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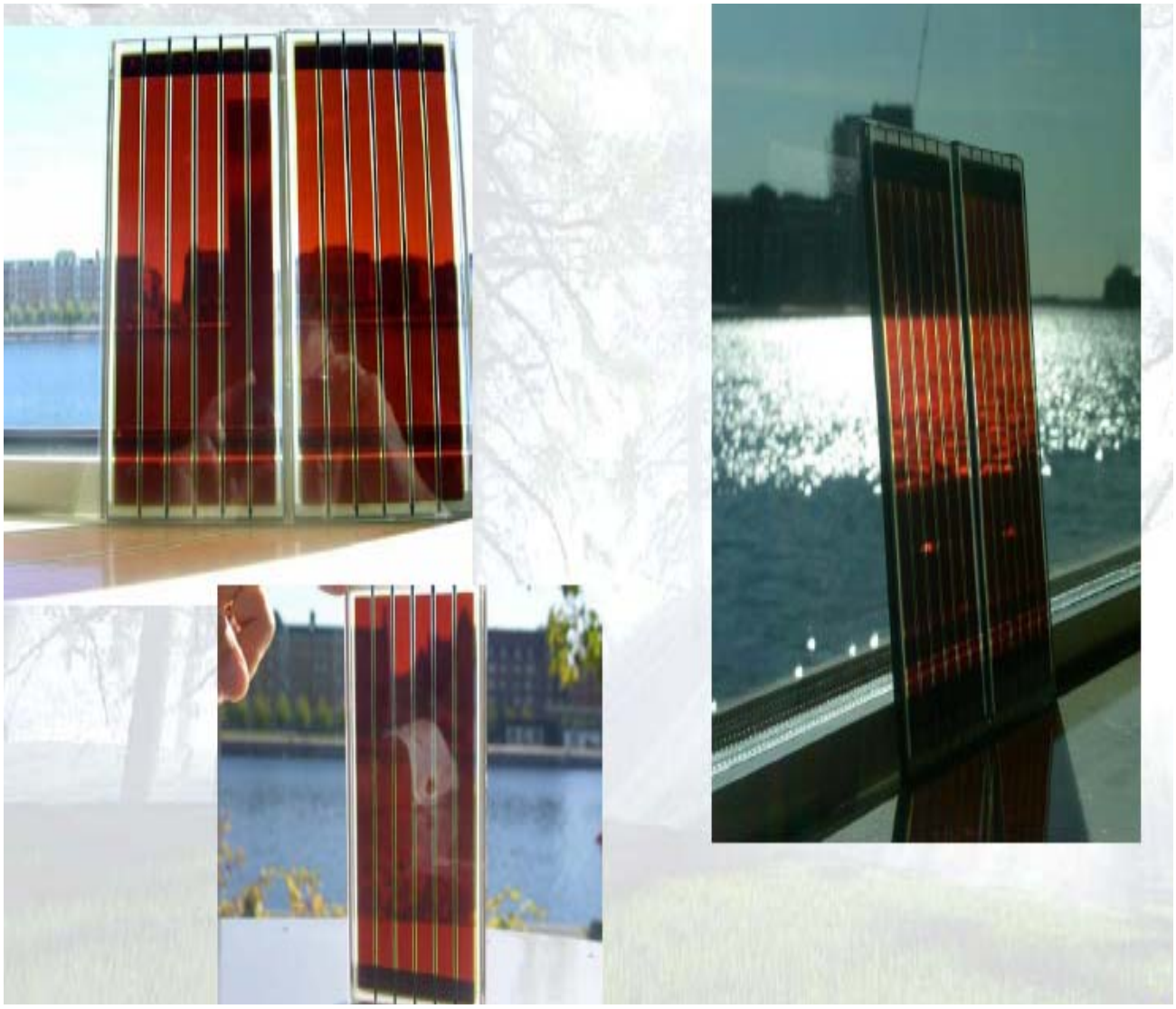
Nesli Dye Solar Cells (NDSC) A.Ş.



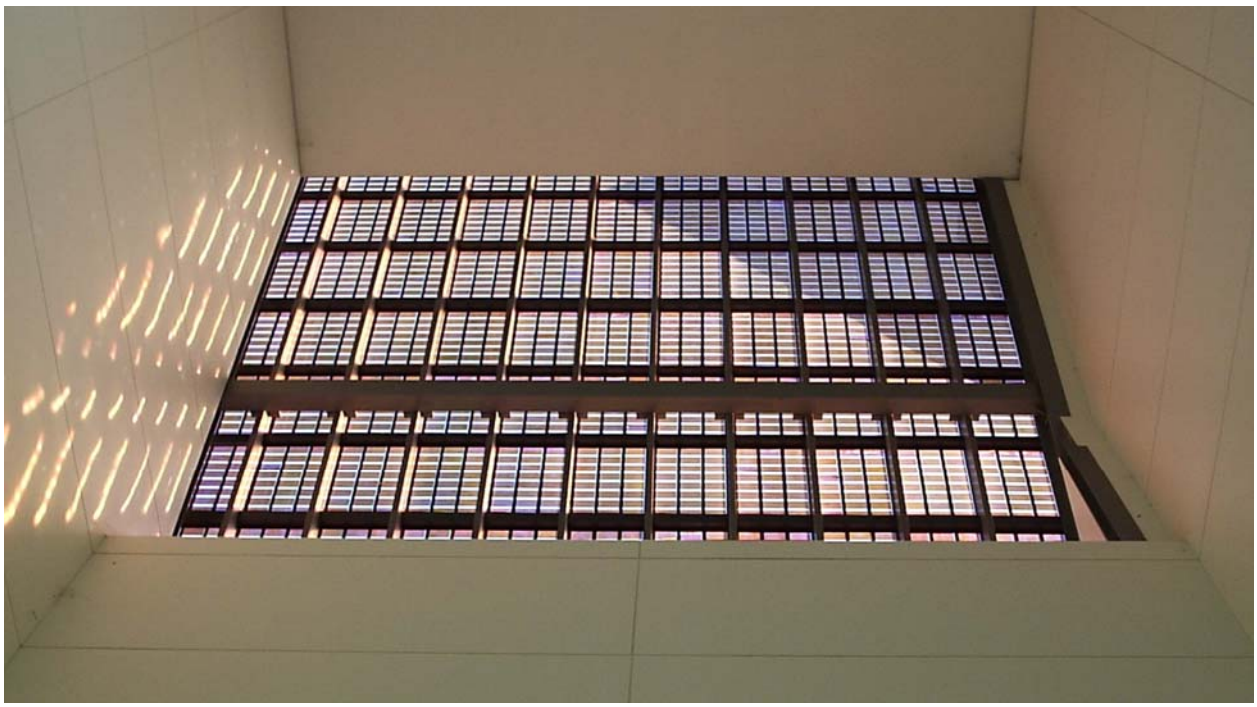
NDSC Wall Panels

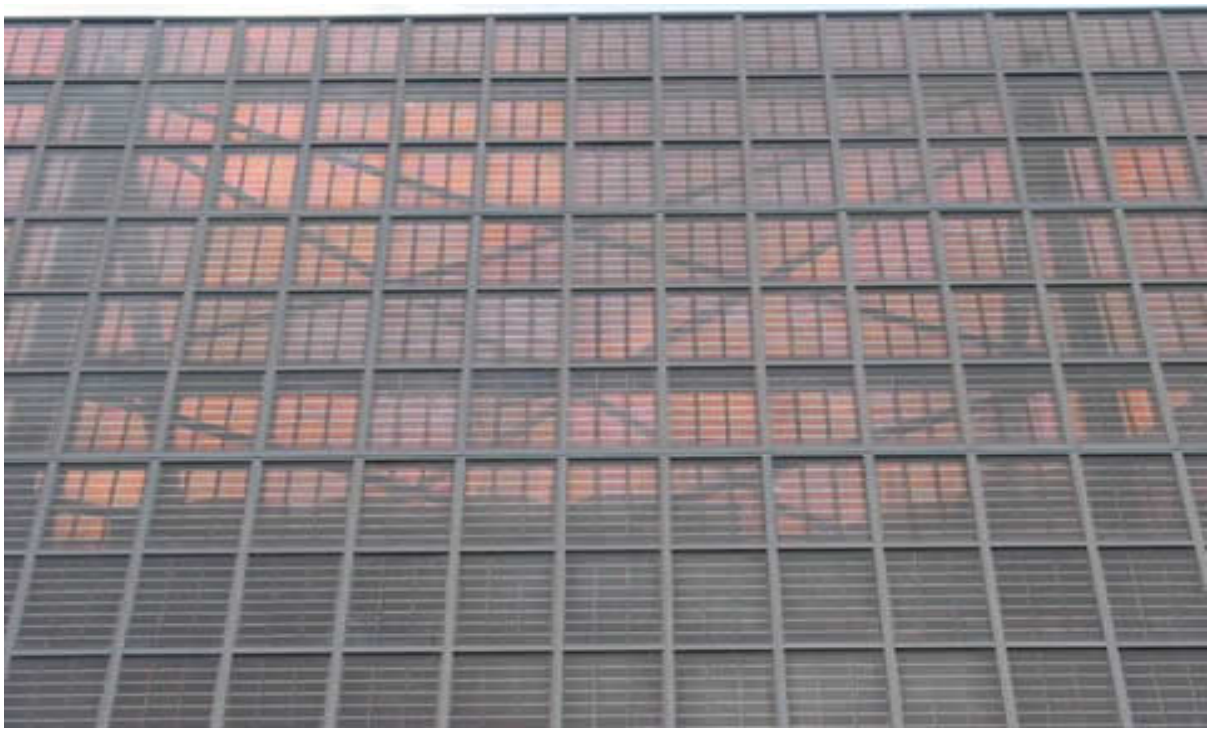
PROJECTS

The first DSC array was installed in NSW Australia in 2003.

- DSC PV façade Panels Form a 200 square meter sloping atrium wall/roof over the auditorium and plant room
- Design generation capability over 10,000 kWh of electricity every year
- The project was supported by the Australian Government.

Exterior
Interior





Close-up

VISION

The company's vision is to be the leading manufacturer and supplier of Dye Solar Cell panels in the region.

MISSION STATEMENT

Nesli Dye Solar Cells (NDSC) AŞ. is committed to bring solar energy into the mainstream.

There are two factors that make this goal achievable; first, superior and affordable DSC technology, second, exclusivity to produce and distribute the worlds 1st commercial DSC products in Turkey, Middle East North Africa, Cyprus, Turkic Republics (Asia) and most of EU countries.

INVESTORS

Nesli Dye Solar Cells (NDSC) AŞ is a privately-held Turkish renewable energy company whose aggresive growth requires a sustained financial effort.

If you are interested in investing in the high growth renewable energies industry, please free to contact us at nesli@nesli.com.tr

RESEARCH

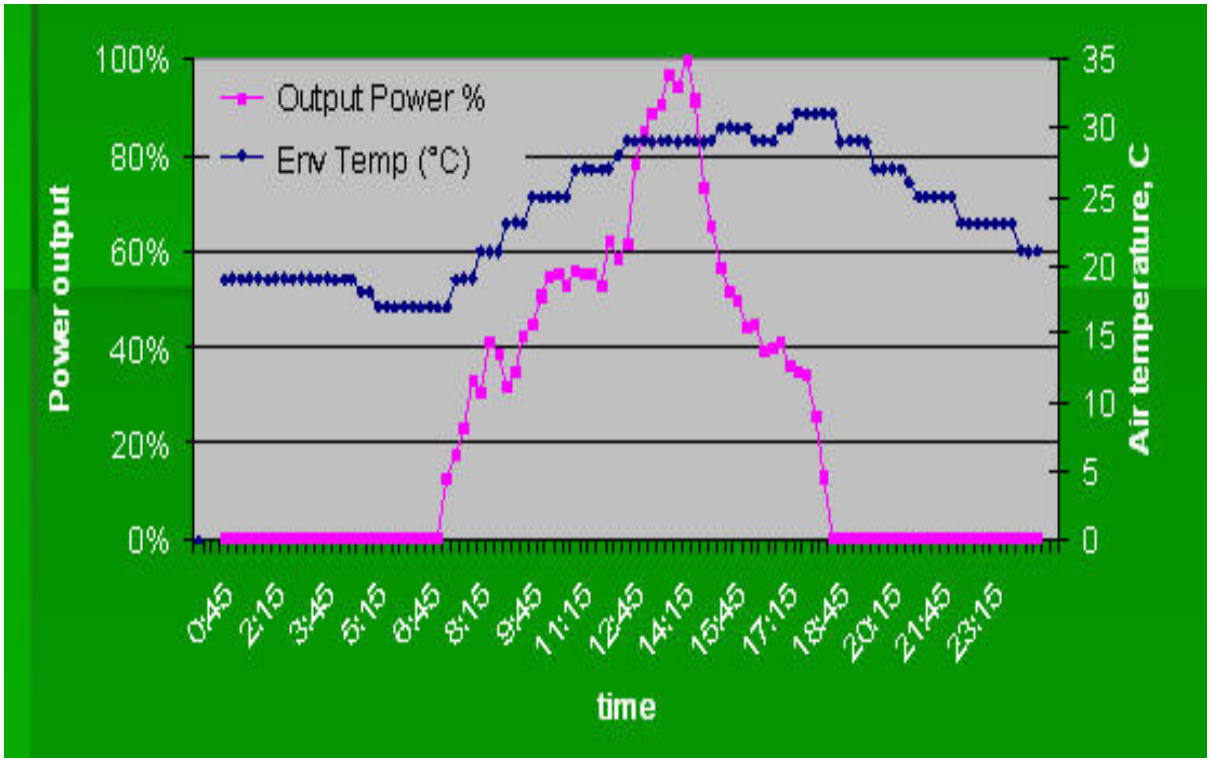
NDSC is currently certifying Dyesol's Dye Solar Panels for temperatures as low as -40degrees to +85 degrees Celsius.

These new standards will alllow NDSC to expand its sales.

PERFORMANCE

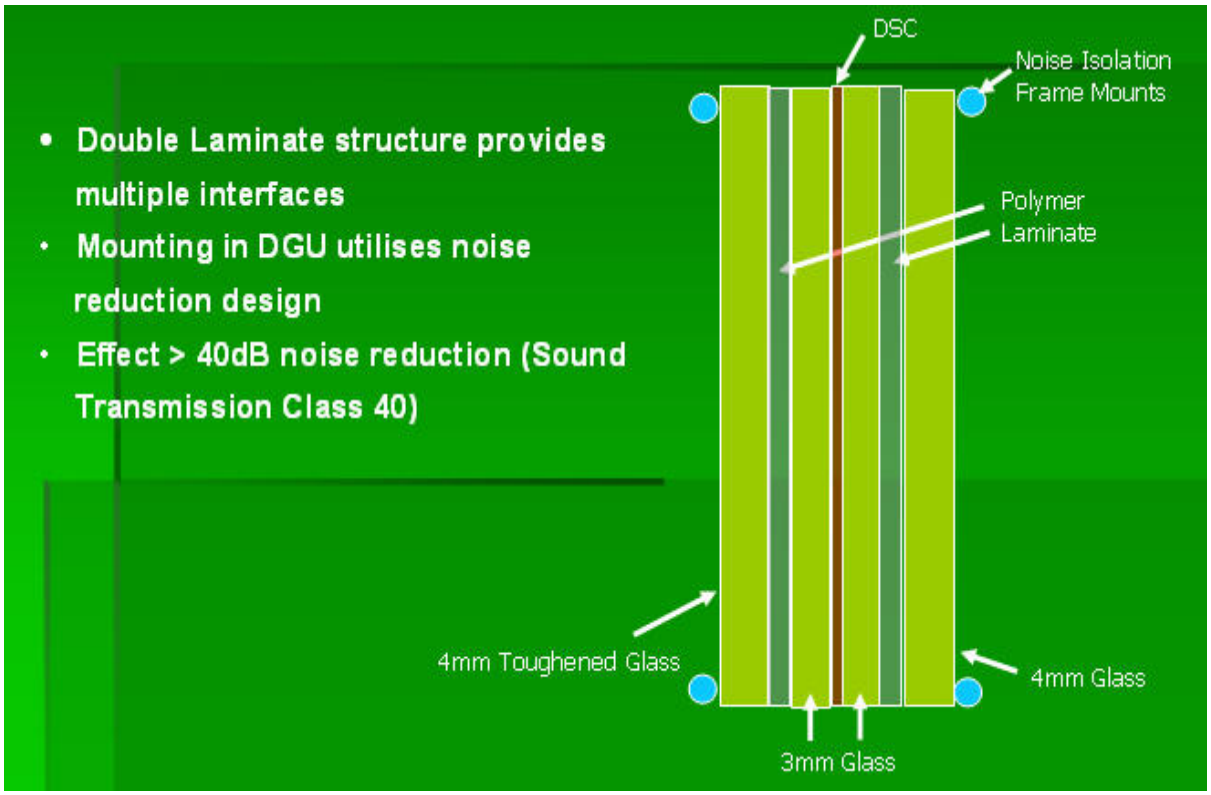
Power Availability

The graph below shows how a DSC panel works in real outdoor conditions, proving the benefits of "artificial photosynthesis".
The pink curve represents the electrical output starting at 6:45 AM and diminishing at roughly 6:45 PM. During the "shoulder hours", the panels are producing at least 85% of their maximum output. Over the period of a full day, **DSC panels will out perform any other PV.**
In climactic conditions and times of the day involving low light conditions (clouds, haze), DSC panels continue to produce electricity, being less angularly dependant.



The blue curve represents the ambient temperature in degrees Celsius. Unlike other PV, DSC panels become more efficient above 25 degrees Celsius. DSC continues to work at efficient rates at very low temperatures as other PV technologies.

Acoustic Performance



FAQs

Q: Why is DSC considered a Building Integrated material?

A: DSC is considered a Building Integrated material due to the fact that the panels can replace the façade of a building (“skin of the building”). It’s not a clip-on material but a replacement of conventional materials such as double coated glass, marble, granite, etc. The panels meet all the necessary building codes and have been tested to support winds up to 200 km/hour.
In addition DSC panels are less angularly dependent, therefore can be installed at any angle just like most

buildings are built.

Q: Do DSC panels need particular weather conditions in order to perform?

A: No, DSC doesn't need special weather conditions in order to produce electricity. No direct sun is necessary. DSC is based on "artificial photosynthesis"; any natural light (including cloudy or hazy days) is enough to produce electricity.

Q: What colors are used for the panels?

A: The color of the Dye can be green, blue, gray or red, the latter being the most efficient (maximum electrical output).

Q: Does the production process or final product involve any toxic substances or materials?
A: No, all the materials used are non-toxic.

Q: Can I sell the electricity generated by my DSC panels back into the grid?
A: Based on recent renewable energy law of ETKB, soon future all the existing meters will be replaced by "smart meters", which will allow the renewable energy generated by the DSC array to be sold to the grid if desired for the higher daytime price (high peak) and buy it back in the evening at a lower cost.
The difference in price will decrease your energy bill, contributing to the pay-back period of your DSC array.

Q: Can NDSC Technologies design the electrical system for a DSC array?

A: NDSC uses high skilled electrical engineers to design and implement your project. Our focus is on delivering an optimum solution with minimum cost and maximum output.

Q: For what type of installation are DSC panels recommended?

A: DSC panels are recommended for different types of applications either residential, or non-residential or educational.

Non-residential: building facades, roofs, sound barriers, etc.

Residential: skylights, roofs, walls (replacing the existing brick walls)

Educational: green/renewable energy labs can incorporate DSC panels and materials as learning tools.

Q: Why is it claimed that DSC has the "lowest embodied energy"?

A: The energy necessary to produce a sqm of DSC panel is 25 KWh, including the production of the glass. In comparison, the energy embodied into producing other PV products is ten times higher. This is why DSC is the first truly "green" Photovoltaic technology.

Q: Are there any government rebates for Photovoltaic Installations in Türkiye?

A: Government incentives focus more on the commercial and industrial projects than on residential yet.

Q: How long will DSC panels perform at the maximum output?

A: The maximum electric output for a DSC panel is guaranteed for 25 years. After 25 years the panels will continue to produce electricity but at a slightly lower rate. As a building material it will last longer, inline with other building materials.

PURCHASE

At the moment **NDSC** is in the process of setting up its production facility in Mersin, Turkey. All **NDSC**s' products will be available for purchase in soon future.

(Please do not hasitate to contact us at nesli@nesli.com.tr in regard to investment opportunities for this Worlds 1st and largest DSC-Wall Panels production facilities and autstanding last generation of Solar Panel technology, while it is young and available.)

BUILDING INTEGRATED SOLAR PANELS(BIPV)

Building Integrated Solar Panels are constructed in a laminated design, with the connected tiles sandwiched between two panes of glass, fully encapsulated in the UV resistant transparent laminating polymer. The Titania Solar Wall Panels are designed for exposed mounting.

These products are designed to be isostructural to existing fascia mountings – replacing; not duplicating, the existing

fascia. (Therefore, actual building material costs can be deducted from the panel costs.)

Our panels are guaranteed to produce electricity for 25 years. Structural guarantees are consistent with the industry standards for the outer glass panes.

STAND ALONE PANEL

Stand alone panels are essentially identical to BISP panels except they do not need to meet building codes. Therefore they are approximately 20-30% cheaper than any other BIPV panels, due to the use of less robust materials.

Figure 90 : location of studied city

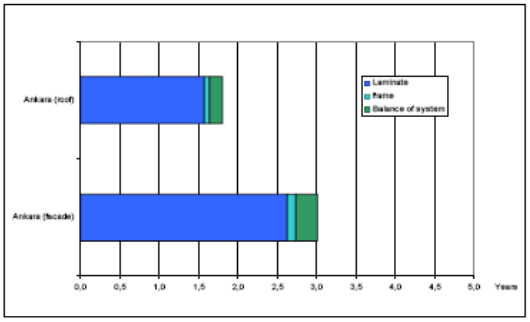


Figure 91 : Energy Payback time

Table 44 : results for Ankara

Ankara	Global horizontal irradiation 1697 kWh/m2	
	Roof-top	***Façade***
Annual output [kWh/kWp]	1 400	840
Energy Pay-Back Time [years]	1,8	3,0
Energy Return Factor [number of times]	15,6	9,0
Potential for CO_2 mitigation [tCO_2/kWp]	20,6	12,3

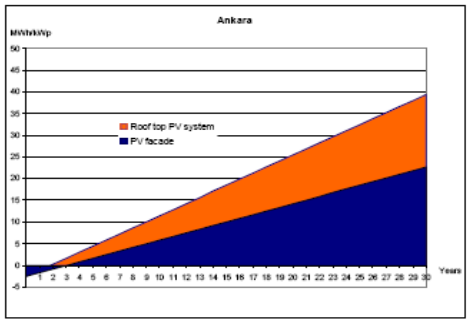
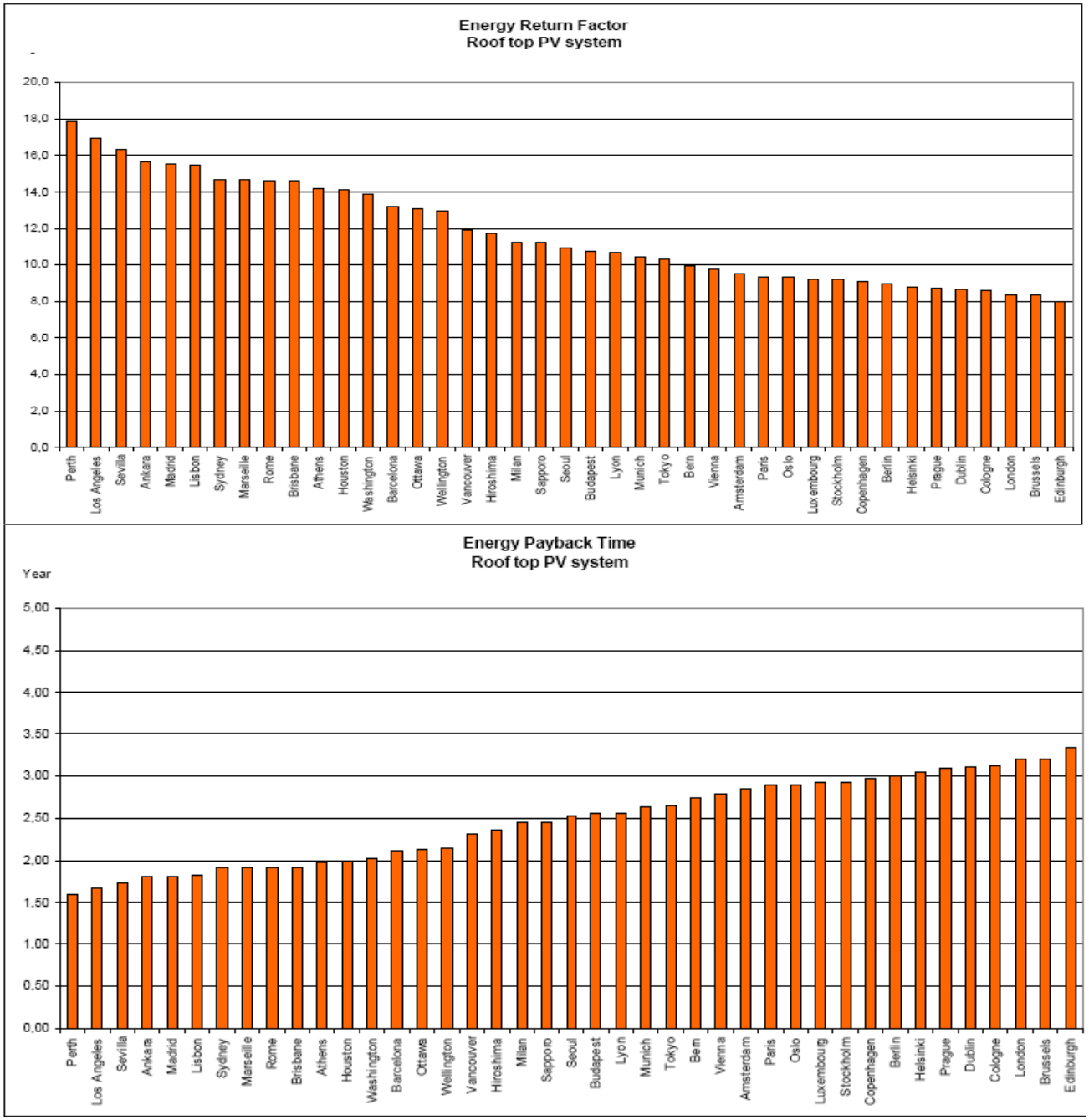


Figure 92 : Cumulative net energy production over system lifetime for Ankara



- The “Energy Pay Back Time” (EPBT), defined as the ratio of the total energy input during the system life cycle and the yearly energy generation during system operation, both should be of course expressed in the same unit, either in primary energy or in final electrical energy. The EPBT is expressed in years,

- The “Energy Return Factor” (ERF) defined as the ratio of the total energy generation during the system operation lifetime and the total energy input during the system life cycle. An ERF equal to ten means that a PV system produces ten times more energy than it consumes throughout its life cycle. The ERF is expressed as a single figure with no unit.

The environmental indicator used is:

- The “Potential for CO2 Mitigation” defined as the quantity of greenhouse gas emissions that will be avoided by a given PV system. It is calculated by multiplying the energy output of a PV system during its lifetime by the average CO2 content of the local electricity mix (taken at national level). It is expressed in tons of CO2 per kWp installed.

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