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Reinier Bosch.

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Design.
Production.
Development.

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We are triggered
by the potential of
green, clean energy
and circular materials.
This encouraged
us to explore new
possibilities.

The fusion of art and technology boosts great possibilities.

So: why not integrate solar panels as a bold, but beautiful statements for buildings, in stead of putting them away on rooftops?.

Solar design is so much more than just a panel. It's a crucial ingredient to create buildings with a strong identity that still feel very human.

SOLARIX

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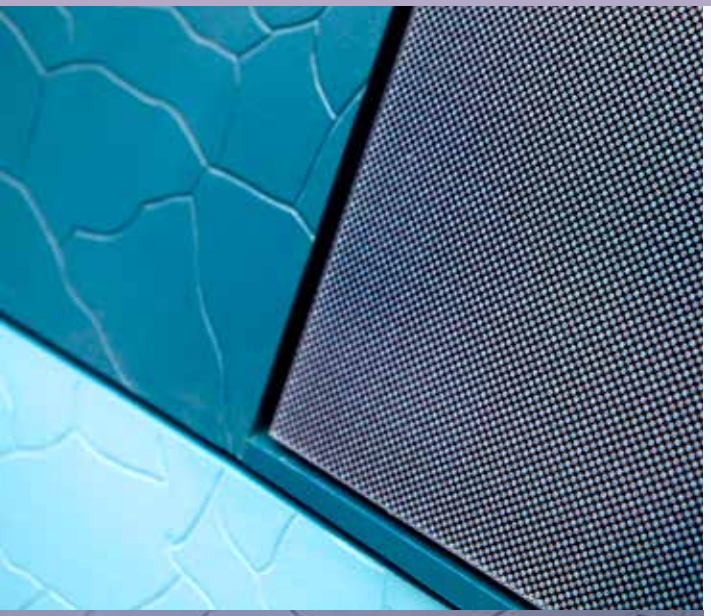

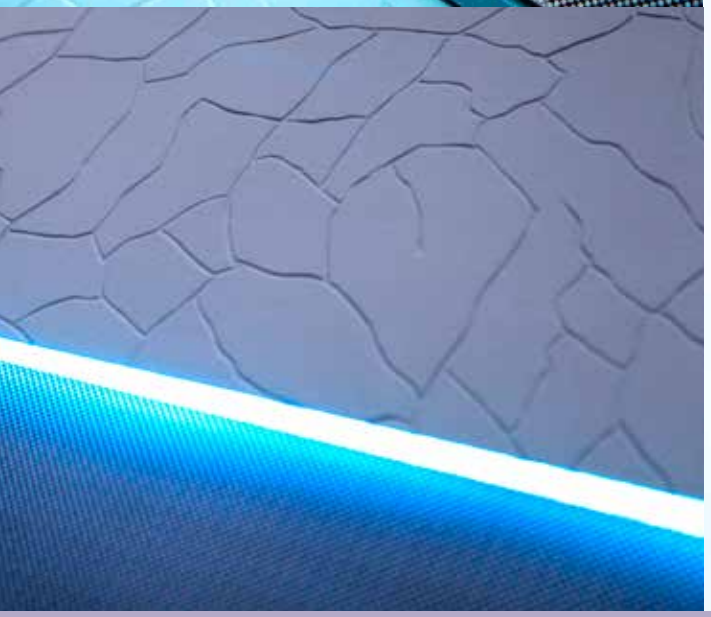

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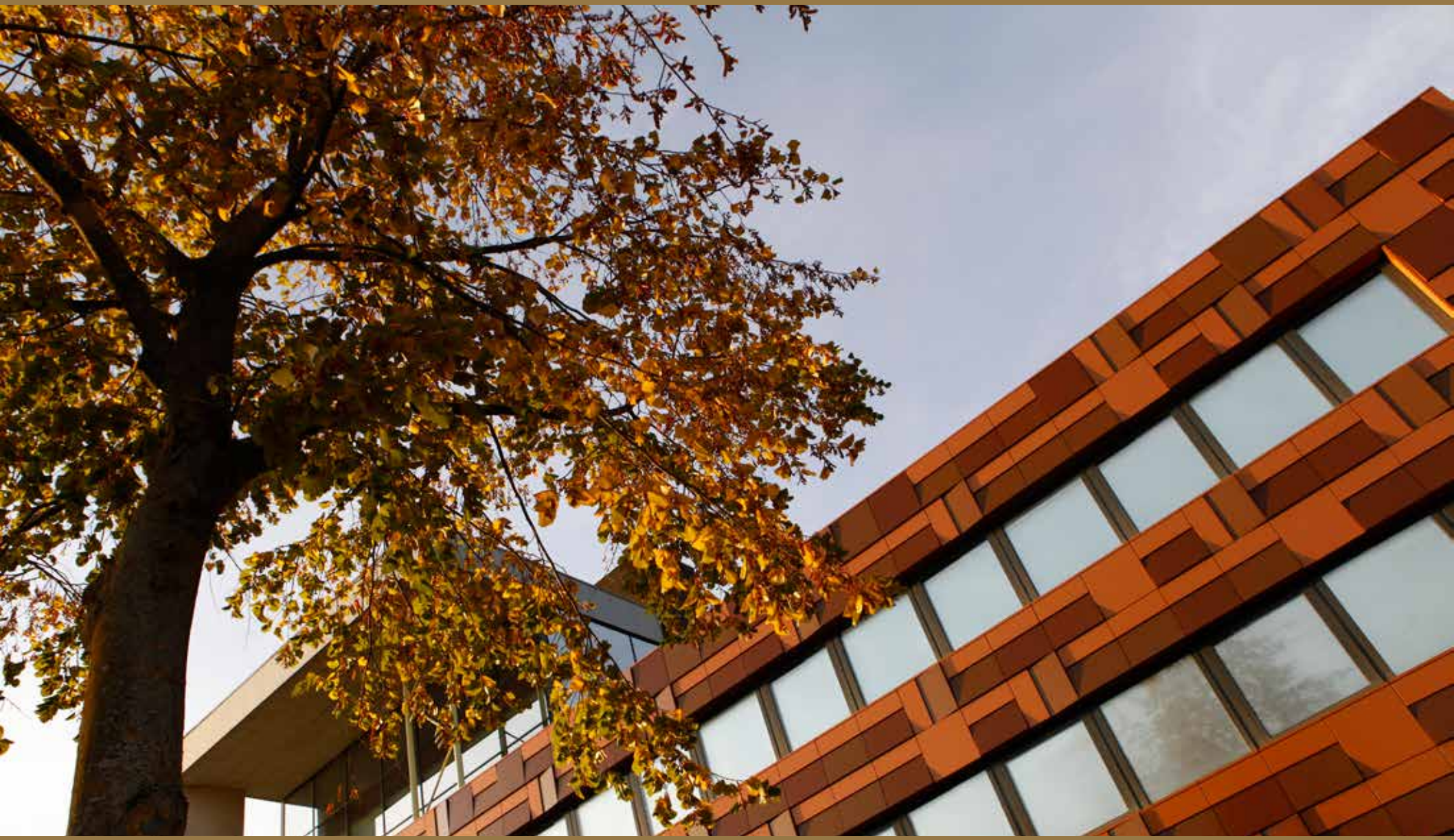

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Solar panel . Solar Design . City Design

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- local energy production
- aesthetic and dynamic architecture

- smart, fun and responsive with led
- circulair

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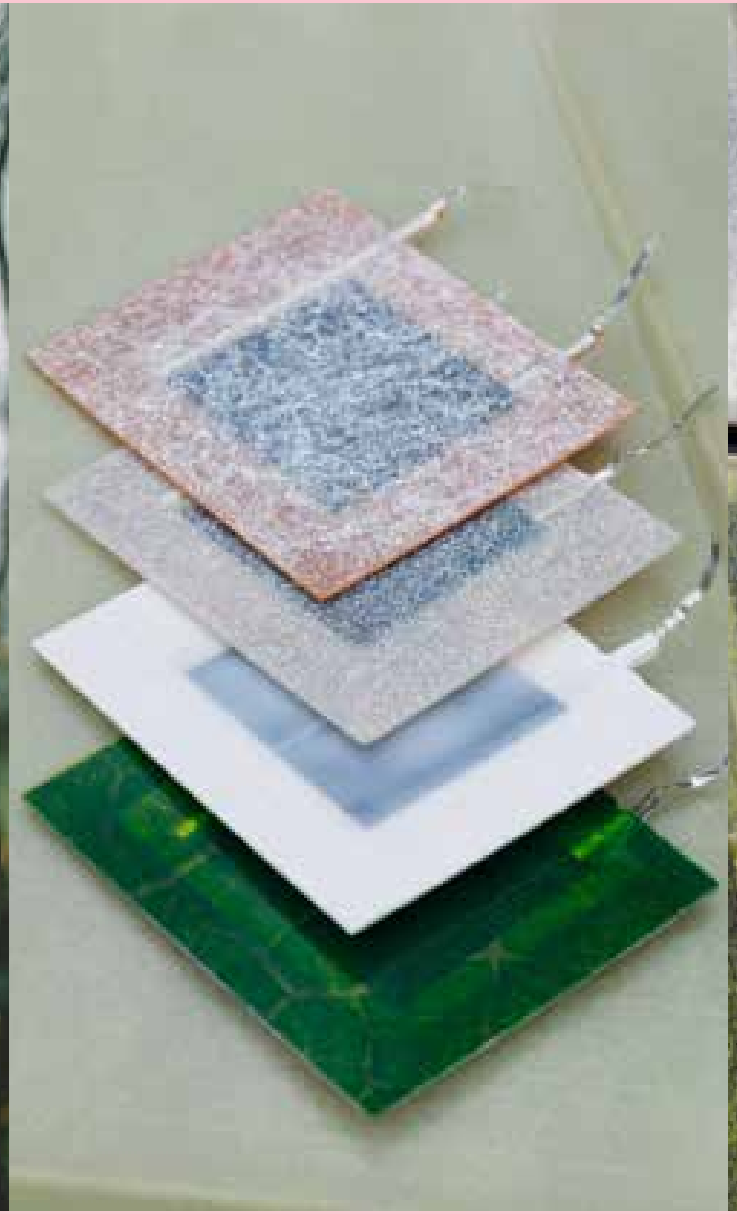

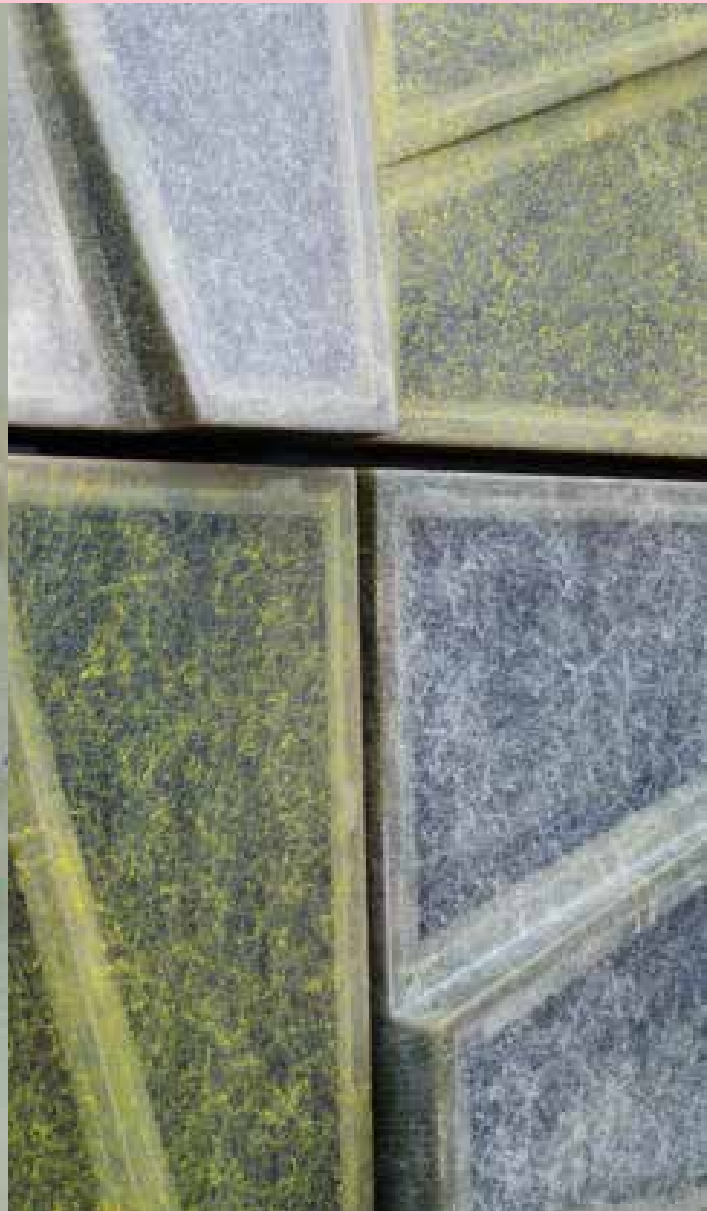

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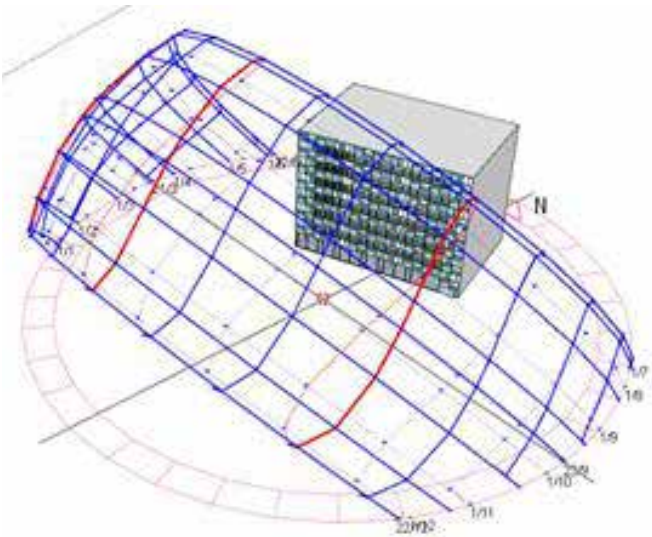
STOP !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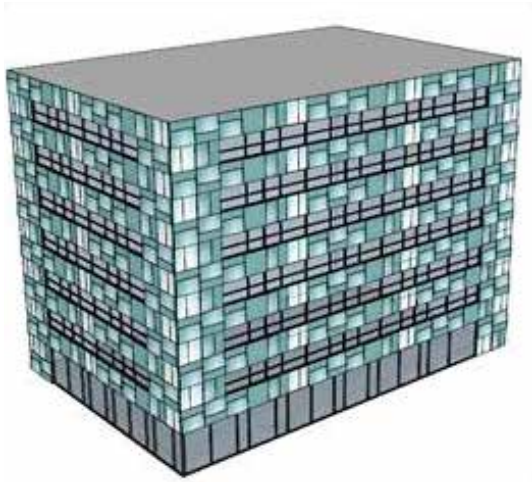
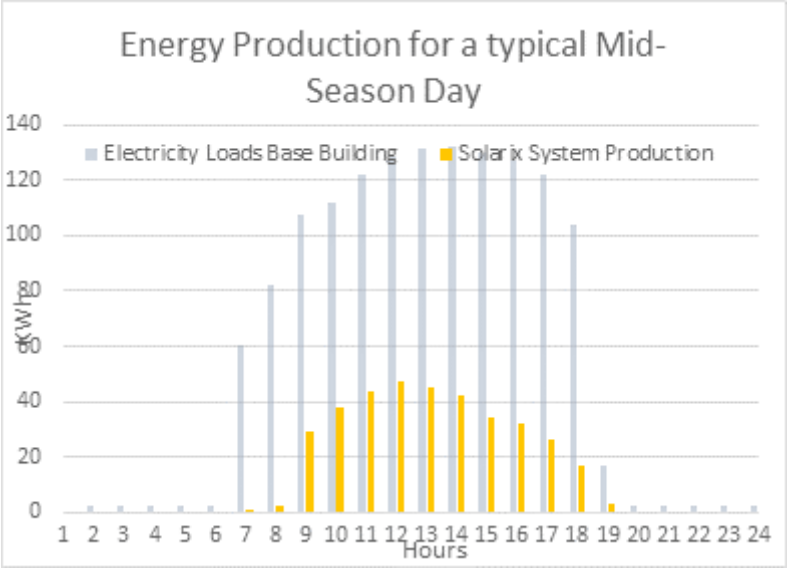
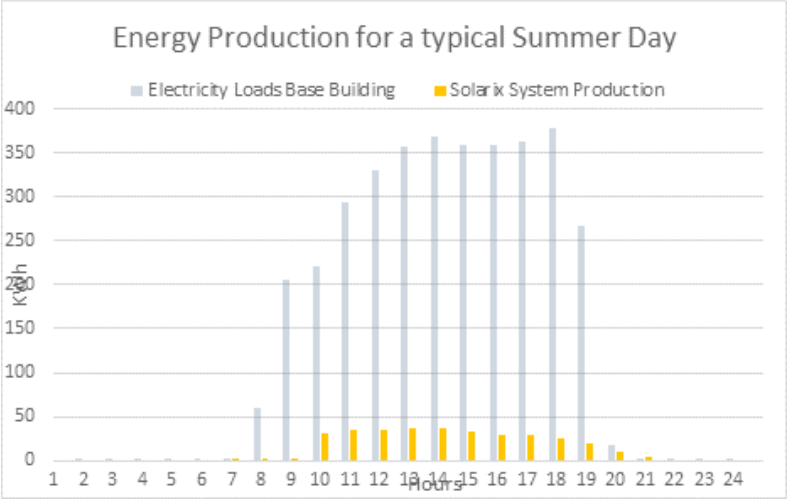



Energy Production for a typical Mid-Season Day
Electricity Loads Base Building
Solarix System Production
kWh
Hours
0
20
40
60
80
100
120
140
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

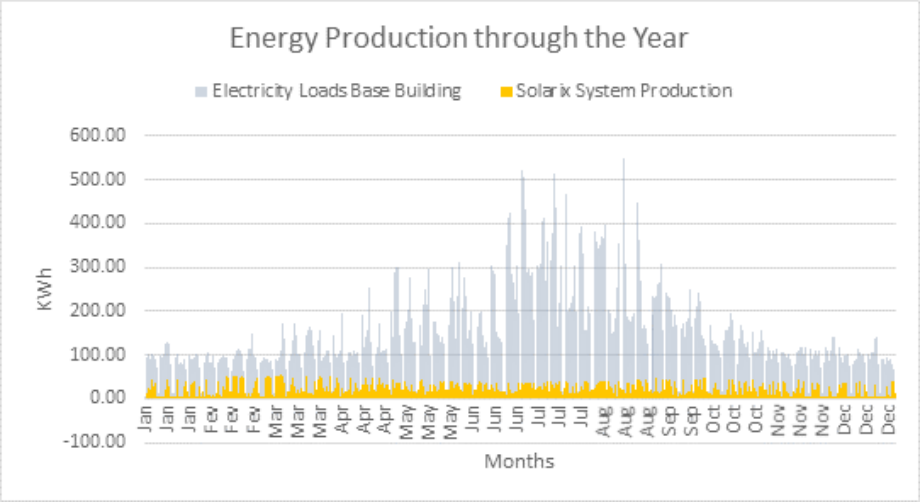

Energy Production for a typical Summer Day
Electricity Loads Base Building
Solarix System Production
kWh
Hours
0
50
100
150
200
250
300
350
400
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

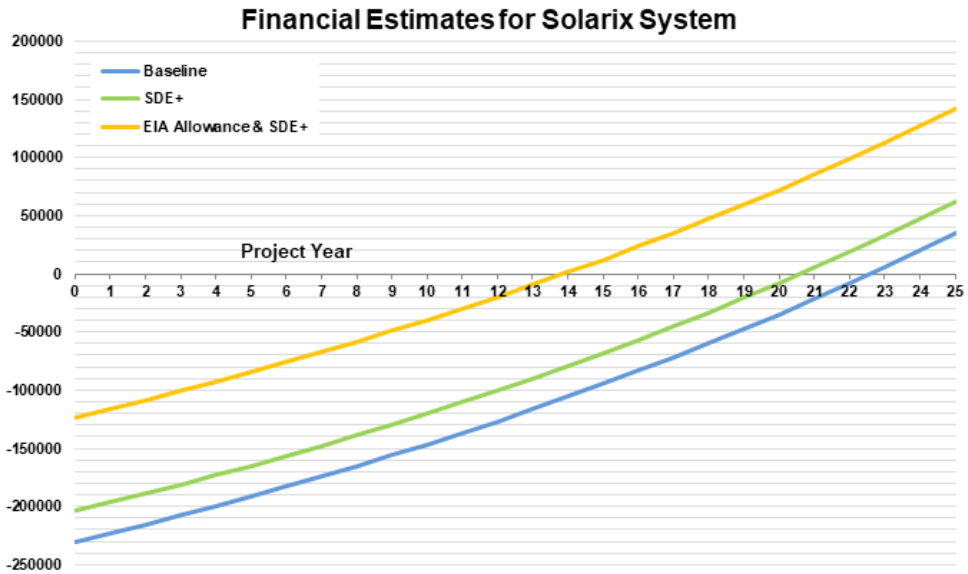
Project:	Typical Office Building		Electricity Grid Factor in NL:	0,431	kg of CO2.kWh		Equivalency to driving:		0,112	(kg CO2/km)
Date:	3/7/19		Equivalent as tree:	0,05	(tree/kg CO2)		Yearly Household Elec Consumption		2990	kWh/y
Subject:	Yield Estimates 2 Facades									

Name:	Panel #1		Panel #2		Panel #3		Panel #4		Panel #5	
Size (mm):	2000	1800	2000	1800	2000	1800	2000	1800	2000	1800
Cells Min Size (mm):	1880	1146	1880	1146	1720	1146	1720	1146		
							1685	826		
Solar Glass Panel Size (mm)	1975	1146	1975	1146	1775	1146	1975	1775		
Capacity (Wp):	290,5		290,5		264,1		264,1			
Width LED Strip (mm)	18,6						188,63			

Energy Production:

Façade	Orientation (°)	Panels		Total Surface Panels (m2)	Surface Composite (m2)	Surface Solar Panels (m2)	Surface Cells (m2)	kWp Installed	Yearly Energy Production (KWh)	
South-East	135,0	28	Panel #1	100,8	36,4	63,4	60,3	8,1	3685,6	4738,6
South-East	135,0	16	Panel #2	57,6	20,8	36,2	34,5	4,6	2106,0	2707,8
South-East	135,0	16	Panel #3	57,6	24,7	32,5	31,5	4,2	1926,8	2477,3
South-East	135,0	16	Panel #4	57,6	1,0	56,1	53,8	7,2	3287,3	4226,5
South-East	135,0	12	Panel #5	43,2	43,2	0,0	0,0	0,0	0,0	0,0
Total South-East		88		316,8	126,1	188,2	180,1	24,3	11005,7	14150,2
South-West	225,0	20	Panel #1	72,0	26,0	45,3	43,1	5,8	3153,9	4055,0
South-West	225,0	12	Panel #2	43,2	15,6	27,2	25,9	3,5	1892,3	2433,0
South-West	225,0	12	Panel #3	43,2	18,5	24,4	23,7	3,2	1731,3	2226,0
South-West	225,0	12	Panel #4	43,2	0,7	42,1	40,4	5,4	2953,8	3797,7
South-West	225,0	8	Panel #5	28,8	28,8	0,0	0,0	0,0	0,0	0,0
Total South-West		64		230,4	89,7	138,9	133,0	17,9	9731,3	12511,7
Total		152		547,2	215,8	327,1	313,1	42,1	20737,1	26661,9 kWh


Energy Production through the Year
Electricity Loads Base Building
Solarix System Production
KWh
600.00
500.00
400.00
300.00
200.00
100.00
0.00
-100.00
Jan Jan Jan Fev Fev Fev Mar Mar Mar Apr Apr Apr May May May Jun Jun Jun Jul Jul Jul Aug Aug Aug Sep Sep Oct Oct Oct Nov Nov Nov Dec Dec Dec
Months


Financial Estimates for Solarix System
Baseline
SDE+
EIA Allowance & SDE+
Project Year
200000
150000
100000
50000
0
-50000
-100000
-150000
-200000
-250000
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Credit	Name	Comments	Estimated Points
Ene30	Share locally generated renewable energy sources	What percentage of the total energy consumption of the building is produced by on-site renewable energy production system? Depending the size of the Solarix Façade and the efficiency of the building points can scale from 2 (>0% to >20%)	From 2 to 10
Ene101	Outdoor & driveway lighting	If the integrated LED system has been specified, it can be considered as an energy efficient, controlled external lighting device.	2
Mat06	Future adaptability	Solarix façade system has been designed with the following elements in mind: - Modularity. The system is made of removable panels, design to enhance their maintainability. - Adaptability. The system can be easily disassembled and/or expanded if needed.	4
Mat101	Environmental impact of building materials	At this stage, not enough information to provide accurate estimates.	NA

Based on the BREEAM.nl 2016 In-Use Guidelines

CO_2 Offset per Year:

CO_2 Offset (kg CO_2)	24228
Growing Trees Equivalency	2811
Km of Driving Offset	501897
Typical House Equivalency	18.8

Road to 100% bio-based

- products C2C
- re-use waste materials
- use bio-based materials
- take back en re-use products

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