Building Integrated Photovoltaics (BIPV)

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Introduction To JinKo Solar
No. 1 Shipment for 4 Consecutive Years

70GW+ Delivered
14.3% Market Share
17 World Records
32GW Module Capacity

Data as of the end of 2020
Market Share Rankings in Top 10 Markets – 2020

1. China - 24%
2. United States - 21%
3. Vietnam - 17%
4. Japan - 14%
5. Germany - 16%
6. Australia - 11%
7. Brazil - 4%
8. Korea - 22%
9. India - 20%
10. Netherlands - 8%
What We Do

Solar Business
Continuously expanding the production capacity of silicon wafers, cells and modules, to create a vertically integrated PV industrial chain

Our Solutions
BIPV+BAPV to foster the development of green buildings
Solar+ Solutions and Energy Storage System
Building Integrated PV (BIPV)
BIPV Market Overview & Potential

Global curtain wall distribution & Application distribution

- China: 17%
- Middle East: 12%
- Europe: 26%
- USA: 26%
- Others: 4%
- ROA: 15%
- Public Facility: 20%
- Residential: 15%
- Commercial: 65%

Curtain Wall Trend 2016~2021

Area (Million m²)

- 2016
- 2017
- 2018
- 2019E
- 2020E
- 2021E

(Data source: Network public data)

Huge Potential
Over 3 trillion yuan total output value of curtain wall

High growth rate
Over 10% annual growth rate of curtain wall

Considerable Scale
600~1000 billion/year market size expected
## Our Products – Building Integrated PV (BIPV)

<table>
<thead>
<tr>
<th>Product</th>
<th>Power Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transparent BIPV</td>
<td>450-600 Wp</td>
</tr>
<tr>
<td>Ocean Blue BIPV</td>
<td>370-390 Wp</td>
</tr>
<tr>
<td>Forest Green BIPV</td>
<td>400-420 Wp</td>
</tr>
<tr>
<td>Classic Black BIPV</td>
<td>535-550 Wp</td>
</tr>
<tr>
<td>Mid-Summer Purple BIPV</td>
<td>350-370 Wp</td>
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</tbody>
</table>
## BIPV Vs Dual Glass Products

<table>
<thead>
<tr>
<th>BIPV</th>
<th>Dual Glass</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Encapsulant</strong></td>
<td>PVB</td>
</tr>
<tr>
<td><strong>Glass Thickness</strong></td>
<td>Up to 10mm</td>
</tr>
<tr>
<td><strong>Glass Color</strong></td>
<td>Multiple Options</td>
</tr>
<tr>
<td><strong>Transparency</strong></td>
<td>Up to 30%</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>Flexible</td>
</tr>
</tbody>
</table>
BIPV Added Value (Case Study)

Location: Dubai, United Arab Emirates
Available Roof Area: 1,200 m²
Façade Available Area: 6,000 m²
Electrical Consumption: 2,873,600 kWh/yr

PV system on the roof: 96 kWp
Expected Generation: 158,400 kWh/yr
Percentage of Coverage: 5.5%

BIPV system Installed: 1,650 kWp
Expected Generation: 1,402,500 kWh/yr
Percentage of Coverage: 48.8%

Total Coverage: 54.3%
BIPV Multiple Applications

Skylight
Spandrel
Green house
Shading
Wall-hanging
Fence
Tile
Louver
BIPV References

Project Name: Tianjin Energy Eco-city
Characteristics:
- Two-star green building;
- The whole building adopts curtain wall integrated photovoltaic power generation technology, combined cooling and heating power supply and smart grid technology.

Project Name: Hangzhou Xixi Wetland Dragon Tongue Tourist Service Center
Characteristics:
- Reasonably and efficiently applied various green building technologies such as ground source heat pump, solar thermal photoelectricity, and building energy intelligent management system;
- The project won the double awards of LEED Platinum Certification and Jing Rui Award Medal.
BIPV References

Project Name: Positec headquarters in Suzhou
Characteristics:
➢ Technology, intelligence, ecology and environmental protection in one.
➢ China’s green three-star building, Third Prize of China Green Building Innovation Award, American LEED-NC2009 Platinum certification.

Project Name: Sound barrier in Seoul, Korea
Characteristics:
➢ Tailor-made n-type double-sided power generation component, high generating capacity;
➢ Solar sound barrier meets local noise reduction standards, outdoor <60dB;
➢ Optimize the frame structure and solve the occlusion problem; optimize the system design plan and increase the power generation of the system by 5%;
Local Bifacial Dual Glass References

**Project Name:** DEWA Mohammad bin Rashed Al Maktoum Solar Park (Phase V)
**Capacity:** 1,065 MW
**Characteristics:**
- Project is in the supply and installation process.
- To be the biggest phase of the Mohammad Bin Rashed Al Maktoum Solar Park.
- Project provided all technical requirements and extended testing assuring best performance.

**Project Name:** Abu Dhabi International Airport
**Capacity:** 4 MW
**Characteristics:**
- Project was installed as a parking structure providing shading and free electricity for the airport.
- Modules used generated more than 7% of expected electricity from monofacial modules despite having unstable albedo factor.
JinKO Solar Co., Ltd

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