

East Village District Energy System

A sustainable energy initiative in Calgary, Alberta, Canada



Jan Buijk

jan.buijk@gruppoab.com

+1(416) 804-2203

November 8, 2023



+40 years of
experience

140 engineers

+1,200 employees

300+ specialist
field
technicians

People remain our most vital corporate asset. With multidisciplinary and shared skillsets, our experts are guided by a common passion and vision, helping us perform at the highest levels for our customers' benefit.

1,200
person-years of cumulative
service experience.

PRODUCTION & INNOVATION



The AB process from start to finish occurs in our world-class engineering and production center in Orzinuovi (BS – Italy), encompassing 40,000 m² of interconnected buildings.



Within the engineering hub, over 140 engineers plan, design and manage the hydraulic, electrical, mechanical, process and IT activities involved in delivering customized solutions for our customers' specific requirements. AB GRADE is a recognized center of excellence for research and development of new technologies in energy transition. DOABLE, the Group's technological hub dedicated to digitizing processes, embodies AB's commitment to innovation.

Argentina Brazil Bulgaria
Canada Colombia Croatia
Czech Republic France
Germany Greece Israel Italy
Mexico Poland Puerto Rico
Romania Serbia Spain UK
USA



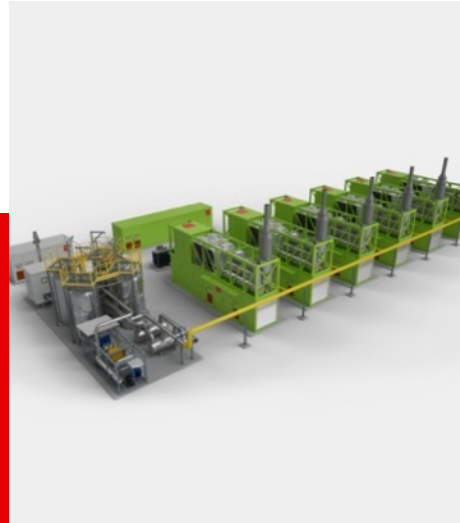
AB is a group of companies with offices worldwide, operating in emerging and industrialized markets that value energy efficiency and sustainability.



ECOMAX®
NATURAL GAS
→ [WATCH THE VIDEO](#)



ECOMAX®
BIOGAS
→ [WATCH THE VIDEO](#)



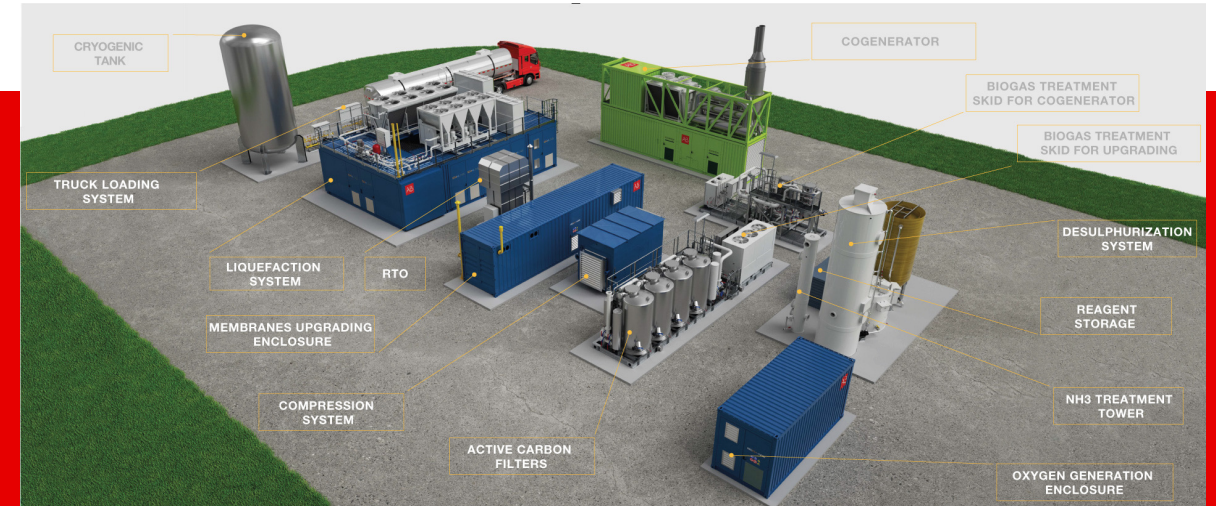
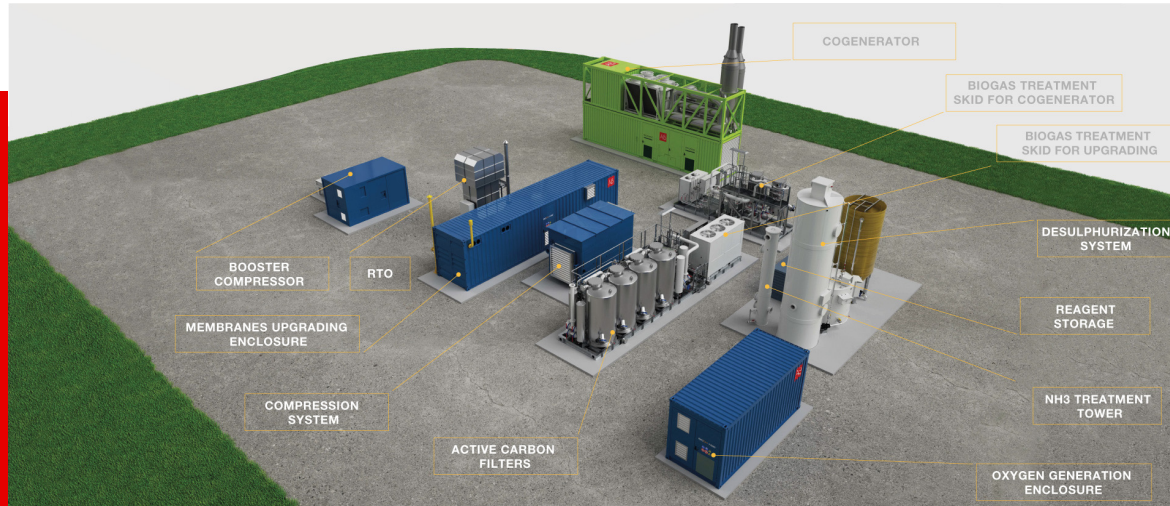
ECOMAX®
LANDFILL
→ [WATCH THE VIDEO](#)



ECOMAX®
GREENHOUSE
→ [WATCH THE VIDEO](#)



ECOMAX®
SPECIAL GAS
→ [WATCH THE VIDEO](#)



CONFIGURATION A

COMPRESSED BIOMETHANE/RNG

[→ GUARDA IL VIDEO](#)

CONFIGURATION B

LIQUEFIED BIOMETHANE/RNG

[→ GUARDA IL VIDEO](#)

AB ONLINE

NetZero
tube

Biogas channel
Biomethane RNG channel
Cogeneration channel

NetZero Tube: a triple path towards energy sustainability

AB is the publisher of the **NetZero Tube** portal, which consists of three video channels: **Biogas Channel, Biomethane RNG Channel and Cogeneration Channel.**

Through these web channels, AB promotes an international exchange of information and technical-scientific dialogue on natural gas and biogas cogeneration, biomethane, sustainability, energy efficiency and related topics.

A global library of AB's know-how, expertise, and innovation contained in three multimedia channels, available anytime, anywhere.

8

+ 2.000 online videos

Video content from around the world

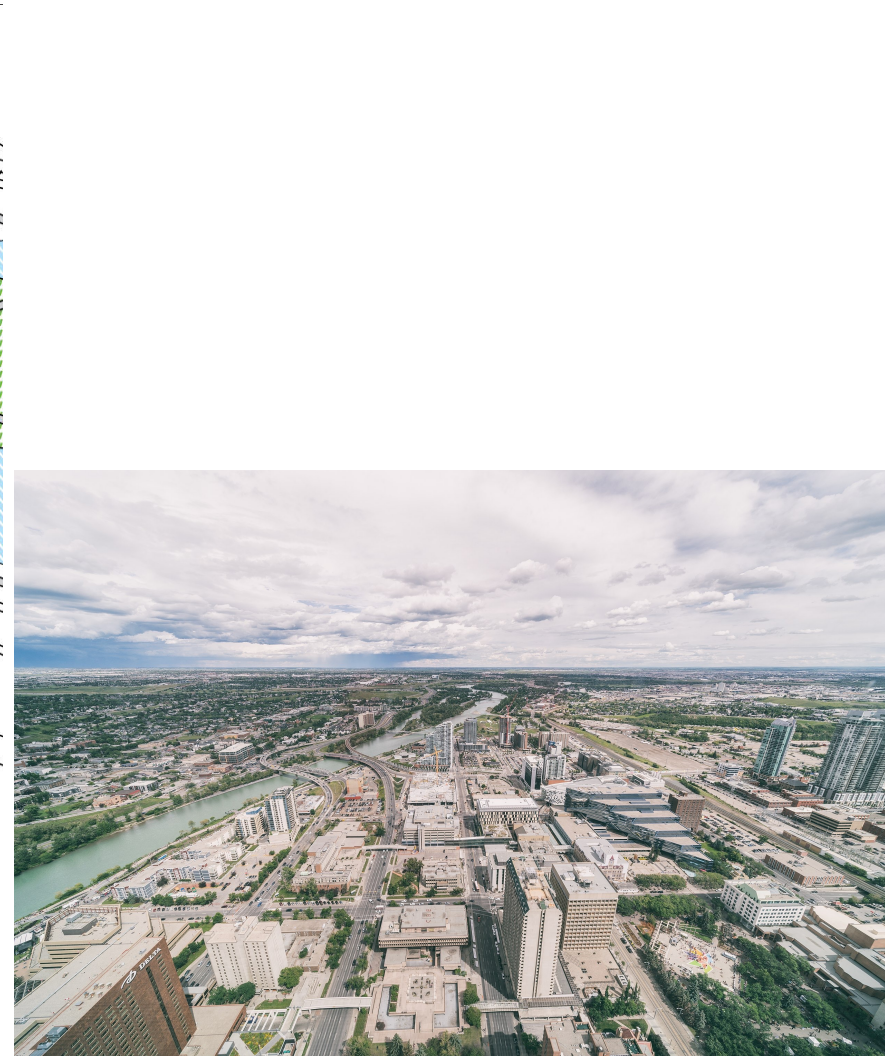
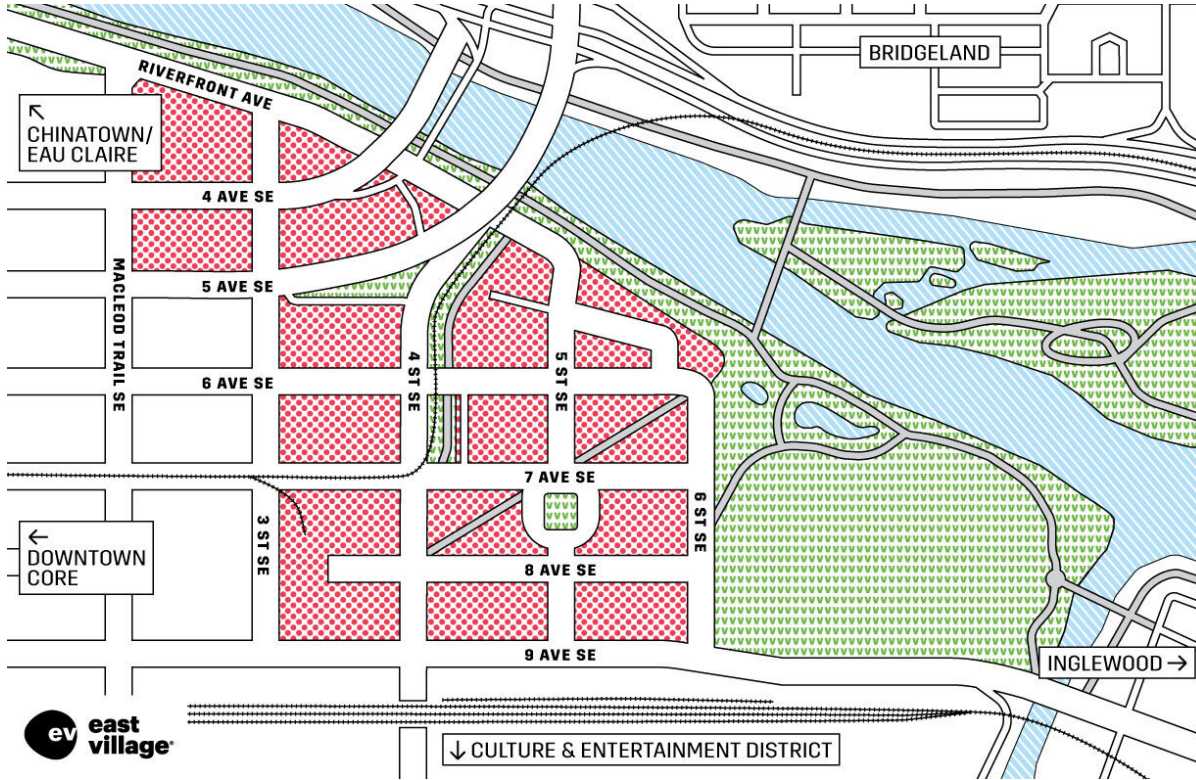
A global community of sector key players.

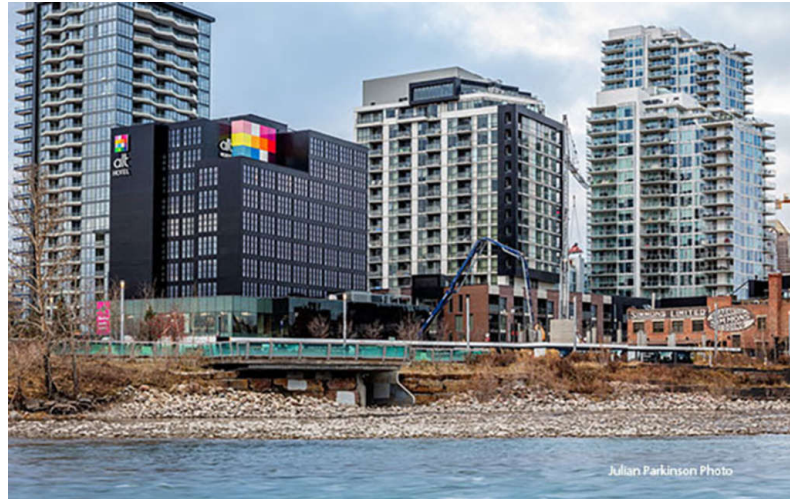
netzerotube.com

East Village District Energy Centre



East Village Overview





East Village Overview

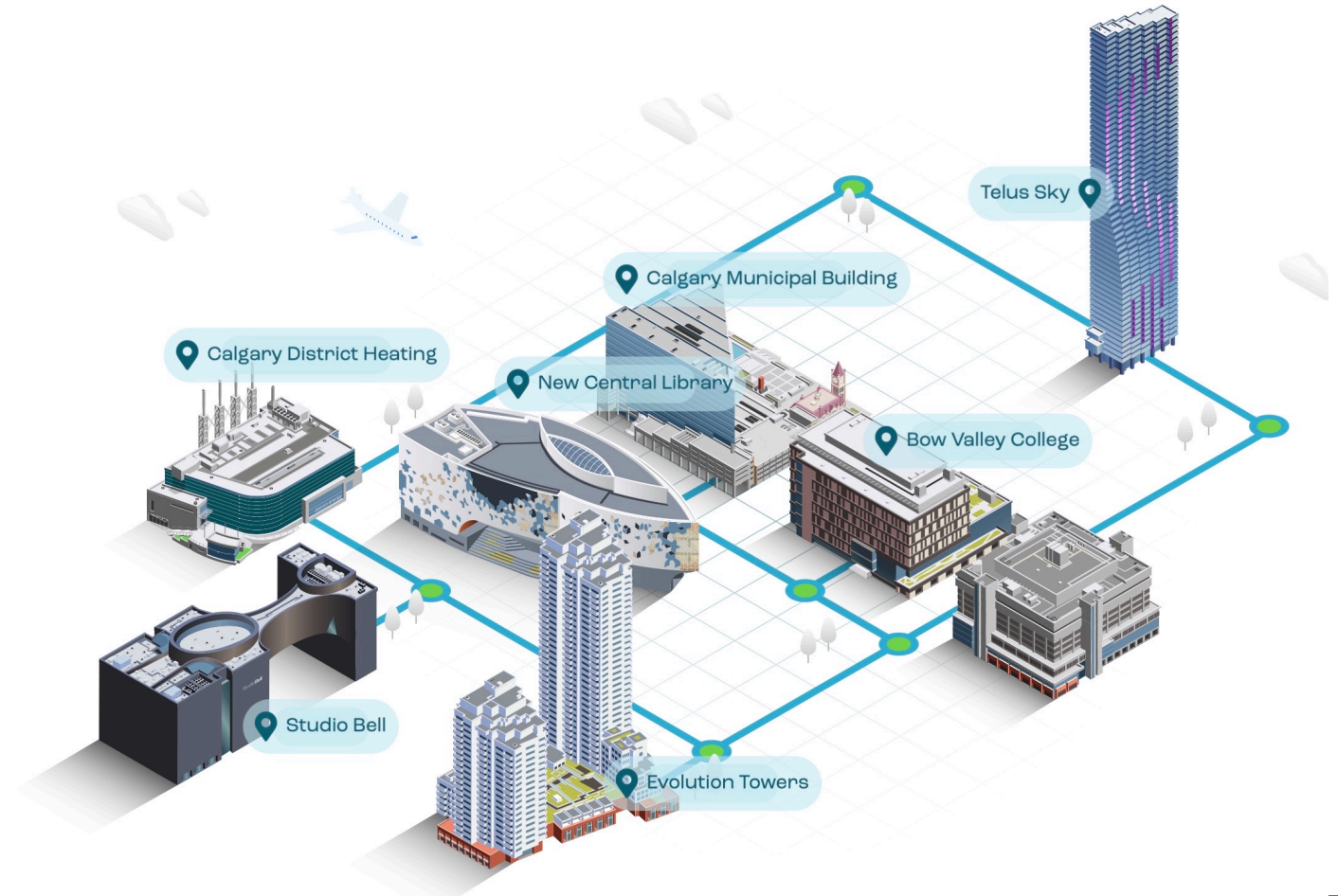
The District Energy Plant

- In 2005, Enmax, the electric utility in Calgary started the district energy study
- Started commercial operation in 2010
- 4 high efficiency natural gas boilers capable of producing up to 60 MWt of heating
- First customer to receive heat from the district energy plant was the Calgary Municipal Building



East Village District Energy System

- Provides heating to 6M square feet of new, existing and institutional building space
- 12 km of hot water piping
- 22 buildings connected
- 50% of buildings are new construction
- 50% of buildings are existing buildings, retrofitted to connect to the district energy system



2017 – Addition of a 3.3 MW CHP Plant

- Jenbacher, model J620
- 3,325 kW, 60 Hz, 13.8 kV
- 113°C Hot water heat recovery from engine and exhaust
- SCR system to reduce exhaust emissions
- Ship loose scope of supply for installation, interconnection and integration on site
- Reached commercial operation in 2018
- Runs 24/7



Why add CHP to District Energy Facilities?

- Lower energy costs
 - Improve power reliability
 - Improve resilience
 - Natural gas grid is exponentially more reliable than electricity grid
 - Improve power quality
 - Run through extended power outages
 - Operate or transition to renewable fuels
 - RNG
 - H₂
 - 24/7 or demand response operation
-



Why AB?

- **Global organization**
 - We go where you go
- **One chicken to choke for the life of the installation**
 - From manufacturing, through start up and ongoing service support, we are responsible and accountable for the ongoing success of the power plant
- **AB Protection Plan**
 - Covers ***all*** maintenance costs for the entire power plant
 - Guaranteed ownership costs for the length of the contract

Thank You!

Jan Buijk - 416-804-2203 - jan.buijk@gruppoab.com