CASE STUDY: RIIKINVOIMA

# A NEW GENERATION POWER PLANT



Riikinvoima is a modern, efficient and ecological wasteto-energy production plant that utilizes the municipal waste from Eastern and Central Finland households and companies. Reaching the annual waste incineration capacity of up to 145 000 tons, Riikinvoima is one of Finland's largest waste-to-energy plant.

#### CHALLENGE

CROSS

WRAP

With the fuel efficiency of 54 Megawatts, Riikinvoima is able to generate an amount of electricity that would fulfill the need of 4 300 houses. Alongside, district heating enough to keep 10 000 houses warm throughout the year will be produced.

Every weekday, 20 full-size trucks arrive to Riikinvoima, with full loads of municipal waste gathered from the operation area of waste management companies that jointly own the power plant. As all loose waste cannot always be immediately utilized, the plant needs a system that enables temporary storing and environmentally sound handling.

#### SOLUTION

Riikinvoima Oy acquired a baling and wrapping line to handle the loose waste that is stored for future purposes. Baling and wrapping is also required during the plant's maintenance and service breaks, as well as in situations where more waste arrives to the plant that can be utilized right away.

Furthermore, a bale opener was acquired to open the wrapped bales as they are taken from storage to the process. Both the bale wrapping line and the bale opener were delivered by Cross Wrap Oy.

#### BENEFITS

The baling and wrapping operation and bale opener allow Riikinvoima Oy to receive both loose and baled waste. The automatic bale opener allows the plant to utilize either the bales arriving from outside or the ones that have been produced on site, depending on the situation. This flexibility allows Riikinvoima to optimize their material handling economics and efficiency, as well as the intake of waste during maintenance breaks and low season. The fact that no waste arrives to the plant during weekends further supports efficient baling, wrapping and bale opening.



#### **CROSS WRAP BENEFITS FOR RIIKINVOIMA**

1	Environmentally safe storing of waste materials
2	Greater operational flexibility
3	An efficient way to handle, store and utilize the waste streams whenever the need occurs
4	Operation to ensure the needed fuel flow for continuous production of electricity and district heating
5	A contribution to recycling and sustainable development by replacing fossil fuels with waste



#### **ABOUT RIIKINVOIMA**

**RIIKINVOIMA** is owned by eight municipal waste management companies and a local district heating company. About 640 000 people live in the 57 municipalities in Eastern and Central Finland where waste is being collected.

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# THE BALE WRAPPER

- CW 2200 LW 750 1-5 Bale Wrapper
- The bale dimensions 1100 x 720 x 1400-1900 mm
- Capacity of 41 tons per hour



# THE BALE OPENER

- BO 4000
- $\cdot$  The bale dimensions
- 1100 x 720 x 1400-1900 mm
- Capacity of 41 tons per hour



# www.crosswrap.com