment on-site where feasible, such as CNG, liquefied natural gas (LNG), propane or biodiesel.

25. **AQ-5: Hydrocarbon Contaminated Soil.** Should hydrocarbon contaminated soil be encountered **during construction activities**, the APCD shall be notified as soon as
possible and no later than 48 hours after affected material is discovered to determine if an APCD permit will be required. In addition, the following measures shall be implemented immediately after contaminated soil is discovered:

- Covers on storage piles shall be maintained in place at all times in areas not actively involved in soil addition or removal;
- Contaminated soil shall be covered with at least six inches of packed uncontaminated soil or other TPH-non-permeable barrier such as plastic tarp. No headspace shall be allowed where vapors could accumulate.
- Covered piles shall be designed in such a way to eliminate erosion due to wind or water. No openings in the covers are permitted;
- The air quality impacts from the excavation and haul trips associated with removing the contaminated soil shall be evaluated and mitigated if total emissions exceed the APCD’s construction phase thresholds;
- During soil excavation, odors shall not be evident to such a degree as to cause a public nuisance; and
- Clean soil shall be segregated from contaminated soil.

26. **AQ-6: Lead During Demolition.** The applicant shall contact APCD ten days prior to the start of any demolition, renovation, or retrofitting work to determine if a lead work plan is required. An APCD permit may be required; if required the permit shall be obtained prior to any demolition, renovation, or retrofitting work.

27. **AQ-7: Naturally Occurring Asbestos.** Prior to any construction activities at the site, the applicant shall ensure that a geologic evaluation is conducted to determine if the area disturbed is exempt from the asbestos regulation. An exemption request shall be filed with the APCD. If the site is not exempt from regulation, the applicant shall comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety Program approved by the APCD.

28. **AQ-8: Demolition Asbestos.** Prior to any construction activities at the site, the applicant shall comply with all requirements of the National Emission Standard for Hazardous Air Pollutants. These requirements include, but are not limited to:
   a. written notification, within at least 10 business days of activities commencing to the APCD
   b. asbestos survey conducted by a certified Asbestos Consultant and
   c. applicable removal and disposal requirements of identified ACM. Please contact the APCD Enforcement Division at(805) 781-5912 and also go to slocleanair.org/business/asbestos.php for further information. To obtain a Notification of Demolition and Renovation form go to the "Other Forms" section of: slocleanair.org/business/onlineforms.php.

29. **AQ-9: Idling Restrictions.**
   a. Driver’s shall not idle the vehicle’s primary diesel engine for greater than 5 minutes at any location;
   b. Driver’s shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than five minutes at any location when within 100 feet of a restricted area;
   c. Signs shall be posted in the designated queuing areas and job sites to remind drivers
of the five minute idling limit;

d. Off-road diesel equipment shall comply with the five minute idling restriction identified in Section 2449(d)(3) of the California Air Resources Board’s In-Use off-Road Diesel regulation: www.arb.ca.gov/regact/2007/ordiesl07/frooil.pdf.

e. Signs shall be posted in the designated queuing areas and job sites to remind off-road equipment operators of the five minute idling limit.

**Geology and Soils**

30. **GS-1: Geotechnical Recommendations.** The applicant shall implement the recommendations of the *Geotechnical Engineering Report* prepared by Earth Systems Pacific, dated March 2016.

**Conditions to be completed prior to occupancy or final building inspection / establishment of the use**

31. **Prior to occupancy or final inspection,** which ever occurs first, the applicant shall obtain final inspection and approval from CDF of all required fire/life safety measures.

32. **Prior to occupancy of any structure associated with this approval,** the applicant shall contact the Department of Planning and Building to have the site inspected for compliance with the conditions of this approval.

**Air Quality**

33. **AQ-10: Permit to Operate.** Prior to final inspection or occupancy, the applicant shall obtain a permit to operate from the SLO APCD. The applicant shall install a Selective Catalyst Reduction (SCR) and oxidation catalyst (Oxicat) system on the combined heat and power (CHP) unit.

**Hazards and Hazardous Material**

34. **HZ-5: Environmental Health.** Prior to occupancy or final inspection, the applicant shall obtain the appropriate permits from the Department of Environmental Health for the process gasses produced. Depending on reportable quantities, a Hazardous Materials Business Plan may be required (including potential for a Risk Management Plan). The project may necessitate updates to the Waste Connections, Inc. Business Plan, including, but not limited to, the site plan.

**Water and Hydrology**

35. **WR-2: Water System.** Prior to occupancy or final inspection, the site shall have a permit from the Department of Environmental Health for a Non-Transient Non-Community Water System (reactivation of the CBI water system permit).

**Notice of Use**

36. A notice listing the authorized land uses for a site shall be recorded in the Office of the County Recorder **prior to occupancy or final inspection.**

**On-going conditions of approval (valid for the life of the project)**

37. This land use permit is valid for a period of 24 months from its effective date unless time extensions are granted pursuant to Land Use Ordinance Section 22.64.070 or the land use permit is considered vested. This land use permit is considered to be vested once a
construction permit has been issued and substantial site work has been completed. Substantial site work is defined by Land Use Ordinance Section 22.64.080 as site work progressed beyond grading and completion of structural foundations; and construction is occurring above grade.

38. All conditions of this approval run with the land and shall be strictly adhered to, within the time frames specified, and in an on-going manner for the life of the project. Failure to comply with these conditions of approval may result in an immediate enforcement action by the Department of Planning and Building. If it is determined that violation(s) of these conditions of approval have occurred, or are occurring, this approval may be revoked pursuant to Section 22.74.160 of the Land Use Ordinance.

Hazards and Hazardous Material

39. **HZ-6:** The non-residential density for this property shall be limited to 353 persons.

40. **HZ-7:** The building coverage for this property shall be limited to 1.25 acres (54,450 square-feet).

41. **HZ-8:** All moderately noise sensitive land uses on the project site shall include noise mitigation as required by the ALUP.

42. **HZ-9: For the life of the project,** no structure, landscaping, apparatus, or other feature, whether temporary or permanent in nature, shall constitute an obstruction to air navigation or a hazard to air navigation, as defined by the ALUP.

43. **HZ-10: For the life of the project,** any use is prohibited that my entail characteristics which would potentially interfere with the takeoff, landing, or maneuvering of aircraft at the Airport, including:
   - Creation of electrical interference with navigation signals or radio communication between the aircraft and airport;
   - Lighting which is difficult to distinguish from airport lighting;
   - Glare in the eyes of pilots using the airport;
   - Uses which attract birds and create bird strike hazardous;
   - Uses which produce visually significant quantities of smoke; and
   - Uses which entail a risk of physical injury to operators or passengers of aircraft (e.g. exterior laser light demonstrations or shows)

44. **HZ-11:** All owners, potential purchasers, occupants (whether as owners or renters), and potential occupants (whether as owners or renters) shall receive full and accurate disclosure concerning the noise, safety, or overflight impacts associated with airport operations prior to entering any contractual obligation to purchase, lease, rent, or otherwise occupy any property or properties within the airport.

45. **HZ-12: For the life of the project,** any fueling stations in connection with this project shall be processed through an amendment to this Conditional Use Permit, and shall require, at a minimum, referral to and recommendation from the Airport Land Use Committee.

46. **HZ-13: For the life of the project,** any proposed solar system installation shall be referred to the Airport Manager for review and approval. The proposed solar system
project shall be evaluated by the FAA Solar Glare Hazard Analysis Tool (SGHAT) and be designed to mitigate glare to the maximum extent possible.

47. **HZ-14: For the life of the project**, any development shall be setback from the fence line to ensure nothing creates an opportunity for someone to easily climb over the fence and violate airport security.

**Water and Hydrology**

48. **WR-1: Cross Connection.** If a cross-connection review by the Department of Environmental Health determines a cross-connection device is necessary, then an annual device test is required.