

## 1. Plants currently under construction

Toronto Dufferin (Canada) Input Delivery	Start-up 2 <sup>nd</sup> half 2011 Source Separated Organics (SSO) Delivery and installation of one complete additional digester (5.300 m <sup>3</sup> ) incl. extension of the existing plant control unit, engineering services, commissioning and start-up supervision (Works executed in the frame of an upgrading of Toronto's existing Dufferin AD facility).
Toronto Disco Road (Canada) Input Capacity Delivery	Start-up 2 <sup>nd</sup> half 2012 Source Separated Organics (SSO) 75.000 tons/year BTA Hydromechanical Pre-treatment, gas mixing and heating system for anaerobic digestion, BTA Control System, engineering services, commissioning and start-up supervision, operation assistance
Bredbury Parkway (UK) Input Capacity Delivery	Start-up 2 <sup>nd</sup> half 2011 Pre-treated Municipal Solid Waste (< 80 mm) 86.000 tons/year Engineering services , BTA Hydromechanical Pre-treatment, SCADA PLC, commissioning and start-up supervision
Burgos (Spain) Input Capacity Delivery	Start-up 2 <sup>nd</sup> half 2011 Pre-treated Municipal Solid Waste (< 90 mm) 25.000 tons/year Turnkey refurbishment of methanisation plant incl. replacement of the existing pre-treatment. Implementation of BTA Control System
Maresme (Spain) Input Capacity Delivery	Start-up beginning 2012 Pre-treated Municipal Solid Waste 35.000 tons/year Engineering, BTA Hydromechanical Pre-treatment*, heat exchanger and BTA Control System
Suldouro (Portugal) Input Capacity Delivery	Start-up end of 2010 Municipal Solid Waste 43.000 tons/year Engineering, BTA Hydromechanical Pre-treatment, gas mixing system, design and key components composting and wastewater treatment, BTA Control System, supervision of plant assembly and start-up

Itzig (Luxembourg)	Start-up 2 <sup>nd</sup> half 2011
Input	Biowaste, Kitchen Waste,
Capacity	15.000 tons/year
Delivery	Delivery and installation of waste reception and mechanical / BTA hydromechanical pre-treatment (turn-key basis).

\* in co-operation with our licensee Biotec Sistemi S.r.l.

## 2. Plants designed according to the BTA® Process

The following plants have been designed according to the overall BTA® Process incl. digestion.  
BTA provided general engineering services, key components and construction / start-up assistance:

Reliance Street (UK)	Start-up 2010
Input	Municipal Solid Waste (< 40 mm from Danodrum)
Capacity	63.250 tons/year
Valorlis (Portugal)	Start-up 2010
Input	Municipal Solid Waste
Capacity	50.000 tons/year
Castelleone (Italy)	Start-up 2010
Input	Biowaste, commercial waste, maize silage, pig and cow manure
Capacity	100.000 tons/year
Granollers (Spain)	Start-up 2010
Input	Biowaste (FORM)
Capacity	45.000 tons/year
Mülheim (Germany)	Start-up 2003
Input	Biowaste, commercial waste
Capacity	22.000 tons/year
Ipres (Belgium)	Start-up 2003
Input	Biowaste, commercial waste
Capacity	50.000 tons/year
Ko-Sung (Korea)	Start-up 2003
Input	Biowaste, commercial waste
Capacity	3.000 tons/year
Toronto (Canada)	Start-up 2002
Input	Biowaste, commercial waste
Capacity	25.000 tons/year

Villacidro (Italy) Input Capacity	Start-up 2002 Municipal Solid Waste incl. sewage sludge 45.000 tons/year
Mertingen (Germany) Input Capacity	Start-up 2001 Commercial waste 12.000 tons/year
Newmarket (Canada) Input Capacity	Start-up 2000 Biowaste, commercial waste and organic sludge 150.000 tons/year
Wadern-Lockweiler (Germany) Input Capacity	Start-up 1998 Biowaste, commercial waste 20.000 tons/year
Kirchstockach (Germany) Input Capacity	Start-up 1997 Biowaste 20.000 tons/year
Erkheim (Germany) Input Capacity	Start-up 1997 Biowaste, commercial waste 11.500 tons/year
Karlsruhe (Germany) Input Capacity	Start-up 1996 Biowaste 8.000 tons/year
Dietrichsdorf (Germany) Input Capacity	Start-up 1995 Biowaste, commercial waste, food waste 17.000 tons/year
Helsingør (Denmark) Input Capacity	Start-up 1991 Biowaste 20.000 tons/year

### 3. Plants provided with BTA Hydromechanical Pre-treatment or parts thereof

For the following plants BTA provided general engineering services, key components and construction/start-up assistance, mainly for the BTA Hydromechanical Pre-treatment:

Leoben (Austria) Input Capacity	Start-up 2009 Biowaste, kitchen waste, commercial waste 18.000 tons/year
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Barcelona / Ecoparc I (Spain) Input Capacity	Start-up 2009 Biowaste, Municipal Solid Waste 50.000 tons/year Refurbishment of existing plant including replacement of existing pre-treatment and gas mixing system in one of the digesters
Komoro (Japan) Input Capacity	Start-up 2005 Food waste 8.000 tons/year
Herrieden (Germany) Input Capacity	Start-up 2003 Biowaste, commercial waste 13.000 tons/year
Parramatta (Australia) Input Capacity	Start-up 2003 Commercial waste, organic sludges 35.000 tons/year
Nara City (Japan) Input Capacity	Start-up 2003 Food waste 1.500 tons/year
Verona (Italy) Input Capacity	Start-up 2002 Municipal Solid Waste 70.000 tons/year
Pulawy (Poland) Input Capacity	Start-up 2001 Municipal Solid Waste 22.000 tons/year
Kushima City (Japan) Input Capacity	Start-up 2001 Commercial waste about 1.000 tons/year
Tochigi (Japan)	Operating time 1997-1998 Pilot plant
Münster (Germany) Input Capacity	Start-up 1997 Biowaste 20.000 tons/year
Wels (Austria) Input Capacity	Start-up 1997 Commercial waste, biowaste 15.000 tons/year

Schwabach (Germany)	Start-up 1996
Input	Biowaste
Capacity	12.000 tons/year
Baden-Baden (Germany))	Start-up 1993
Input	Biowaste
Capacity	5.000 tons/year
Kaufbeuren (Germany)	Start-up 1992
Input	Biowaste
Capacity	2.500 tons/year

## 4. Agricultural Biogas Plants

The following agricultural plants have been designed according to BTA technology. BTA provided general engineering services and key components. The plants marked with \*) where built by BTA on a turnkey basis:

Montanera (Italy)	Start-up Mid of 2009
Input	Slurry, maize silage, cow dung
Capacity	29.000 tons/year
Chiusa Pesio (Italy)	Start-up mid 2008
Input	Cow manure and energy crops
Capacity	625 kW
Stockerau (Austria)*	Start-up 2007
Input	Maize silage
Capacity	500 kW
Raab (Austria)*	Start-up 2007
Input	Maize silage
Capacity	500 kW
Seckach (Germany)*	Start-up 2006
Input	Maize silage
Capacity	500 kW
Parndorf (Austria)*	Start-up 2006
Input	Maize silage
Capacity	500 kW
Echsenbach (Austria)*	Start-up 2005
Input	Maize silage
Capacity	500 kW

Karlshof/Munich City (Germany)*	Start-up 2000
Input	Manure and maize silage
Capacity	130 kW

## 5. Pilot Plant Garching / Germany

1986 - 1995	Construction and operation of pilot plant Garching Continuous tests and research project to optimize the BTA® Process and prove its suitability for the organic fraction of different waste types from municipal, commercial and agricultural sources.
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For further information please visit our website: [www.bta-international.de](http://www.bta-international.de)