GLOBAL MARKET VIEW
AND IRA IMPACT

May 2023
AGENDA

• Market Vision
  • Secular Trends
  • Global Market Overview

• Inflation Reduction Act
  • Impact
  • Opportunities
MARKET VISION: SECULAR TRENDS
WHAT WE ARE SEEING AND THE IMPACT ON KEY MARKETS

SECULAR TRENDS ACCELERATING

Relative to before the pandemic, we are seeing faster, more pronounced shifts toward...

Consumers, policymakers and investors approaching Sustainability with urgency

Productivity becoming more critical as skilled labor shortages have become even greater

Government spending driving demand for more - and more resilient infrastructure

ECONOMIC & GEOPOLITICAL UNCERTAINTY

Geopolitical risks and trade tensions continue to increase

The most complex macro environment in last 40 years leading to market volatility

Resilient inflation, high interest rates, mixed consumer spending signals, supply chain woes easing but remaining, labor imbalances, commodity prices coming off highs, heightened geopolitical tensions

Strong regional regulations and protectionism

CHANGES IN END-USE MARKETS

Most markets remain solid in terms of underlying demand outlook and fundamentals

Wind energy demand remains high; favorable policy backdrop remains a catalyst for growth

Monetary policy focused on infrastructure spending, driving composites demand

Automotive outlook improved

Some consumer markets declining

Sources: Owens Corning Management Estimates based on third-party and publicly-available information
All competitive data and Owens Corning management estimates are based on legally obtained information from third parties and public sources
## MAIN TRENDS BY END USE MARKET

<table>
<thead>
<tr>
<th>Markets</th>
<th>Key Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building &amp; Construction</td>
<td>• Light-weighting, prefabrication and modular construction.</td>
</tr>
<tr>
<td></td>
<td>• Sustainable construction: better insulation, higher durability, improved energy efficiency, etc</td>
</tr>
<tr>
<td></td>
<td>• Urbanization to deal with more denser cities.</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>• Decarbonization of energy production</td>
</tr>
<tr>
<td></td>
<td>• Electric and Hydrogen fueled vehicles</td>
</tr>
<tr>
<td></td>
<td>• Increasing demand for higher modulus</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>• Renewal of infrastructure</td>
</tr>
<tr>
<td></td>
<td>• Shorter supply chain and sustainability</td>
</tr>
<tr>
<td></td>
<td>• Demand for higher reliability and resilience, driving conversions to FRP</td>
</tr>
<tr>
<td>Transportation</td>
<td>• Light-weighting to improve fuel efficiency and reduce carbon emissions</td>
</tr>
<tr>
<td></td>
<td>• Sustainability (Electrification, alternative fuels, use of sustainable materials, etc)</td>
</tr>
<tr>
<td></td>
<td>• Shared mobility, connectivity, autonomous driving to increase safety and increase efficiency.</td>
</tr>
</tbody>
</table>
MARKET VISION:
GLOBAL OVERVIEW
GLASS FIBER MARKET OUTLOOK

LONG-TERM GLASS FIBER GROWTH DRIVEN BY INDUSTRIAL PRODUCTION AND NEW APPLICATIONS

Glass Fiber Demand
40+ Years Averaging 5% CAGR

2019-2022 Demand Growth by Region

Megatrends
Population
Urbanization
Sustainability

Industrial Production Growth 2-3% CAGR
Material Substitution 1.6*

Implied Glass Fiber
GlassFiber growth of ~ 4-5% per year

Sources: Fiber economic bureau, Glass Fiber Europe, Global Trade information Services, Inc. and Owens Corning management estimates; Glass fiber market demand excludes E-glass yarns

* Multiple based on long term average
INDUSTRY SLOW-DOWN IN 2022 AND 2023, RECOVERY IN 2024

Gradual recovery in automotive as supply disruptions fade

Global Industrial Production (% Y/Y)

Global Light Vehicle Production (MM Units)

Source: Oxford Economics Industry Databank and I.H.S. Markit as of April 10 2023
CORE INFLATION REMAINS ABOVE THE 2% TARGET IN 2023

Sources: Federal Reserve Bank of New York
STRONG NEAR-TERM WIND DEMAND AND BULLISH LONG-TERM OUTLOOK

Source: Wood Mackenzie forecast as of April 10 2023

Global Installs (GW/year)

Rising geopolitical tensions drive increased emphasis on energy independence in the EU

China, Europe and the US government agendas all create potential upside to the base case outlook

How we power our world is evolving rapidly as clean energy takes over:

- Underlying demand in wind energy is outpacing installed capacity of the material supplier base
- Rising geopolitical tensions drive increased emphasis on energy independence in the EU

Source: Wood Mackenzie forecast as of April 10 2023
China government announced RMB 100 billion stimulation for renewable energy in May 2022 and overall production & demand started to rebound in August 2022.

2023 was upgraded by more than 20GW vs Q4 forecast, based on a 94GW order intake and 10GW delayed projects.

Note: Turbine Installation / grid connection can take anywhere from 6-18 months after auction stage.

Source: Wood Mackenzie forecast as of March 2023, Wind Daily
OUTLOOK ON GLOBAL GLASS MARKET

Global growth has remained resilient despite projected recession on horizon

2021: Sharp recovery & low inventory

2022: Demand growth decelerates in 2H, most global inventories replenishing

2023: Mild recession expected in US & EU, now pushed out to 2H 2023

2024-2025: Growth recovers as inflation falls and central banks ease financial conditions

Sources: Owens Corning Management Estimates based on third-party and publicly-available information. All competitive data and Owens Corning management estimates are based on legally obtained information from third parties and public sources.
INFLATION REDUCTION ACT

IMPACT & OPPORTUNITIES
THE IRA WILL INVEST $369BN INTO NEW CLEAN ENERGY AND CLIMATE PROGRAMS
OVER 60% OF FUNDING IS RELEVANT TO THE COMPOSITES INDUSTRY

Inflation Reduction Act Climate Spending ($BN)

$369BN over 10 years

- $17
- $35
- $35
- $37
- $7
- $21
- $22
- $42
- $153

$245BN Composites relevant

- Clean Fuel Tax Credits
- Conservation, Rural Development and Forestry
- Air Pollution
- Consumer Clean Energy Incentives
- Transportation & Infrastructure Upgrades
- Clean Energy Vehicle Tax Credits
- Climate Resilience
- Clean Manufacturing Incentives
- Clean Energy Tax Credits

Highlights:

- Estimated to reduce US GHG emissions 40% vs. 2005 by 2030, (goal is 50%)
- Projects include:
  - $135BN to ramp up wind and solar
  - Tax credits available for producers, including utilities and non-utilities
  - $9.7BN for rural electric systems to improve reliability, affordability and long-term resiliency
  - $0.8BN to accelerate interstate transmission line siting
- Eliminates the PTC phaseout for wind projects placed in service after Dec. 31, 2021

https://www.edf.org/blog/2022/08/12/biggest-thing-congress-has-ever-done-address-climate-change?gclid=EAIaIQobChMIzIK_8NOr-qfVOBkiJAr0MiVrEAAAYBC1AEgByh_D_BwE&plxc=cw
https://www.csg.org/2022/08/16/understanding-the-inflation-reduction-act/
IIJA & IRA FUNDING TO CREATE EXPONENTIAL GROWTH FOR GREEN TECH. COMPOSITES POISED TO PLAY A KEY ROLE IN BUILDING THE NET ZERO ECONOMY

Wind demand to double¹ by second half of the decade
Solar deployments to grow 5X by 2024², 10X by 2030¹

Electric Vehicle sales to increase 5X by 2030³ reaching 30% of US auto sales

Total US energy storage to double in 2023⁴ alone, could triple in 2024 if supply is available
Continued electrification increases need for grid resiliency, $75BN⁵ in direct funding between IIJA and IRA

$8BN in IIJA Funding and $3/kg tax credit⁶ makes Green Hydrogen less expensive than Gray Hydrogen for first time

1. Wood Mackenzie energy forecasts
MANUFACTURING TAX CREDITS AVAILABLE FOR EXPANSION, RECYCLING AND SUSTAINABILITY PROJECTS TO HELP U.S. MEET CLIMATE GOALS

Advanced Energy Project Credit Section 48C – Up to 30% Credit

- $10BN total, application opens 5/31 concept papers due 7/31, apply through IRS/Treasury Department
- Earn by establishing, expanding or re-equipping facilities that produce or recycle the following:
  - Grid modernization equipment, wind & solar power, energy storage systems, electric vehicles
- Also available for projects that reduce Scope 1 greenhouse gas emissions by at least 20%

Advanced Manufacturing Production Credit Section 45X

- Establishes tax credits for producing wind and solar components
  - Ex. blades, nacelles, towers, offshore wind platforms, fasteners, polymeric backsheets for solar
  - Tax Credit based on per watt calculation dependent on application
  - Cannot be claimed if already awarded Section 48C credit

IRA OFFERS ADDITIONAL OPPORTUNITIES TO LOWER SCOPE 2 EMISSIONS & EMBODIED CARBON

• Production Tax Credit – Section 45Y¹
  • $0.015/kWh of produced zero carbon electricity
    • Technology agnostic, requires prevailing wages
  • Available to utilities and owners/operators of electricity projects
  • Construction start date cutoff extended from 12/31/21 to 12/31/33
  • Domestic content threshold for wind, 40% pre-2025, maxes at 55% after 2028
    • +10% credit if met, -10% if not met in 2024, -15% in 2025, ineligible after 2026
    • +10% if project located in Energy Community (census zone with coal mine closed in last 20 years)
    • Up to 20% additional adder if part of low-income building project
    • +10% if 100% steel/iron used and 40% total components made in US

PTC will drive glass demand for wind while increasing access to low-cost renewables

APPENDIX
Factors that could impact the global economy and drive uncertainty:

1. Political instability (e.g. China-Taiwan, Russia-NATO, etc)
2. Trade tensions (e.g. China-US)
3. Fluctuations in commodity prices (e.g. oil)
5. COVID-19: supply chain disruptions, labor shortages & consumer behavior.
6. Environmental risks: climate change, natural disasters...
7. Major cyber and terror attacks
NATURAL GAS PRICE LOWER AFTER VERY MILD WINTER IN THE US AND EU

NA Natural Gas Price
(USD/MMBtu)

EU Natural Gas Price
(EUR/MWh)

US Natural Gas back to pre-pandemic levels

EU Natural Gas sharp decline, but still much above 2021 levels

Source: Trading Economics
REGIONAL FOCUS: NA
NA INDUSTRIAL PRODUCTION EXPECTED FALL MODESTLY IN 2023

Automotive outlook hampered by chip shortages; pent-up demand has built amid supply constraints

Light Vehicle Production (MM units)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
</tr>
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<tr>
<td></td>
<td>16</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
</tr>
</tbody>
</table>

Industrial Production (Growth, Y/Y%)

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-7.2</td>
<td>4.9</td>
<td>3.8</td>
<td>-1.2</td>
<td>0.4</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Sources: Oxford Economics Industry Databank, I.H.S. Markit as of April 10, 2023
ENERGY PRICES ARE GOING DOWN, BUT STILL HIGHER THAN PRE-PANDEMIC

US Natural Gas Price
(USD/MCF)

US Electricity Price
(¢ / kWh)

Source: EIA (Energy Information Administration)
INFLATION PRESSURE CONTINUES FOR MATERIALS AND LABOR

Limestone (index)

Kaolin and Ball Clay (index)

Chemical mfg (index)

Labor (index)

Source: BLS (Bureau of Labor Statistics)
SIGNIFICANT DECLINE IN FREIGHT, BUT STILL HIGHER THAN PRE-PANDEMIC

Source: Cass Truckload Linehaul Index
U.S. RESIDENTIAL OUTLOOK SLOWING, BUT IN ABSOLUTE TERMS REMAINS SOLID

Going forward, expect to see Non-Residential pick up sequentially as its recovery has just begun in earnest.

US Construction outlook is above-trend with some differences by construction vertical and job type:

Residential moderating: interest rates hurting affordability, but structural underbuilding should put a “floor” on US Residential demand.

Continued improvements to Non-Res outlook, early 2023 census data very strong. New chip plants, anti-climate change spending, plus Boeing contract with Air India.

Composites demand in infrastructure is up 2.6% in 2022, pointing to very strong glass conversions.

Sources: Oxford Economics Industry Databank as of April 10 2023, ACMA FY 2022 statistics.
# The Infrastructure Investment and Jobs Act Became Law in Q4 2021

$550 Billion in New Spending Over the Next Five Years

## Estimated Allocation of Funds:

### By Infrastructure Category, in $B

<table>
<thead>
<tr>
<th>Infrastructure Category</th>
<th>Allocation ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads, bridges and major projects</td>
<td>$110</td>
</tr>
<tr>
<td>Passenger/freight rail and public transit</td>
<td>$105</td>
</tr>
<tr>
<td>Water infrastructure</td>
<td>$63</td>
</tr>
<tr>
<td>Power and grid</td>
<td>$65</td>
</tr>
<tr>
<td>Broadband</td>
<td>$65</td>
</tr>
<tr>
<td>Resiliency and safety</td>
<td>$58</td>
</tr>
<tr>
<td>Airports, ports and waterways</td>
<td>$42</td>
</tr>
<tr>
<td>Clean school buses and ferries, EV charging</td>
<td>$21</td>
</tr>
<tr>
<td>Addressing legacy pollution</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

## By Type, % of Total

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula-based funding</td>
<td>68%</td>
</tr>
<tr>
<td>Competitive grant funding</td>
<td>28%</td>
</tr>
<tr>
<td>Other Budget account</td>
<td>2%</td>
</tr>
</tbody>
</table>

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2Agency breakout and funding type is a mix of new and existing funding (totaling to $773B). Source: The Infrastructure Investment and Jobs Act – Formula and Competitive Funding by Agency – Democratic Policy & Communications Committee.
## NORTH AMERICA: END-USE MARKET OUTLOOK (MAR 2023 UPDATE)

<table>
<thead>
<tr>
<th>End-Market</th>
<th>2020 Final</th>
<th>2021 Final</th>
<th>2022 Final</th>
<th>2023 (Dec 22 Outlook)</th>
<th>2023 Latest Update</th>
<th>2024 Latest Update</th>
<th>Source</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Residential</td>
<td>-9%</td>
<td>-10.2%</td>
<td>-10.2%</td>
<td>-2.7%</td>
<td>5.6%</td>
<td>1.7%</td>
<td>Oxford Economics</td>
<td>March</td>
</tr>
<tr>
<td>Trailers, RV’s, &amp; Parts</td>
<td>-10.5%</td>
<td>11.4%</td>
<td>2.4%</td>
<td>0.0%</td>
<td>-0.7%</td>
<td>1.0%</td>
<td>Oxford Economics</td>
<td>March</td>
</tr>
<tr>
<td>Ships &amp; Boats</td>
<td>-5%</td>
<td>13.5%</td>
<td>1.3%</td>
<td>2.3%</td>
<td>-1.2%</td>
<td>6.2%</td>
<td>Oxford Economics</td>
<td>March</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>-55%</td>
<td>65%</td>
<td>10%</td>
<td>2.5%</td>
<td>8%</td>
<td>10%</td>
<td>Capex &amp; Baker Hughes</td>
<td>March</td>
</tr>
<tr>
<td>Light Vehicle</td>
<td>-20%</td>
<td>0.2%</td>
<td>9.7%</td>
<td>5.5%</td>
<td>5.5%</td>
<td>4.7%</td>
<td>IHS Markit</td>
<td>March</td>
</tr>
<tr>
<td>Heavy Truck</td>
<td>-38%</td>
<td>23%</td>
<td>16.7%</td>
<td>-4.8%</td>
<td>-4.8%</td>
<td>-18.4%</td>
<td>ACT Research Co.</td>
<td>March</td>
</tr>
<tr>
<td>Residential</td>
<td>4.5%</td>
<td>17.6%</td>
<td>-7.7%</td>
<td>-7.9%</td>
<td>-11.8%</td>
<td>6.6%</td>
<td>Oxford Economics</td>
<td>March</td>
</tr>
<tr>
<td>US Housing Starts MM/year</td>
<td>1.34</td>
<td>1.58</td>
<td>1.61</td>
<td>1.27</td>
<td>1.28</td>
<td>1.45</td>
<td>NSA</td>
<td>March</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>-5%</td>
<td>-7.4%</td>
<td>-17.9%</td>
<td>-1.5%</td>
<td>2.0%</td>
<td>4.2%</td>
<td>Oxford Economics</td>
<td>March</td>
</tr>
<tr>
<td>US IP</td>
<td>-7.2%</td>
<td>4.9%</td>
<td>3.8%</td>
<td>-2.0%</td>
<td>-1.2%</td>
<td>0.4%</td>
<td>Oxford Economics</td>
<td>March</td>
</tr>
</tbody>
</table>

The economic forecasts herein represent 3rd-party forecasts and do not represent Owens Corning’s views. Such forecasts are based on data available at the time the institutions release them and are subject to change.

Sources: IHS Markit, Oxford Economics, Baker Hughes, Dodge Data & Analytics, ACT Research Co. – NA class 8 production, table 14, and publicly available data.

Wind is installed GW for all NA and a blend of MAKE & Bloomberg forecast.
EU INDUSTRIAL OUTLOOK IS LOW GROWTH, ANTICIPATING REBOUND IN 2024

Supply-side shortages heavily impacting the EU automotive outlook; recovery is expected to be gradual.

European Light Vehicle Production (EU+UK) (MM Units)

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>19</td>
<td>15</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>16</td>
<td>17</td>
</tr>
</tbody>
</table>

European Industrial Production (EU+UK) (Growth, Y/Y%)

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>-7.1</td>
<td>7.7</td>
<td>0.4</td>
<td>-0.3</td>
<td>2.5</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Sources: Oxford Economics Industry Databank, IHS Markit as of April 10, 2023
FAVORABLE LONG-TERM OUTLOOK IN EU BUILDING AND CONSTRUCTION

Near-term, heightened uncertainty and more moderated outlook as inflation and rates temper demand.

Secular tailwind as energy-efficiency, sustainability and the EU Renovation Wave drive long-term growth.

Near-term uncertainty and more moderated demand outlook driven by inflationary pressure, rising rates.

Construction in Europe will continue to be an attractive end-market.

European Construction Output (EU+UK) (% Y/Y)

<table>
<thead>
<tr>
<th>Year</th>
<th>Res</th>
<th>Non-Res</th>
<th>Infra</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>5.3</td>
<td>5.7</td>
<td>5.3</td>
</tr>
<tr>
<td>2022</td>
<td>2.9</td>
<td>3.9</td>
<td>2.6</td>
</tr>
<tr>
<td>2023</td>
<td>-2.7</td>
<td>0.1</td>
<td>1.0</td>
</tr>
<tr>
<td>2024</td>
<td>2.1</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>2025</td>
<td>2.1</td>
<td>2.6</td>
<td>2.0</td>
</tr>
</tbody>
</table>
EU SUSTAINABILITY TRENDS: HOW TO PREPARE AS THE COMPOSITES INDUSTRY?

Legislation moves from Plastic Packaging to all Plastics. And from all Plastics to other materials.

**CIRCULARITY**
Recyclability as a prerequisite for future markets

- Further restrictions and increasing costs on waste to landfill
- Circularity legislation affects our industries Automotive & Transportation, Electronics & Building & Construction.

**DECARBONIZATION**
Carbon footprint as differentiator

- Energy efficiency and decarbonization: Scope 1 and 2 GHG reductions, Industrial emissions, ETS
- Sustainable supply chains based on green energy (REPowerEU, Green Deal Industry Plan). Scope 3 reductions driven by Science-based targets

**SUSTAINABILITY BY DESIGN**
Overall shift for chemicals from risk to hazard based

- Chemical Strategy for Sustainability.
- Review of products specific legislation based on transparency requirements, safety and sustainability by-design
- Phase out of hazardous substances (REACH) in composite products.

Create alliances for common solutions within the composites industry
REGIONAL FOCUS: AP
CHINA INDUSTRIAL OUTLOOK BOUNCES BACK IN ‘23 AND LEADS GLOBAL GROWTH

China Industrial Production (% Y/Y)

<table>
<thead>
<tr>
<th>Year</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2.4</td>
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<tr>
<td>2021</td>
<td>8.7</td>
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<tr>
<td>2022</td>
<td>3.8</td>
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<tr>
<td>2023</td>
<td>5.9</td>
</tr>
<tr>
<td>2024</td>
<td>4.3</td>
</tr>
<tr>
<td>2025</td>
<td>5.0</td>
</tr>
</tbody>
</table>

China Light Vehicle Production (MM Units)

<table>
<thead>
<tr>
<th>Year</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>25</td>
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<td>2022</td>
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<td>2023</td>
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<tr>
<td>2024</td>
<td>28</td>
</tr>
<tr>
<td>2025</td>
<td>30</td>
</tr>
</tbody>
</table>

Sources: Oxford Economics Industry Databank, I.H.S. Markit as April 10 2023