

CHAPTER ONE: INTRODUCTION.....	1
INTRODUCTION	1
STUDY GOALS AND OBJECTIVES.....	2
REASONS FOR DOING THE STUDY	3
SCOPE OF REPORT	4
METHODOLOGY	5
INTENDED AUDIENCE.....	6
INFORMATION SOURCES.....	6
ANALYST CREDENTIALS.....	7
RELATED REPORTS	7
BCC ONLINE SERVICES.....	8
DISCLAIMER	8
CHAPTER TWO: SUMMARY.....	9
SUMMARY.....	9
THE EMERGENCE OF BIPV AND NEW GEOGRAPHIC DISTRIBUTION.....	10
<i>SUMMARY TABLE GLOBAL BIPV ANNUAL MARKET SEGMENT, THROUGH 2015 (MW)</i>	11
<i>SUMMARY FIGURE GLOBAL BIPV ANNUAL MARKET SEGMENT, 2009-2015 (MW)</i>	11
CHAPTER THREE: OVERVIEW	12
OVERVIEW.....	12
OVERVIEW (CONTINUED)	13
OVERVIEW (CONTINUED)	14
CHAPTER FOUR: BIPV MARKETS.....	15
BIPV MARKET SEGMENTATION	15
BIPV ROOFING	15
Shingles.....	16
Roof Tiles.....	16
Metal Seam Roofing.....	17
Dyesol Prepares Product for the Metal Seam Market.....	18
TPO Membrane Roofing	18
BIPV GLAZING MARKET	19
BIPV BUILDING CLADDING MARKET	20
BIPV ARCHITECTURAL SHADING MARKETS.....	20
WORLD AVAILABLE MARKET SIZE FOR BIPV APPLICATIONS	21
World Available Market Size...(Continued).....	22
<i>TABLE 1 GLOBAL BIPV NEW CAPACITY BY MARKET SEGMENT, THROUGH 2015 (MW)</i>	23

<i>TABLE 2 GLOBAL BIPV MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	24
CHAPTER FIVE: BIPV TECHNOLOGIES.....	25
BIPV TECHNOLOGIES	25
BIPV TECHNOLOGIES (CONTINUED).....	26
CHAPTER SIX: BIPV MARKET SEGMENTATION BY TECHNOLOGY	27
BIPV MARKET SEGMENTS	27
<i>TABLE 3 PV TECHNOLOGY BIPV APPLICATION SUITABILITY</i>	28
CHAPTER SEVEN: BIPV MARKET SEGMENTS.....	29
BIPV MARKET SEGMENTS	29
BIPV MARKET SEGMENTS (CONTINUED).....	30
CHAPTER EIGHT: BUILDING INTEGRATED PHOTOVOLTAIC TECHNOLOGIES	31
C-SI AND POLY-SI BIPV CHALLENGES AND BUILDING COMPONENT COMPATIBILITY	32
FLUCTUATIONS IN SI AVAILABILITY AND PRICE.....	33
A-SI BIPV CHALLENGES AND COMPATIBILITY	33
CDTE BIPV CHALLENGES AND COMPATIBILITY.....	34
CIGS CHALLENGES AND COMPATIBILITY.....	34
DSC BIPV CHALLENGES AND COMPATIBILITY	35
OPV BIPV CHALLENGES AND COMPATIBILITY	35
OPV BIPV CHALLENGES AND ... (CONTINUED)	36
CHAPTER NINE: BIPV REGULATORY AND INCENTIVE REGIMES.....	37
REGULATORY REGIMES PERTINENT TO BIPV PROJECTS.....	37
U.S. REGULATIONS PERTINENT TO BIPV INSTALLATIONS.....	38
ASHRAE 90.1	38
LOCAL REGULATORY AGENCIES.....	39
EUROPEAN UNION (EU) REGULATIONS PERTINENT TO BIPV INSTALLATIONS	39
CE MARKING	40
FRENCH REGULATORY REGIME FOR BIPV.....	40
ITALIAN REGULATORY AND INCENTIVE REGIMES FOR BIPV	41
SPANISH REGULATORY REGIME FOR BIPV	41
PACIFIC RIM REGULATORY REGIMES FOR BIPV	42
ASIA MINOR BIPV REGULATORY REGIME	42
CHAPTER TEN: BIPV-RELEVANT INTERNATIONAL STANDARDS	43
INTERNATIONAL CERTIFICATION STANDARDS	43
2006 UNIFORM SOLAR ENERGY CODE	43

ASHRAE/IESNA STANDARD 90.1-1999	43
IEC 61215	44
IEC 61646: THIN-FILM TERRESTRIAL PHOTOVOLTAIC (PV) MODULES, DESIGN QUALIFICATION AND TYPE APPROVAL	44
IEEE STD 1262-1995: RECOMMENDED PRACTICE FOR QUALIFICATION OF PHOTOVOLTAIC (PV) MODULES	45
IEC 61215	45
ISO9001	46
UNDERWRITERS LABORATORIES (UL) CERTIFICATIONS PERTINENT TO BIPV MATERIALS.....	46
UL 746	46
UL 790	46
ISO 773	46
UL 1703	47
EU-SPECIFIC CERTIFICATION STANDARDS.....	47
CE-COMPLIANCE.....	47
APPLICATION CLASS A AND IEC/EN61730.....	47
 CHAPTER ELEVEN: BIPV INDUSTRY STRUCTURE AND COMPETITIVE ANALYSIS	48
BIPV INDUSTRY STRUCTURE AND COMPETITIVE ANALYSIS.....	48
MAJOR DRIVING FORCES FOR BIPV CAPACITY BY REGION	49
GREEN BUILDING PRINCIPLES: NOW AN UNSTOPPABLE CULTURE.....	49
U.S. BIPV MARKET DRIVERS	50
U.S. Federal Incentives for BIPV.....	50
State Support Environments for BIPV.....	50
State Support ... (Continued).....	51
<i>TABLE 4 SOLAR MANDATES IN STATE RENEWABLE PORTFOLIO STANDARDS</i>	52
CANADA'S BIPV MARKET DRIVERS	53
EU'S BIPV MARKET DRIVERS.....	53
FRANCE'S BIPV MARKET DRIVERS.....	54
GERMANY'S BIPV MARKET DRIVERS	55
<i>TABLE 5 REVISED GERMAN SOLAR FEED-IN TARIFFS IN EFFECT JANUARY 1, 2011 (\$/KWH).....</i>	56
ITALY'S BIPV MARKET DRIVERS	56
<i>TABLE 6 REVISED ITALIAN SOLAR FEED-IN TARIFFS IN EFFECT JANUARY 1, 2011 (\$/KWH).....</i>	57
SPAIN'S BIPV MARKET DRIVERS	58
UNITED KINGDOM'S BIPV MARKET DRIVERS.....	58
CZECH REPUBLIC'S MARKET DRIVERS	59
PACIFIC RIM AND SE ASIAN BIPV MARKET DRIVERS.....	59
CHINA'S BIPV MARKET DRIVERS	60

JAPAN'S BIPV MARKET DRIVERS	61
SOUTH KOREA'S BIPV MARKET DRIVERS	62
TAIWAN'S BIPV MARKET DRIVERS	63
INDIA'S BIPV MARKET DRIVERS	64
AUSTRALIA'S BIPV MARKET DRIVERS.....	64
FITS IN THE AUSTRALIAN STATES.....	65
<i>TABLE 7 IN EFFECT SOLAR FEED-IN TARIFFS OF THE AUSTRALIAN STATES (\$/KWH).....</i>	<i>66</i>
<i>TABLE 8 AUSTRALIAN RENEWABLE ENERGY TARGET SCHEDULE (GWH).....</i>	<i>67</i>
CHAPTER TWELVE: BIPV MARKET STRUCTURE.....	68
BIPV ROOF TILE	68
C-SI AND POLY-SI MODULE-BASED TILE MARKET STRUCTURE	69
A-SI THIN FILM SOLAR TILE MARKET STRUCTURE	70
THE IMPORTANCE OF STRATEGIC PARTNERSHIPS IN THE BIPV MARKET STRUCTURE.....	70
THE IMPORTANCE OF STRATEGIC (CONTINUED).....	71
THE IMPORTANCE OF STRATEGIC (CONTINUED).....	72
CHAPTER THIRTEEN: BIPV MARKETS BY SEGMENT.....	73
METRICS USED IN THIS REPORT FOR FORECASTING	73
<i>TABLE 9 CONVENTIONS USED IN BIPV MARKET FORECASTS, PV TECHNOLOGY POWER DENSITY.....</i>	<i>74</i>
CONVENTIONS USED FOR MARKET SHARE OF PV TECHNOLOGIES IN BIPV FORECASTS	75
<i>TABLE 10 BIPV MARKET SHARES OF PV TECHNOLOGY, 2009 (%).....</i>	<i>75</i>
CHAPTER FOURTEEN: BIPV ROOFING FORECASTS	76
SUMMARY FORECAST FOR GLOBAL MARKETS FOR BIPV ROOFING	76
<i>TABLE 11 GLOBAL BIPV ROOFING MARKET SECTORS BY ANNUAL NEW GENERATING CAPACITY, THROUGH 2015 (MW).....</i>	<i>77</i>
<i>TABLE 12 GLOBAL BIPV ROOFING MARKET SECTORS BY ANNUAL REVENUE, THROUGH 2015.....</i>	<i>78</i>
<i>TABLE 13 GLOBAL BIPV ROOFING MARKET BY PV TECHNOLOGY GENERATING CAPACITY, THROUGH 2015.....</i>	<i>78</i>
BIPV ROOFING SHINGLES MARKET.....	79
GLOBAL BIPV ROOFING SHINGLES MARKET	79
GLOBAL BIPV SHINGLE MARKET FORECAST BY CAPACITY AND REVENUE	80
<i>TABLE 14 GLOBAL BIPV ROOFING SHINGLES MARKET BY CAPACITY, THROUGH 2015.....</i>	<i>81</i>

GLOBAL BIPV SHINGLE MARKET FORECAST BY TECHNOLOGY.....	81
<i>TABLE 15 GLOBAL BIPV ROOFING SHINGLES MARKET BY PV TECHNOLOGY, THROUGH 2015</i>	82
U.S. BIPV ROOFING SHINGLE MARKET	82
BIPV SHINGLE REPLACEMENT MARKET BIGGER THAN NEW MARKET	83
U.S. BIPV SHINGLE MARKET FORECAST BY CAPACITY AND REVENUE	84
U.S. BIPV Shingle Market...(Continued).....	85
<i>TABLE 16 U.S. BIPV ROOFING SHINGLES MARKET BY REVENUE AND CAPACITY, THROUGH 2015</i>	86
U.S. BIPV SHINGLE MARKET FORECAST BY TECHNOLOGY.....	86
U.S. BIPV SHINGLE MARKET FORECAST BY TECHNOLOGY.....	87
<i>TABLE 17 U.S. BIPV ROOFING SHINGLES MARKET BY PV TECHNOLOGY, THROUGH 2015</i>	88
THE CANADA'S BIPV SHINGLE MARKET	88
CANADA'S BIPV SHINGLE MARKET FORECAST BY CAPACITY AND REVENUE	89
<i>TABLE 18 CANADA'S BIPV ROOFING SHINGLES MARKET BY REVENUE AND CAPACITY, THROUGH 2015</i>	89
CANADA'S BIPV SHINGLE MARKET FORECAST BY TECHNOLOGY.....	89
<i>TABLE 19 CANADA'S BIPV ROOFING SHINGLES MARKET BY PV TECHNOLOGY, THROUGH 2015</i>	90
AUSTRALIA'S BIPV SHINGLE MARKET	90
AUSTRALIA'S BIPV SHINGLE MARKET FORECAST BY CAPACITY AND REVENUE	91
<i>TABLE 20 AUSTRALIA'S BIPV ROOFING SHINGLES MARKET BY REVENUE AND CAPACITY, THROUGH 2015</i>	92
AUSTRALIA'S BIPV SHINGLE FORECAST BY TECHNOLOGY.....	92
<i>TABLE 21 AUSTRALIA'S BIPV ROOFING SHINGLES MARKET BY PV TECHNOLOGY, THROUGH 2015</i>	93
REST OF WORLD'S BIPV SHINGLE MARKET	93
REST OF WORLD'S BIPV SHINGLE MARKET FORECAST BY CAPACITY AND REVENUE	93
Rest of World BIPV Shingle Market...(Continued).....	94
<i>TABLE 22 REST OF WORLD'S BIPV ROOFING SHINGLES MARKET BY REVENUE AND CAPACITY, THROUGH 2015</i>	95
REST OF WORLD'S BIPV SHINGLE MARKET FORECAST BY TECHNOLOGY.....	95

<i>TABLE 23 REST OF WORLD'S BIPV ROOFING SHINGLES MARKET BY PV TECHNOLOGY, THROUGH 2015</i>	96
GLOBAL BIPV ROOFING TILE MARKET	96
GLOBAL BIPV ROOFING TILE MARKET FORECAST BY CAPACITY AND REVENUE	97
<i>TABLE 24 GLOBAL BIPV ROOFING TILE MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	98
GLOBAL BIPV ROOFING TILE MARKET FORECAST BY PV TECHNOLOGY.....	99
<i>TABLE 25 GLOBAL BIPV ROOFING TILE MARKET BY PV TECHNOLOGY, THROUGH 2015</i>	99
U.S. BIPV ROOFING TILE MARKET.....	100
U.S. BIPV ROOFING TILE MARKET BY CAPACITY AND REVENUE.....	100
<i>TABLE 26 U.S. BIPV ROOFING TILE MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	101
U.S. BIPV ROOFING TILE MARKET FORECAST BY PV TECHNOLOGY.....	101
<i>TABLE 27 U.S. BIPV ROOFING TILE MARKET BY PV TECHNOLOGY, THROUGH 2015</i>	102
EUROPEAN UNION'S BIPV ROOFING TILE MARKET	102
EUROPE'S BIPV ROOFING TILE MARKET FORECAST BY CAPACITY AND REVENUE	102
<i>TABLE 28 EUROPE'S BIPV ROOFING TILE MARKET BY CAPACITY AND REVENUE THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	103
EUROPEAN UNION'S BIPV ROOFING TILE MARKET BY PV TECHNOLOGY.....	104
<i>TABLE 29 EUROPEAN UNION'S BIPV ROOFING TILE MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	104
PACIFIC RIM'S SOLAR TILE MARKET.....	104
CHINA'S BIPV ROOFING TILE MARKET	105
JAPAN'S BIPV ROOFING TILE MARKET.....	105
SOUTH KOREA'S BIPV ROOFING TILE MARKET	106
TAIWAN'S BIPV ROOFING TILE MARKET.....	106
PACIFIC RIM'S BIPV ROOFING TILE MARKET BY CAPACITY AND REVENUE	106
<i>TABLE 30 PACIFIC RIM'S BIPV ROOFING TILE MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	107
PACIFIC RIM'S BIPV ROOFING TILE MARKET BY PV TECHNOLOGY.....	107

<i>TABLE 31 PACIFIC RIM'S BIPV ROOFING TILE MARKET BY PV TECHNOLOGY THROUGH 2015 (MW)</i>	108
REST OF WORLD'S BIPV ROOFING TILE MARKET	109
REST OF WORLD'S BIPV ROOFING TILE FORECAST BY CAPACITY AND REVENUE	110
<i>TABLE 32 REST OF WORLD'S BIPV ROOFING TILE MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	110
<i>TABLE 32 (CONTINUED)</i>	111
REST OF WORLD'S BIPV ROOFING TILE FORECAST BY PV TECHNOLOGY.....	111
<i>TABLE 33 REST OF WORLD'S BIPV ROOFING TILE MARKET BY PV TECHNOLOGY THROUGH 2015 (MW)</i>	111
GLOBAL BIPV METAL SEAM ROOFING MARKET	112
WORLD BIPV METAL SEAM ... (CONTINUED)	112
GLOBAL BIPV STANDING METAL SEAM ROOFING BY CAPACITY AND REVENUE	113
World BIPV Standing Metal Seam...(Continued).....	114
World BIPV Standing Metal Seam...(Continued).....	115
<i>TABLE 34 GLOBAL BIPV STANDING METAL SEAM ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	116
GLOBAL BIPV STANDING METAL SEAM ROOFING BY PV TECHNOLOGY.....	116
World BIPV Standing Metal...(Continued)	117
<i>TABLE 35 GLOBAL BIPV STANDING METAL SEAM ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	118
U.S. BIPV STANDING METAL SEAM ROOFING MARKET	118
U.S. BIPV STANDING METAL SEAM ROOFING BY CAPACITY AND REVENUE	119
<i>TABLE 36 U.S. BIPV STANDING METAL SEAM ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	120
U.S. BIPV STANDING METAL SEAM ROOFING BY PV TECHNOLOGY.....	120
<i>TABLE 37 U.S. BIPV STANDING METAL SEAM ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	121
EUROPE'S BIPV STANDING METAL SEAM ROOFING MARKET.....	122
EUROPE'S BIPV STANDING METAL SEAM ROOFING BY CAPACITY AND REVENUE	123
<i>TABLE 38 EUROPE'S BIPV STANDING METAL SEAM ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	124

EUROPE'S BIPV STANDING METAL SEAM ROOFING BY PV TECHNOLOGY.....	124
<i>TABLE 39 EUROPE'S BIPV STANDING METAL SEAM ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	<i>125</i>
AUSTRALIA'S BIPV STANDING METAL SEAM ROOFING MARKET....	125
AUSTRALIA'S BIPV STANDING METAL SEAM ROOFING BY CAPACITY AND REVENUE	125
<i>TABLE 40 AUSTRALIA'S BIPV STANDING METAL SEAM ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	<i>126</i>
AUSTRALIA'S BIPV STANDING METAL SEAM ROOFING BY PV TECHNOLOGY.....	126
<i>TABLE 41 AUSTRALIA'S BIPV STANDING METAL SEAM ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	<i>127</i>
CHINA'S BIPV STANDING METAL SEAM ROOFING MARKET	127
CHINA'S BIPV STANDING METAL SEAM ROOFING BY CAPACITY AND REVENUE	128
<i>TABLE 42 CHINA'S BIPV STANDING METAL SEAM ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	<i>129</i>
CHINA'S BIPV STANDING METAL SEAM ROOFING BY PV TECHNOLOGY.....	129
<i>TABLE 43 CHINA'S BIPV STANDING METAL SEAM ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	<i>130</i>
REST OF WORLD'S BIPV STANDING METAL SEAM ROOFING MARKET.....	130
REST OF WORLD'S BIPV STANDING METAL SEAM ROOFING BY CAPACITY AND REVENUE.....	131
<i>TABLE 44 REST OF WORLD'S BIPV STANDING METAL SEAM ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	<i>132</i>
REST OF WORLD'S BIPV STANDING METAL SEAM ROOFING BY PV TECHNOLOGY	133
<i>TABLE 45 REST OF WORLD'S BIPV STANDING METAL SEAM ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	<i>133</i>
GLOBAL TPO MEMBRANE ROOFING BIPV MARKET	134
BIPV ROOFS VS. GREEN ROOFS?	135
GLOBAL BIPV TPO MEMBRANE ROOFING FORECAST BY CAPACITY AND REVENUE	136
END NOTE FOR THE BIPV TPO MEMBRANE ROOFING MARKET	137
<i>TABLE 46 GLOBAL BIPV TPO MEMBRANE ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	<i>138</i>

GLOBAL BIPV TPO MEMBRANE ROOFING FORECAST BY TECHNOLOGY.....	138
<i>TABLE 47 GLOBAL BIPV TPO MEMBRANE ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	<i>139</i>
U.S. BIPV TPO MEMBRANE ROOFING MARKET	139
U.S. BIPV TPO MEMBRANE ROOFING FORECAST BY CAPACITY AND REVENUE	140
<i>TABLE 48 U.S. BIPV TPO MEMBRANE ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	<i>141</i>
U.S. BIPV TPO MEMBRANE ROOFING FORECAST BY TECHNOLOGY.....	141
<i>TABLE 49 U.S. BIPV TPO MEMBRANE ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	<i>142</i>
EUROPE'S BIPV TPO MEMBRANE ROOFING MARKET.....	142
EUROPE'S BIPV TPO MEMBRANE ROOFING FORECAST BY CAPACITY AND REVENUE	143
<i>TABLE 50 EUROPE'S BIPV TPO MEMBRANE ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	<i>144</i>
EUROPE'S BIPV TPO MEMBRANE ROOFING FORECAST BY TECHNOLOGY.....	144
<i>TABLE 51 EUROPE'S BIPV TPO MEMBRANE ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	<i>145</i>
REST OF WORLD'S BIPV TPO MEMBRANE ROOFING MARKET	145
REST OF WORLD'S BIPV TPO MEMBRANE ROOFING FORECAST BY CAPACITY AND REVENUE	146
<i>TABLE 52 REST OF WORLD'S BIPV TPO MEMBRANE ROOFING MARKET BY CAPACITY AND REVENUE, THROUGH 2015 (MW CAPACITY AND PV MANUFACTURER REVENUE)</i>	<i>146</i>
REST OF WORLD'S BIPV TPO MEMBRANE ROOFING FORECAST BY TECHNOLOGY	147
<i>TABLE 53 REST OF WORLD'S BIPV TPO MEMBRANE ROOFING MARKET BY PV TECHNOLOGY, THROUGH 2015 (MW)</i>	<i>147</i>
GLOBAL BIPV BUILDING FAÇADE MARKET	148
DEDICATED BIPV FAÇADE PRODUCTS ARE APPEARING	148
RIGID VS THIN FILM FAÇADE CHOICES	149
PEAK OUTPUT DURING PEAK DEMAND MAXIMIZES OUTPUT VALUE.....	150
STANDARDIZATION AND THE BIPV FAÇADE MARKET	150
CATERING TO ARCHITECTS AND DESIGNERS	151
SEE THE OPPORTUNITY, BE THE OPPORTUNITY	151
IS SOLAR IVY A FAÇADE?	152
GLOBAL BIPV BUILDING FAÇADE MARKET FORECAST	153

DISCUSSION OF GLOBAL MARKETS FOR BIPV FAÇADES BY GEOGRAPHICAL REGION.....	154
Discussion of Global Markets (Continued).....	155
Discussion of Global Markets (Continued).....	156
Discussion of Global Markets (Continued).....	157
GLOBAL MARKET FORECAST FOR BIPV FAÇADES BY CAPACITY AND GEOGRAPHIC REGION	157
<i>TABLE 54 GLOBAL BIPV BUILDING FAÇADE MARKET BY CAPACITY AND REGION, THROUGH 2015 (MW CAPACITY AND GEOGRAPHIC REGION).....</i>	<i>158</i>
GLOBAL MARKET FORECAST FOR BIPV FAÇADES BY PV TECHNOLOGY.....	158
Global Market Forecast for ... (Continued).....	159
<i>TABLE 55 GLOBAL BIPV BUILDING FAÇADE MARKET BY PV TECHNOLOGY CAPACITY, THROUGH 2015 (MW)</i>	<i>160</i>
GLOBAL BIPV GLAZING MARKET.....	160
GLOBAL BIPV GLAZING MARKET (CONTINUED)	161
THE GLAZING MARKET OPPORTUNITY	162
POTENTIAL FOR CONFLICT WITH GREEN BUILDING COMPETITIVE METHODS.....	162
ESTIMATE OF THE TOTAL AVAILABLE BIPV GLAZING MARKET	163
GLOBAL MARKET FORECAST FOR BIPV GLAZING BY CAPACITY AND GEOGRAPHIC REGION	163
Global Market Forecast for BIPV...(Continued).....	164
<i>TABLE 56 GLOBAL BIPV GLAZING MARKET BY CAPACITY AND REGION THROUGH 2015 (MW CAPACITY AND GEOGRAPHIC REGION).....</i>	<i>165</i>
GLOBAL MARKET FORECAST FOR BIPV GLAZING BY PV TECHNOLOGY.....	166
<i>TABLE 57 GLOBAL BIPV BUILDING GLAZING MARKET BY PV TECHNOLOGY CAPACITY, THROUGH 2015 (MW)</i>	<i>166</i>
<i>TABLE 57 (CONTINUED).....</i>	<i>167</i>
GLOBAL BIPV SKYLIGHTING MARKET	167
BIFURCATED MARKET FOR BIPV SKYLIGHTING	168
GLOBAL MARKET FORECAST FOR BIPV SKYLIGHTING BY CAPACITY AND GEOGRAPHIC REGION	169
<i>TABLE 58 GLOBAL BIPV SKYLIGHTING MARKET BY CAPACITY AND REGION THROUGH 2015 (MW CAPACITY AND GEOGRAPHIC REGION).....</i>	<i>170</i>
GLOBAL MARKET FORECAST FOR BIPV SKYLIGHTING BY PV TECHNOLOGY.....	170
<i>TABLE 59 GLOBAL BIPV BUILDING GLAZING MARKET BY PV TECHNOLOGY CAPACITY, THROUGH 2015 (MW)</i>	<i>171</i>

GLOBAL BIPV ARCHITECTURAL SHADING MARKET	172
INNOVATION: PV-POWERED ROLLER SHADING.....	173
MARKET FORECASTS FOR BIPV ARCHITECTURAL SHADING.....	174
U.S. BIPV ARCHITECTURAL SHADING MARKET	175
EUROPE'S BIPV ARCHITECTURAL SHADING MARKET	175
CHINA'S BIPV ARCHITECTURAL SHADING MARKET.....	176
JAPAN'S BIPV ARCHITECTURAL SHADING MARKET.....	176
SE ASIA'S AND INDIA'S BIPV ARCHITECTURAL SHADING MARKET	177
FORECAST FOR THE BIPV ARCHITECTURAL SHADING MARKET	177
Forecast for the BIPV ... (Continued).....	178
<i>TABLE 60 GLOBAL BIPV ARCHITECTURAL SHADING MARKET BY CAPACITY AND REGION THROUGH 2015 (MW CAPACITY AND GEOGRAPHIC REGION).....</i>	<i>179</i>
GLOBAL MARKET FORECAST FOR BIPV ARCHITECTURAL SHADING BY PV TECHNOLOGY	179
Global Market Forecast for BIPV...(Continued)	180
<i>TABLE 61 GLOBAL BIPV ARCHITECTURAL SHADING MARKET BY PV TECHNOLOGY CAPACITY, THROUGH 2015 (MW)</i>	<i>181</i>
GLOBAL BIPV ARCHITECTURAL FABRICS MARKET.....	181
GLOBAL ARCHITECTURAL FABRIC MARKETS.....	182
MAIN SUBSEGMENTS OF THE BIPV ARCHITECTURAL FABRIC MARKET	183
PV COMPANIES SIGNIFICANT TO THE BIPV ARCHITECTURAL FABRIC MARKET	184
GLOBAL BIPV ARCHITECTURAL FABRIC MARKET FORECASTS	184
GLOBAL BIPV ARCHITECTURAL FABRIC MARKET BY CAPACITY AND REGION.....	185
Global BIPV Architectural ... (Continued).....	186
Global BIPV Architectural ... (Continued).....	187
<i>TABLE 62 GLOBAL BIPV ARCHITECTURAL FABRIC MARKET BY AREA, CAPACITY AND REVENUE TO MANUFACTURER, THROUGH 2015 (000 SQ M, MW CAPACITY AND VALUE)</i>	<i>188</i>
GLOBAL BIPV ARCHITECTURAL FABRIC MARKET BY PV TECHNOLOGY AND CAPACITY	188
<i>TABLE 63 GLOBAL BIPV ARCHITECTURAL FABRIC MARKET PV TECHNOLOGY CAPACITY, THROUGH 2015 (MW)</i>	<i>189</i>
GLOBAL BIPV SHUTTERS MARKET	189
GLOBAL BIPV ... (CONTINUED).....	190
APPENDIX A: BIPV-RELATED COMPANIES.....	191
BIPV COMPANIES.....	191

BUILDING-INTEGRATED PHOTOVOLTAICS ARCHITECTS.....	191
Building-Integrated Photovoltaics ... (Continued).....	192
BUILDING INTEGRATED PHOTOVOLTAICS	
MANUFACTURERS.....	193
A-Si BIPV Photovoltaics Manufacturers	193
A-Si BIPV Photovoltaics ... (Continued).....	194
A-Si BIPV Photovoltaics ... (Continued).....	195
C-Si BIPV Photovoltaic Manufacturers.....	196
C-Si BIPV Photovoltaic ... (Continued)	197
Poly-Si BIPV Photovoltaic Manufacturers	198
CIGS BIPV Product Photovoltaic Manufacturers.....	199
CIGS BIPV Product ... (Continued)	200
CIGS BIPV Product ... (Continued)	201
DSC BIPV Photovoltaic Companies.....	202
DSC BIPV Photovoltaic ... (Continued)	203
Plastic (OPV) Photovoltaics Manufacturers.....	204
PHOTOVOLTAIC METAL SEAM ROOFING COMPANIES	204
Photovoltaic Metal Seam ... (Continued)	205
Photovoltaic Metal Seam ... (Continued)	206
BIPV ARCHITECTURAL FABRIC MANUFACTURERS	207
BIPV Architectural ... (Continued).....	208
BIPV ARCHITECTURAL SHADING SYSTEMS COMPANIES	209
BIPV Architectural Shading ... (Continued)	210
BIPV Architectural Shading ... (Continued)	211
BIPV Architectural Shading ... (Continued)	212
BIPV FAÇADE COMPANIES	213
BIPV Façade Companies (Continued)	214
BIPV Façade Companies (Continued)	215
BIPV Façade Companies (Continued)	216
BIPV Façade Companies (Continued)	217
BIPV Façade Companies (Continued)	218
BIPV FAÇADE SUPPORT SYSTEMS COMPANIES	219
BIPV GLAZING COMPANIES.....	220
BIPV Glazing Companies (Continued)	221
BIPV Glazing Companies (Continued)	222
BIPV Glazing Companies (Continued)	223
BIPV Glazing Companies (Continued)	224
BIPV ARCHITECTURAL SHUTTERS COMPANIES.....	225
BIPV TPO MEMBRANE ROOFING COMPANIES	225
BIPV TPO Membrane ... (Continued)	226
BIPV ROOFING SHINGLES COMPANIES.....	227
BIPV ROOFING TILES COMPANIES	228
BIPV Roofing Tiles Companies (Continued)	229
BIPV Roofing Tiles Companies (Continued)	230

BIPV Roofing Tiles Companies (Continued)	231
BIPV Roofing Tiles Companies (Continued)	232
BIPV Roofing Tiles Companies (Continued)	233
BIPV SKYLIGHT COMPANIES	234
BIPV Skylight Companies (Continued).....	235
BIPV Skylight Companies (Continued).....	236
BIPV Skylight Companies (Continued).....	237
BIPV PLANNED COMMUNITY COMPANIES	238
INNOVATIVE BIPV COMPANIES.....	239