

INNOVATIVE WAY OF THINKING,RENEWABLE ENERGY GENERATION.

Is a 3D sculptural form that has the ability to stimula and challenge the mind of visitors to the site
Create a new ma,itime learning and experience space. "Remarkable in Denmark" A well design product must HIT
to success

Is a new way to integrate renewable enery project into the city space. Art , Architecture are creative projects to
create greener living spaces for our communities.

Is a CREATIVE, INNNOVATIVE AND ENERGY PRODUCING SCULPTURE FOR REFSHALEØEN

ENERGY TECHNOLOGY: Thin film photovoltaic,

Organic thin films which are flexible and offer interesting hues and textures, for public art installation, piezoelectric
generators that capture vibration energy, and concentrated photovoltaics, which allow for interesting play with
light.

WAY WORK: Capture enrgy from nature, the sun, convert it into electricity, and have the ability to store, trans-
form and transmit the electrical power to a grid connection point.

TIMATE ANNUAL 15,000 KW/h:

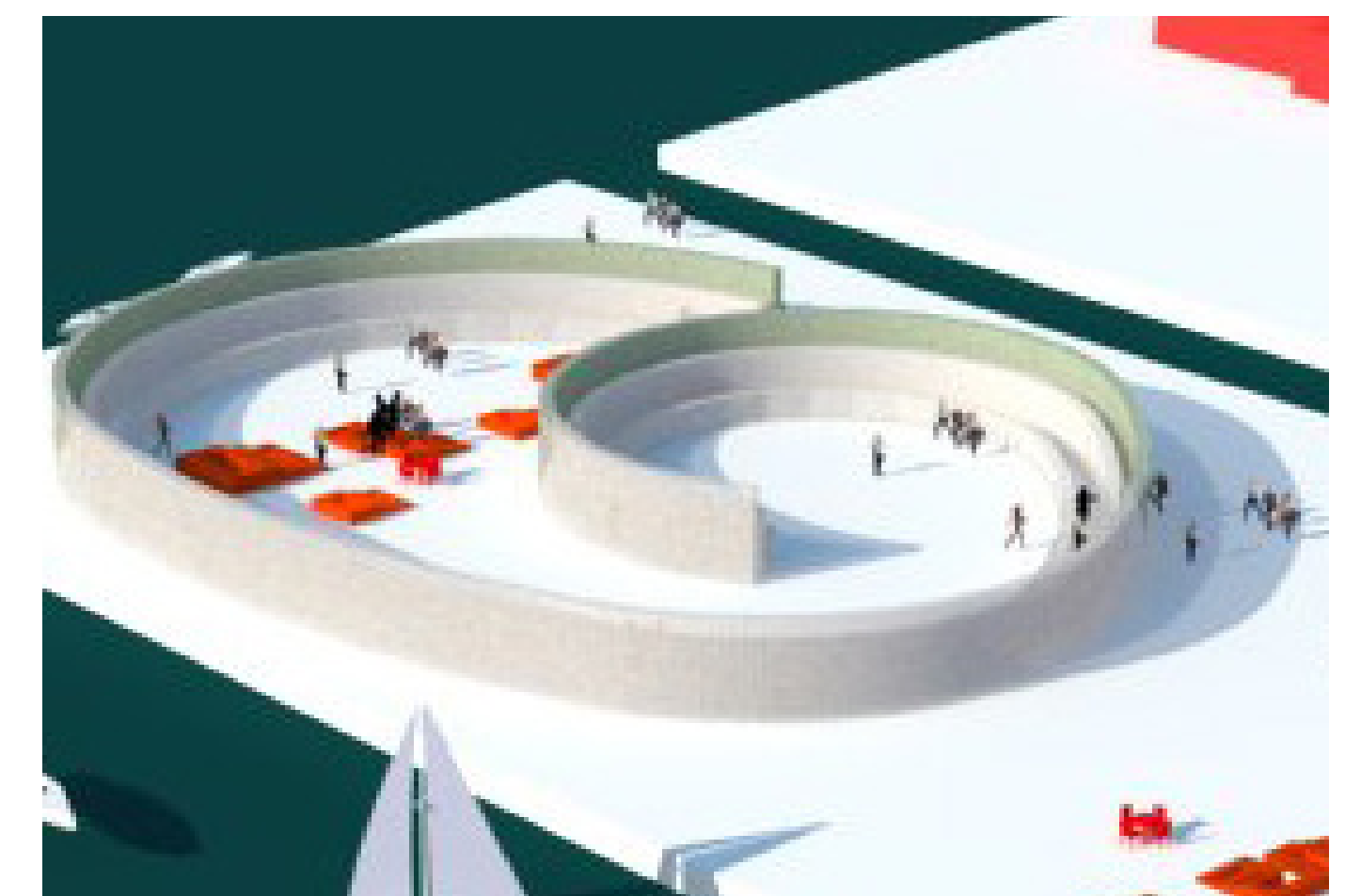
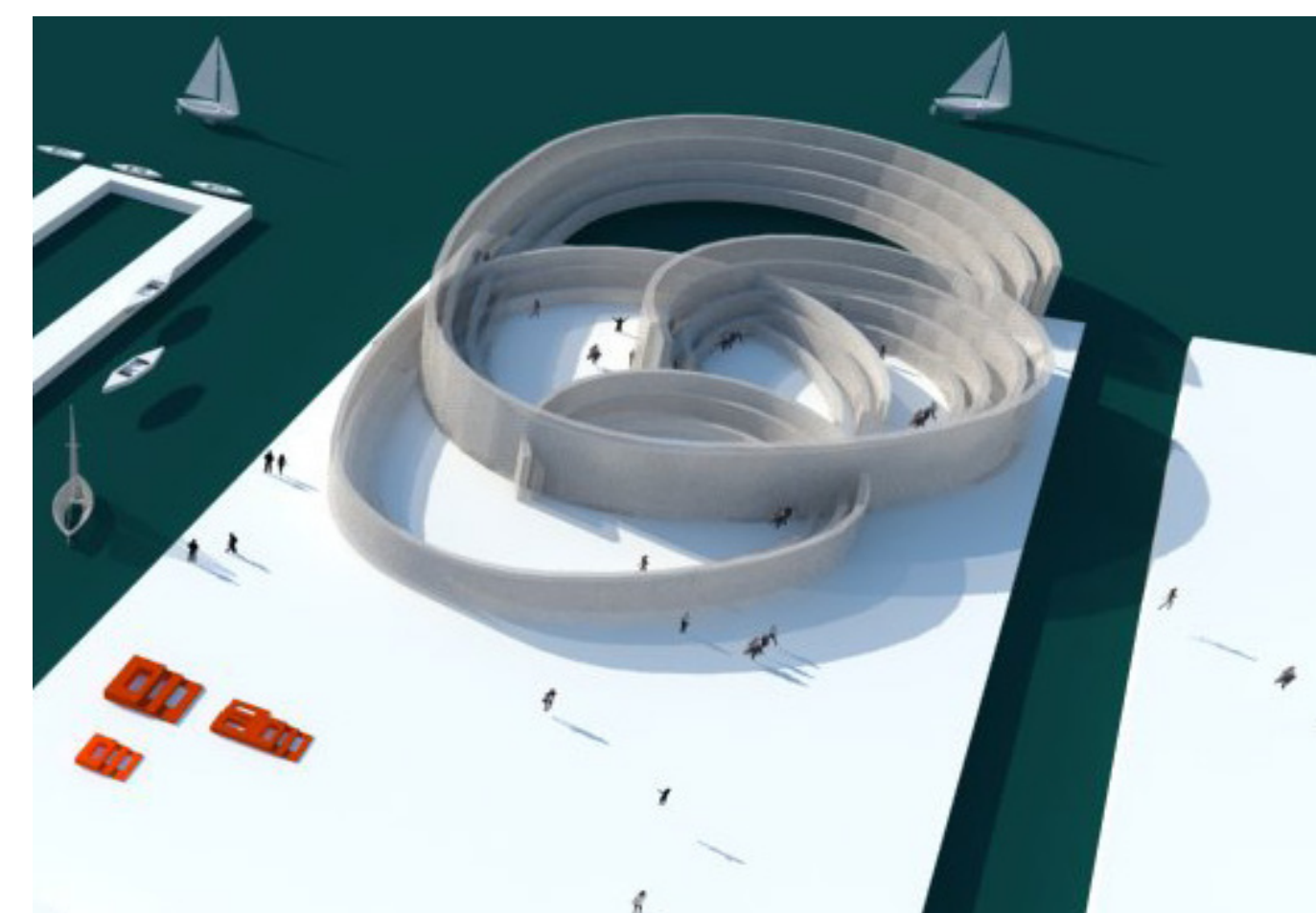
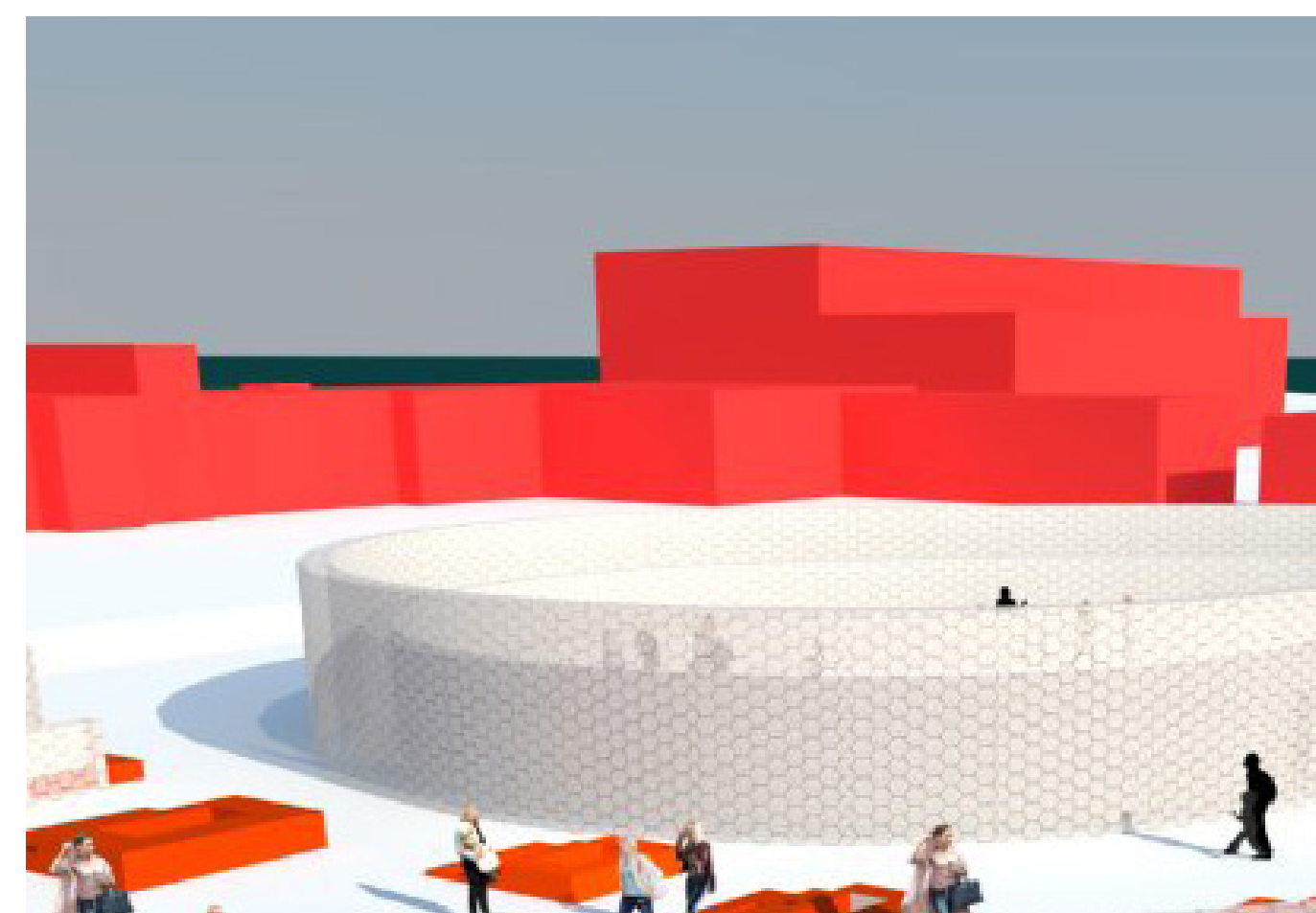
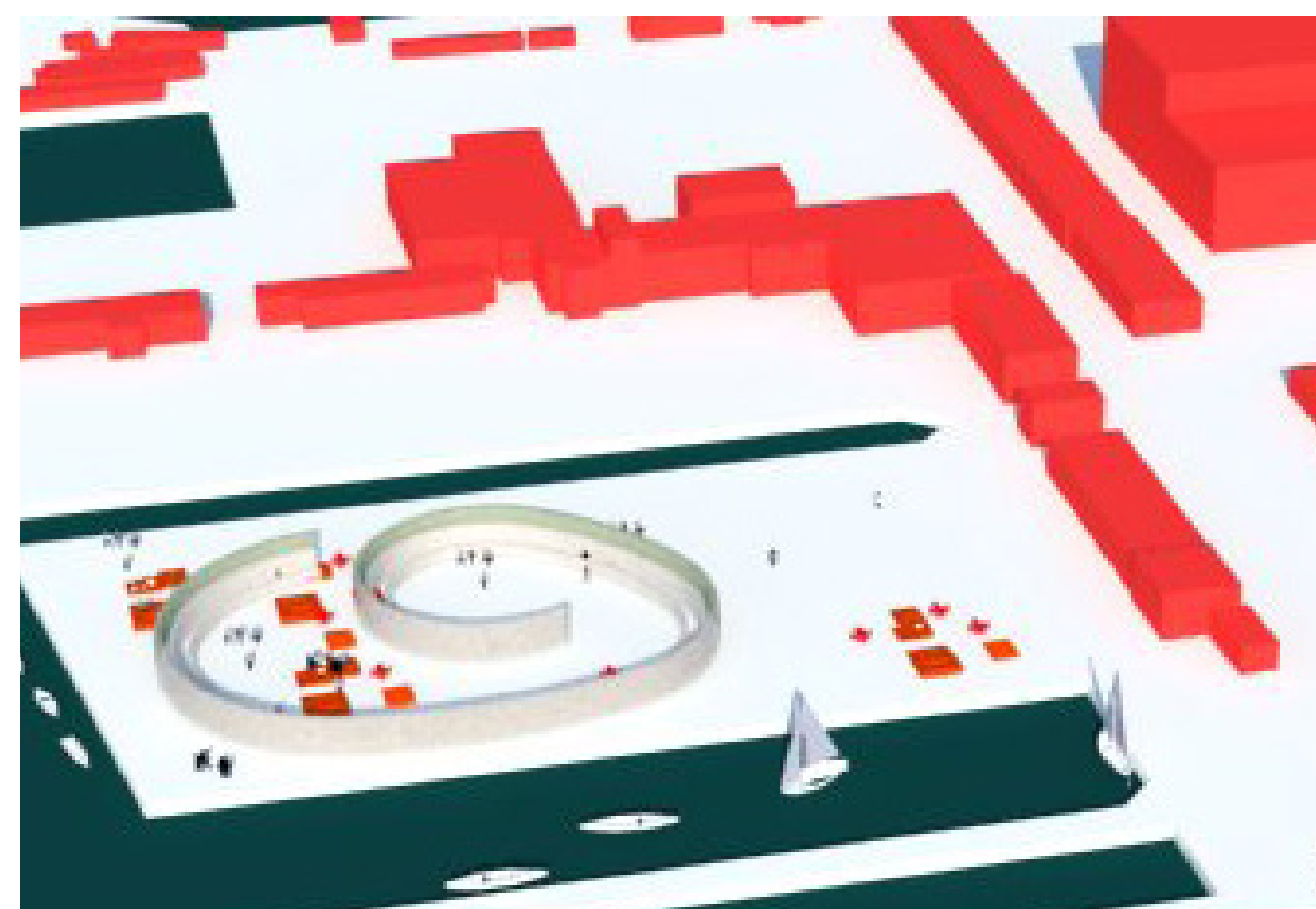
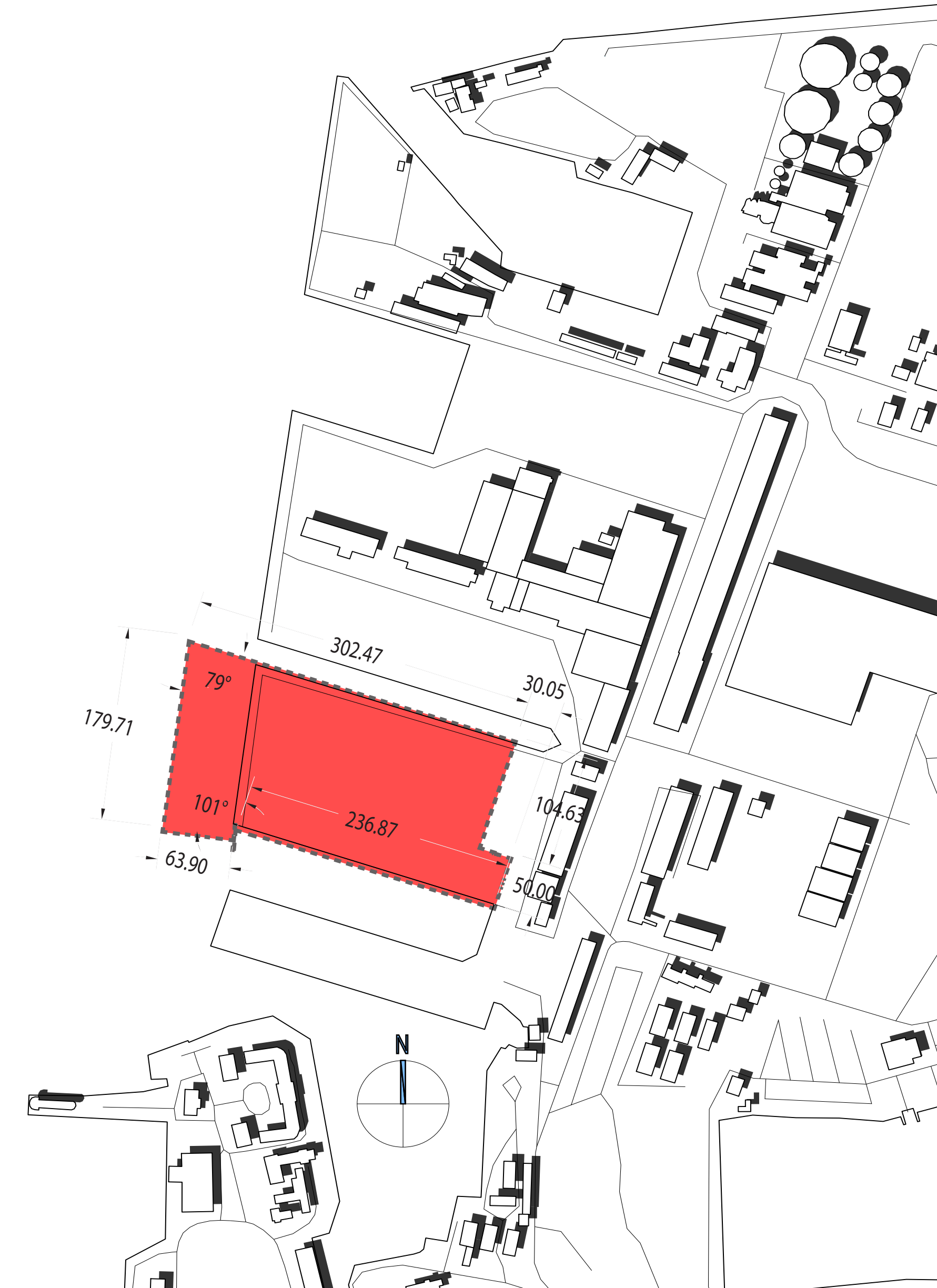
DIMENSIONS: flexiblibility, PRIMARY MATERIALS: copper indium gallium selenide (CIGS)

ENVIRONMENTAL IMPACT STATEMENT: Thin-film technologies reduce the amount of material required in creating
the active material of solar cell. Most thin film solar cells are sandwiched between two panes of glass to make a
module. Since silicon solar panels only use one pane of glass, thin film panels are approximately twice as heavy
as crystalline silicon panels, although they have a smaller ecological impact (determined from life cycle analy-
sis).The majority of film panels have significantly lower conversion efficiencies, lagging silicon by two to three
percentage points.

Thin-film solar technologies have enjoyed large investment.

Cadmium telluride (CdTe), copper indium gallium selenide (CIGS) and amorphous silicon (a-Si) are three thin-
film technologies often used as outdoor photovoltaic solar power production.

As of December 2013, CdTe was most cost effective (U.S. manufacturing cost per installed watt: \$0.59 reported by
First Solar) widely used thin film technology, and CIGS technology has the highest laboratory efficiency (20.4%
as of December 2013), though CdTe cells made by First Solar have the highest industrial efficiency, and the lab
efficiency of the immature GaAs thin film technology tops 28%.



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CAPTIVATING THE SUN