



**IBES2020**

# **The 4th International Biomass Energy Summit**

**——Biomass for Heat and Power Forum**

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**Sept. 3<sup>rd</sup>-4<sup>th</sup>, 2020 Shanghai, China**

[www.biomass-summit.org](http://www.biomass-summit.org)

# The 4<sup>th</sup> International Biomass Energy Summit (IBES2020)

—Biomass for Heat and Power Forum

Sept. 3<sup>rd</sup> -4<sup>th</sup> , 2020 Shanghai, China

## Day One ( Sept. 3<sup>rd</sup> , Thursday )

### 08:30 Sign in & Name Cards Exchanging

### 09:00 Opening Ceremony

### 09:10-09:45 Current situation, latest policies and development trends of biomass power generation and heating industry in China

- ★ Current situation
- ★ Latest policies and development trend
- ★ Suggestions and guidance for the construction of bioenergy projects

### 09:45-10:20 Technical standards and industrial standard system of biomass industry

- ★ Emission standards for biomass-fueled power-generating boilers
- ★ Economic performance of the biomass power plants with different emission standards
- ★ Improving the standards and certification system

### 10:20-10:55 Key policies and investment ideas for scaled power generation with agricultural and forestry waste

- ★ Market overview of power generation with agricultural and forestry waste
- ★ Insights into key industry policies
- ★ Economic analysis and investment ideas

### 10:55-11:10 Tea Break & Networking

### 11:10-11:45 Planning and construction of biomass direct-fired power generation project

- ★ Market, development trend and industry difficulties of biomass direct-fired power generation technology
- ★ Analysis and control of pollutant emissions from direct-fired biomass power generation and steam supply

- ★ Overall operation optimization adjustment and improvement measures
- ★ Life cycle and economic benefit analysis

### 11:45-12:20 Integrated biomass and waste-to-energy project

- ★ Overall planning and construction of integrated biomass and waste-to-energy project
- ★ Resources & equipment integration and operation management
- ★ Investment & operation cost and project benefit

### 12:20-14:00 Lunch & Networking

### 14:00-14:35 Biomass CHP technology and case study

- ★ Overall planning of biomass CHP project
- ★ Equipment selection, configuration, installation and heating scheme
- ★ Thermoelectric distribution and rational energy planning
- ★ Economic benefit analysis of CHP

### 14:35-15:10 Open for Presentation Sponsor

### 15:10-15:45 Equipment selection and technical points of biomass power plant

- ★ Fuel requirements and applicability of different boiler types
- ★ Prevention and treatment of ash clogging in boiler air preheater
- ★ Selection of steam turbine
- ★ Improving the operation stability of core equipments

### 15:45-16:00 Tea Break & Networking

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## **16:00-16:35 Modification and commissioning technology of circulating water heating at low vacuum operation of steam turbine in biomass power plant**

- ★ Technical modification measures for low vacuum operation of steam turbine
- ★ Determination of modification parameters
- ★ Tasks and methods of automatic control and regulation of heating system
- ★ Economic benefit analysis of modification

## **16:35 -17:10 Construction and operation of biomass district heating project**

- ★ Current situation of biomass heating in China
- ★ Difficulties, challenges and solutions of the construction regional heating project

- ★ Fuel management, cost analysis and operation management
- ★ Project case analysis

## **17:10-17:45 Panel Discussion: Investment and financing of the biomass power generation and heating industry**

**17:50 End of Day One**

## **Day Two** ( Sept. 4<sup>th</sup> , Friday )

### **08:30 Sign in & Name Cards Exchanging**

### **09:00-09:35 Design and optimization of combustion control system for biomass furnace**

- ★ Introduction to biomass combustion in furnace
- ★ Methods and measures to stabilize combustion
- ★ Optimization with intelligent control
- ★ Dynamics and economics of biomass combustion

### **09:35-10:10 Challenges and modification solutions to slag removing from furnaces**

- ★ Slag removing structure overview
- ★ Current problems and impacts
- ★ Modification solutions and specifications
- ★ User cases

### **10:10-10:45 Automation solutions for biomass power plant**

- ★ Intelligent management and control platform for biomass power generation
- ★ Power plant emission monitoring and calculation of key performance indicators of power plant
- ★ Optimizing operation through real-time monitoring of equipment status
- ★ Fault diagnosis and analysis based on big data for early warning of equipment failure

### **10:45-11:00 Tea Break & Networking**

### **11:00-11:35 Operation, maintenance and heat supply management of biomass thermal power plant**

- ★ Fuel pretreatment and feeding
- ★ Equipment transformation and operation optimization
- ★ Strengthen the planned maintenance and operation adjustment

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**11:35-12:10 Panel Discussion: management and optimization of fuel procurement, storage and delivery for biomass power generation**

**12:10-14:00 Lunch & Networking**

**14:00-14:35 Green emission of biomass power generation plant**

- ★ Relevant standards for air pollutant emission from biomass boilers
- ★ Gas monitoring solution for biomass power generation
- ★ Flue gas desulfurization process
- ★ Control and removal technology of nitrogen oxide

**14:35-15:10 High efficiency desulfurization and denitrification technology in biomass power plant and case sharing**

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**15:10-15:45 Biomass gasification-coal coupling power generation system**

- ★ Circulating Fluidized Bed process
- ★ Pressurized fuel gas delivery system

- ★ Biomass- fuel gas combined combustion
- ★ Sustainability and economics analysis

**15:45-16:00 Tea Break & Networking**

**16:00-16:35 Core technology & process of biomass gasification for power generation**

- ★ Selection of gasification chambers
- ★ Gas cleaning
- ★ Turbine technology
- ★ Improved energy conversion rate and cost control

**16:35-17:10 market status and application cases of biomass gasification for power and heat**

- ★ Market overview
- ★ Technology & process
- ★ Commercial applications
- ★ Challenges and solutions in management and operation

**17:10-17:45 Utilization of biomass ashes**

- ★ Ash properties and current utilizations
- ★ Technical pathways of ashes utilization
- ★ Challenges and solutions to ashes utilization

**17:50 End of the Biomass for Heat and Power Forum**



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# **The 4th International Biomass Energy Summit**

**— Fermentation and Biogas Utilization Forum**

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# The 4<sup>th</sup> International Biomass Energy Summit (IBES2020)

—Fermentation and Biogas Utilization Forum

Sept. 3<sup>rd</sup> -4<sup>th</sup> , 2020 Shanghai, China

## Day One ( Sept. 3<sup>rd</sup> , Thursday )

### 08:30 Sign in & Name Cards Exchanging

### 09:00 Opening Ceremony

### 09:10-09:45 Status quo, policies and future trend of biogas industry

- ★ Status quo and challenges of China biogas industry
- ★ Biogas related policies
- ★ Development trends and suggestions

### 09:45-10:20 Biogas technology with straw as raw material

- ★ Component properties of straw
- ★ Pretreatment technology before fermentation
- ★ Straw fermentation process and operation parameters
- ★ analysis of operation cost and investment income

### 10:20-10:55 Large and Medium-sized Biogas Project Engineering Design and Construction Safety Technology

- ★ Overall planning and design highlights
- ★ Main equipment and design
- ★ Construction and operation management
- ★ Maintenance and failure management
- ★ Engineering case

### 10:55-11:10 Tea Break & Networking

### 11:10-11:45 Operation and management of large-scale biogas project

- ★ Collection, storage and transportation system of raw materials
- ★ Biogas production
- ★ Biogas application and market analysis
- ★ Project operation problems and experience sharing

### 11:45-12:20 Comprehensive disposal technology of urban organic waste and operation experience sharing

- ★ Classified collection, transportation and pretreatment of urban organic waste
- ★ Collaborative anaerobic digestion process
- ★ Parameters and indexes of the operation process
- ★ Economic benefit analysis

### 12:20-14:00 Lunch & Networking

### 14:00-14:35 Industry standards of scaled biogas projects

- ★ Technical specifications for large and medium-sized biogas projects
- ★ Biogas process equipment specification
- ★ Quality standard of Bio-natural gas products
- ★ Problems and suggestions of China's biogas industry standard system

### 14:35-15:10 Open for Presentation Sponsor

### 15:10-15:45 Treatment and resource utilization of livestock and poultry breeding waste

- ★ Harmless treatment of livestock and poultry breeding wastewater
- ★ Key technologies for resource utilization of livestock and poultry manure
- ★ Process design and efficient operation management
- ★ project case analysis

### 15:45-16:00 Tea Break & Networking

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**16:00-15:35 Panel Discussion: Discussion on the current situation, industry pain point and development direction of Biogas Industry in China**

**16:35-17:10 Technical model and process selection of medium-sized biogas engineering for livestock and poultry waste and agricultural stalk**

- ★ Establishment of collection, storage and transportation system for livestock and poultry manure
- ★ Process selection and engineering design of bio-fermentation and biogas comprehensive utilization project
- ★ Preparation of organic solid fertilizer from biogas residue and biogas slurry
- ★ Economic and social benefits analysis

**17:10-17:45 Distributed comprehensive utilization model of Biogas**

- ★ Development and application of distributed biogas energy mode in foreign countries
- ★ Significance and policy support for developing distributed biogas production in China
- ★ Planning, construction and problem solving of distributed biogas energy comprehensive utilization project
- ★ Case analysis

**17:50 End of Day One**

## Day Two ( Sept. 4<sup>th</sup> , Friday )

**08:30 Sign in & Name Cards Exchanging**

**09:00-09:35 Anaerobic digestion and pretreatment of sewage sludge**

- ★ Sludge reception and pretreatment
- ★ Anaerobic digestion process design
- ★ Operation and management of fermentation system
- ★ Methane system

**09:35-10:10 Sewage Sludge treatment – Veolia’ s technologies, solutions and applications**

- ★ Characteristics of sewage sludge and pretreatment
- ★ Advanced sludge treatment system based on digestion

- ★ Biogasa-fueled combined heat and power generation
- ★ User cases

**10:10-10:45 Cooperative treatment of municipal sludge and organic matter**

- ★ Pretreatment of kitchen waste and sludge
- ★ Cooperative anaerobic digestion of kitchen waste and sludge
- ★ Operation parameters and indicators
- ★ Economic analysis

**10:45-11:00 Tea Break & Networking**

**11:00-11:35 Anaerobic fermentation of municipal organic waste**

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## 11:35-12:10 Highly efficient kitchen waste treatment

- ★ Classified procurement and efficient pretreatment of kitchen waste
- ★ Utilization and harm-free treatment of kitchen waste
- ★ Case Study

## 12:10-14:00 Lunch & Networking

## 14:00-14:35 Techniques and processes of large-scale biogas-fueled combined heat and power generation

- ★ Development overview
- ★ Project design and plan
- ★ Residual heat utilization
- ★ Case study

## 14:35-15:10 Intelligent technologies for biogas production systems

- ★ pH monitoring system for acidification tanks and biogas tanks
- ★ Automatic feedstock loading, heating and mixing systems
- ★ Efficiency improvement for biogas production with intelligent technologies

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## 15:10-15:45 On-line monitoring and remote control systems for biogas production

- ★ Status quo of remote control engineering market
- ★ Configuration of remote control network
- ★ IoT network set-up
- ★ Case study

## 15:45-16:00 Tea Break & Networking

## 16:00-16:35 Experience of biogas engineering technology in Germany and its application in China

- ★ Mainstream technology and operation management of biogas project in Germany
- ★ Technical problems existing in the application of German biogas engineering technology in China
- ★ Overall planning and technical transformation of biogas project in China
- ★ Application practice of German technology in China

## 16:35-17:10 Biomass Gas-Power-Heat-Fertilizer Recycling Model In Anping County

- ★ Procurement, storage and transport of feces and straws
- ★ Biomass Gas-Power-Heat-Fertilizer Recycling Model
- ★ A high-value utilization approach
- ★ Sustainability and economics analysis

## 17:10-17:45 Comprehensive utilization technology of biogas slurry and residue

- ★ Problems and countermeasures of utilizing biogas slurry and residue in china
- ★ Property analysis of biogas slurry and residue
- ★ Comprehensive utilization of biogas slurry and residue

## 17:50 End of the Fermentation and Biogas Utilization Forum