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United States

Infrastructure Report

Includes 10-year forecasts to 2034

Contents

Key View

Key View: *The US infrastructure sector continues to present numerous opportunities though uncertainty has risen given significant policy shifts under the Trump administration.*

Key Forecasts And Latest Updates

- This quarter we have revised our growth forecast for the US construction industry, which we now expect will grow in real terms by 0.4% y-o-y. This compares to a previous forecast of growth of 0.9% y-o-y and will come following growth of 5.2% y-o-y in 2024, which marked a strong rebound for the sector after two years of contraction.
- Over the medium term, we forecast a strengthening of US construction activity from 2026, with the industry to grow by 2.6% y-o-y in 2026 and see annual average real growth of 2.0% y-o-y over our ten-year forecast period to 2034.
- Our outlook for the US construction industry is underpinned by our view that several headwinds will negatively impact construction activity in 2025. This includes the ongoing impact of elevated interest rates seen since 2022 in the market, which over that time have weighed on project launches, impacting the residential building sector in particular.
- In addition to elevated interest rates, we also expect the construction industry will be negatively affected by a weakening of macroeconomic conditions resulting in turn from rising tariffs.
- We do highlight however that uncertainty around our forecast has grown significantly, given a lack of clarity around economic policy direction, the pace of interest rate cuts as well as the federal government's approach to influential federal programmes such as those linked to the IIJA and IRA.

Infrastructure - Construction Industry Forecasts (United States 2024-2034)

Indicator	2024	2025f	2026f	2027f	2028f	2029f	2030f	2031f	2032f	2033f	2034f
Construction industry value, USDbn	1,312.3	1,350.5	1,420.2	1,498.0	1,573.8	1,639.0	1,705.2	1,775.8	1,845.8	1,914.7	2,001.7
Construction industry value, real growth, % y-o-y	5.2	0.4	2.6	2.9	2.5	2.1	2.0	2.1	1.9	1.7	1.5
Construction industry value, % of GDP	4.5	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.4

f = BMI forecast. Source: US Bureau of Economic Analysis (BEA), BMI

Risk/Reward Index

- The US market stands out globally for its low risk. A diverse and relatively open competitive landscape, combined with strong legal frameworks and established institutions, underpin the low risk of the country's infrastructure market. The labour market also remains a strength for the US, although limited availability of labour in recent quarters presents an increasing challenge to the construction industry.

Infrastructure Risk Reward Index (United States 2024)

Geography	Risk/Reward Index	Rewards	Industry Rewards	Country Rewards	Risks	Industry Risks	Country Risks
United States	32.7	43.3	49.5	34.0	16.8	11.8	21.7

Note: Scores out of 100; lower score = more attractive market. Source: BMI Infrastructure Risk/Reward Index

SWOT

Infrastructure SWOT

Strengths	Weaknesses
• Infrastructure landscape comprises numerous companies of differing capacity and skill sets, resulting in a strong domestic industry. • Second largest construction industry in the world, after Mainland China. • Natural resource wealth provides opportunities and demand for infrastructure.	• Owners and operators of infrastructure assets are at risk from natural disasters, which have the potential to cause expensive damage. • Shortages in labour and suitable property in choice markets will limit growth in the residential sector.
Opportunities	**Threats**
• Cheap shale oil & gas has opened up domestic opportunities to capitalise on new resources, such as gas-fired power plants, industrial construction (petrochemicals/refineries), and oil & gas pipelines. • A growing number of public-private partnerships could provide for a greater opening up of the market's infrastructure to private sector participation.	• Elevated interest rates are raising financing costs for projects and posing a challenge to project execution. • Potential for significant changes in policy at the federal level following Trump's victory in the 2024 US presidential election, including a likely shift away from federal efforts to reduce greenhouse gas emissions.

Industry Forecast

Construction And Infrastructure Forecast Scenario

Key View: *The US construction industry is set to see a deceleration of growth in 2025 as it faces multiple headwinds including the continuing effects of elevated interest rates in recent years, a weakening of macroeconomic conditions in the country, a flattening of manufacturing investment and uncertainty around federal funding programmes.*

Latest Developments

- This quarter we have revised our growth forecast for the US construction industry, which we now expect will grow in real terms by 0.4% y-o-y. This compares to a previous forecast of growth of 0.9% y-o-y and will come following growth of 5.2% y-o-y in 2024, which marked a strong rebound for the sector after two years of contraction.
- Over the medium term, we forecast a strengthening of US construction activity from 2026, with the industry to grow by 2.6% y-o-y in 2026 and see annual average real growth of 2.0% y-o-y over our ten-year forecast period to 2034.
- Trump's victory in the US presidential election will have significant implications for the construction and infrastructure sectors. Most notably, it will lead to significant shifts in federal policy toward these sectors.
- At the centre of potential changes, the Trump administration is expected to revise its approach to three significant federal spending laws that were enacted by the Biden administration, namely the Infrastructure Investment and Jobs Act (IIJA), the CHIPS and Science Act, and the Inflation Reduction Act (IRA).
- Other policy changes that were enacted under Trump could potentially have implications for infrastructure, including shifts in policy toward tariffs, immigration, taxation and regulation.

Construction And Infrastructure Industry Data (United States 2024-2034)

Indicator	2024	2025f	2026f	2027f	2028f	2029f	2030f	2031f	2032f	2033f	2034f
Construction industry value, USDbn	1,312.3	1,350.5	1,420.2	1,498.0	1,573.8	1,639.0	1,705.2	1,775.8	1,845.8	1,914.7	2,001.7
Construction industry value, real growth, % y-o-y	5.2	0.4	2.6	2.9	2.5	2.1	2.0	2.1	1.9	1.7	1.5
Construction industry value, % of GDP	4.5	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.4
Infrastructure industry value, USDbn	270.70	284.78	299.19	312.30	321.79	330.63	342.64	355.10	368.33	381.79	400.03
Infrastructure industry value real growth, % y-o-y	6.3	2.6	2.5	1.8	0.5	0.7	1.6	1.6	1.7	1.6	1.7

f = BMI forecast. Source: BEA, US Census Bureau, BMI

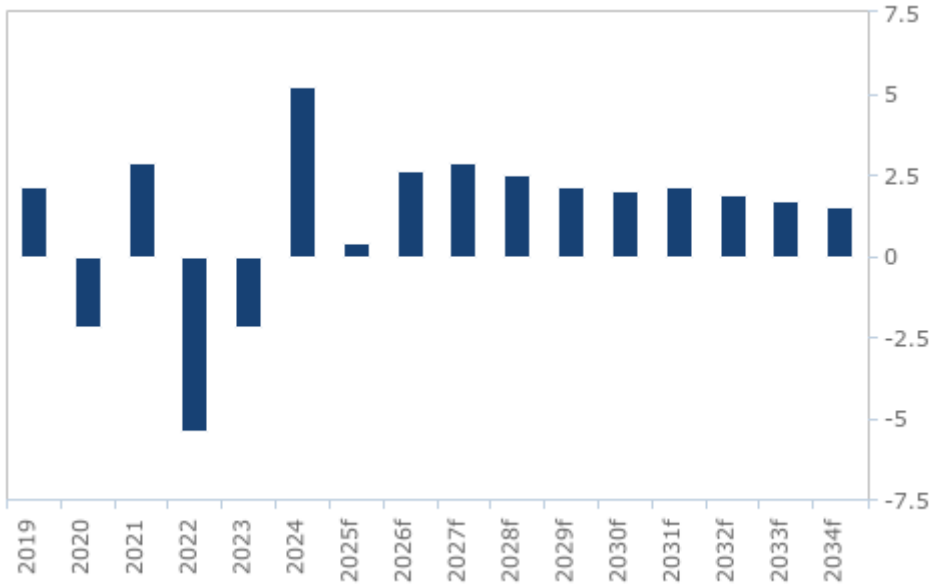
Structural Trends

US Construction Industry Outlook, 2025-2034

This quarter we have revised our growth forecast for the US construction industry, which we now expect will grow in real terms by 0.4% y-o-y. This compares to a previous forecast of growth of 0.9% y-o-y and will come following growth of 5.2% y-o-y in 2024, which marked a strong rebound for the sector after two years of contraction.

Weakening Of 2025 Amid Headwinds

US - Construction Industry Value, Real Growth % Chg y-o-y (2019-2034)



f = BMI forecast. Source: BEA, BMI

Our outlook for the US construction industry is underpinned by our view that several headwinds will negatively impact construction activity in 2025. This includes the ongoing impact of elevated interest rates seen since 2022 in the market, which over that time have weighed on project launches, impacting the residential building sector in particular. The Fed launched its loosening cycle in September 2024, with a 50bps cut that took the funds rate down to 5.00%. This was followed by cuts of 25bps in November 2024 and again in December 2024 to bring the rate to 4.50% at the end of the year. Over the remainder of 2025, our Country Risk team currently anticipates a further 150bps in cuts, taking the Fed funds rate to 3.00% by the end of the year. While we expect this will be supportive of the construction industry over the medium term, the impact of loosening monetary policy on building construction activity will not be felt by the industry until 2026, given the generally delayed effect of interest rate changes on construction activity. Additionally, we note considerable uncertainty around our Country Risk team's outlook any sharp rise in long-term inflation expectations could delay the start of the cutting cycle and result in a more shallow cutting cycle.

In addition to elevated interest rates, we also expect the construction industry will be negatively affected by a weakening of macroeconomic conditions resulting in turn from rising tariffs. As of April 11, 2025, our Country Risk team anticipates the US will see real GDP growth of 0.7% in 2025, down from a previous growth forecast of 1.9%. This estimate implies that the US economy would experience a recession, defined by two consecutive quarters of q-o-q contractions. This weakened environment, paired with considerable economic uncertainty, will in our view weigh on new project launches across the construction industry but particularly in the residential and non-residential building segments.

While we anticipate that manufacturing construction will remain elevated following robust growth in 2023 and 2024, we expect growth of the segment will flatten in 2025, continuing a trend seen in late 2024.

We also note headwinds from uncertainty around federal support for infrastructure development, as the Trump administration has moved to freeze funding programmes linked to the Infrastructure Investment And Jobs Act (IIJA) and Inflation Reduction Act (IRA), each passed under the previous administration. The IIJA involves around USD1trn in spending over five years (2022-2026), of which about USD550bn is new spending, with the remainder going to a five-year extension of current federal infrastructure funding programmes. Transport, digital, water and power infrastructure are among the areas, which will see considerable investment. The IRA includes over USD300bn in funding for climate programmes, primarily to go towards tax credits and incentives for clean energy investment and production, marking the largest climate-dedicated funding programme in US history. The impact of potential changes to these programmes is explored in more detail below.

Over the medium term, we forecast a strengthening of US construction activity from 2026, with the industry to grow by 2.6% y-o-y in 2026 and see annual average real growth of 2.0% y-o-y over our ten-year forecast period to 2034. Easing monetary policy will contribute to this growth, as lower interest rates spur new project launches. Meanwhile this will come alongside a broader improvement in macroeconomic conditions from 2026 as our Country Risk team anticipates the US economy will grow in real terms by 0.9% y-o-y in 2026 and 2.4% y-o-y in 2027.

We do highlight however that uncertainty around our forecast has grown significantly, given a lack of clarity around economic policy direction, the pace of interest rate cuts as well as the federal government's approach to influential federal programmes such as those linked to the IIJA and IRA. We additionally highlight a growing risk from building materials costs, as tariffs threaten to drive up construction costs in the US. With materials prices already having seen a sharp increase over the past five years, additional increases in the cost of key materials could further undermine project financials and weaken the attractiveness of construction projects. This would ultimately weigh on construction activity overall, reducing growth over the coming quarters and years.

Trump Victory: Major Policy Changes To Impact Construction And Infrastructure

Trump's victory in the US presidential election will have significant implications for the construction and infrastructure sectors. Most notably, it will lead to significant shifts in federal policy towards these sectors. In addition to winning the presidency, the Republicans now hold a Senate majority and will retain control of the House of Representatives, giving President Trump the means to enact significant legislative and policy changes. For infrastructure and construction, the Trump administration will shift the federal approach on key policies impacting these sectors, raising uncertainty for projects more vulnerable to federal policy changes.

At the centre of potential changes, the incoming Trump administration is expected to revise its approach to three significant federal spending laws that were enacted by the Biden administration: the IIJA, CHIPS and Science Act and the IRA. These laws, passed during the first two years of Biden's term between 2021 and 2022, collectively include over USD1.5trn in spending on infrastructure and construction. This includes funding for grant programmes, tax credits and other initiatives.

In the case of the IRA, the federal government's approach to the law's implementation is likely to shift significantly under Trump, given strong Republican opposition to the law (the IRA passed in 2022 without any Republican votes) as well as extensive and frequent criticism from Trump. This could include steps to reallocate funding in certain areas, in line with comments from Trump in a speech in September 2024 that he would rescind all unspent IRA funds. EV tax credits included in the IRA appear most at risk, given strong criticism from Republicans and from Trump. We also note risks to tax credits to renewable energy projects, with wind likely at higher risk than solar. There are also risks from potential changes to the IRA for manufacturing construction in the US. In recent quarters, expectations of IRA-driven demand for more clean energy infrastructure and EVs have contributed to strong growth in manufacturing construction, a key driver of overall growth in the construction sector.

In the cases of the CHIPS and Science Act and the IIJA, prior support for the legislation from some Republicans in Congress indicates some residual support within the Republican Party, which reduces the likelihood of major legislative changes.

The incoming Trump administration will review funding and grant allocations made under the Biden administration and could look to alter those decisions. During Trump's first term, we saw this play out in the case of the California High-Speed Rail project, as, in 2019, the Federal Railroad Administration cancelled a USD929.0mn grant for the project, which was later restored by the Biden administration.

With the IIJA, CHIPS and Science Act and IRA, all currently key drivers of our outlook for infrastructure construction and overall construction activity in the US over the coming years, any significant changes could have implications for our forecasts.

Transport Infrastructure

Key View: *We expect transport infrastructure development to be a key focus of infrastructure investment in the US over the next decade, driven primarily by robust public investment, following the passing of a large-scale federal infrastructure spending law in November 2021.*

Latest Developments

- In February 2025, the Los Angeles City Council approved Los Angeles World Airports' (LAWA) latest Multiple Award Task Order Contract, or MATOC, for design-build and construction services. The contract, valued at USD5bn, includes 51 contractual agreements. It establishes a pool of pre-qualified design-builders and construction contractors able to support projects from LAWA's multi-billion-dollar Capital Improvement Program.
- Also in February 2025, AECOM announced that, as part of the San Fernando Transit Constructors (SFTC) joint venture team, it had been selected as lead designer under for the Phase 2 final design for the Los Angeles County Metropolitan Transportation Authority East San Fernando Valley Light Rail Transit Project. The USD3.6bn project, involves the construction of a 6.7-mile rail line with 11 stations.
- In November 2024, Virginia Passenger Rail Authority broke ground for the Long Bridge Project, a USD2.3bn initiative to enhance passenger rail capacity between Arlington, Virginia and Washington DC. The project, which is the largest of the Commonwealth of Virginia's Transforming Rail in Virginia projects, will involve construction of a new two-track bridge alongside a 119 year old bridge, currently operating at 98.0% capacity during peak times. Project completion is scheduled for 2030.
- In September 2024, the FRA officially awarded a USD3.0bn grant for the 351km Brightline West project, with the funding to be used to support final design and initial construction of the USD12.0bn project. This followed the announcement of the grant in December 2023.

Transport Infrastructure Industry Data (United States 2024-2034)

Indicator	2024	2025f	2026f	2027f	2028f	2029f	2030f	2031f	2032f	2033f	2034f
Transport infrastructure industry value real growth, % y-o-y	2.6	2.1	2.4	1.6	-1.1	-1.0	0.5	0.6	0.9	0.9	1.3
Roads and bridges infrastructure industry value real growth, % y-o-y	2.9	1.2	1.1	1.2	-0.6	-0.5	0.5	0.6	0.7	0.8	0.9
Railways infrastructure industry value real growth, % y-o-Y	-1.8	4.2	5.9	2.9	-3.7	-3.1	0.6	0.7	0.8	0.9	1.0
Airports infrastructure industry value real growth, % y-o-y	8.8	4.3	4.9	2.1	-0.8	-1.3	0.4	0.3	2.1	1.3	3.5
Ports, harbours and waterways infrastructure industry value, real growth, % y-o-y	-4.2	3.4	3.4	2.7	2.2	1.6	1.6	1.7	1.8	1.9	2.0

e/f = BMI estimate/forecast. Source: BEA, US Census Bureau, BMI

Structural Trends

Transport Infrastructure Outlook

Transport infrastructure development will be a central focus of infrastructure investment more broadly in the US over the next decade. We anticipate this will be supported by robust federal funding, following the passage in 2021 of the Infrastructure Investment and Jobs Act (IIJA), the largest federal infrastructure funding programme passed in decades. The law involves roughly

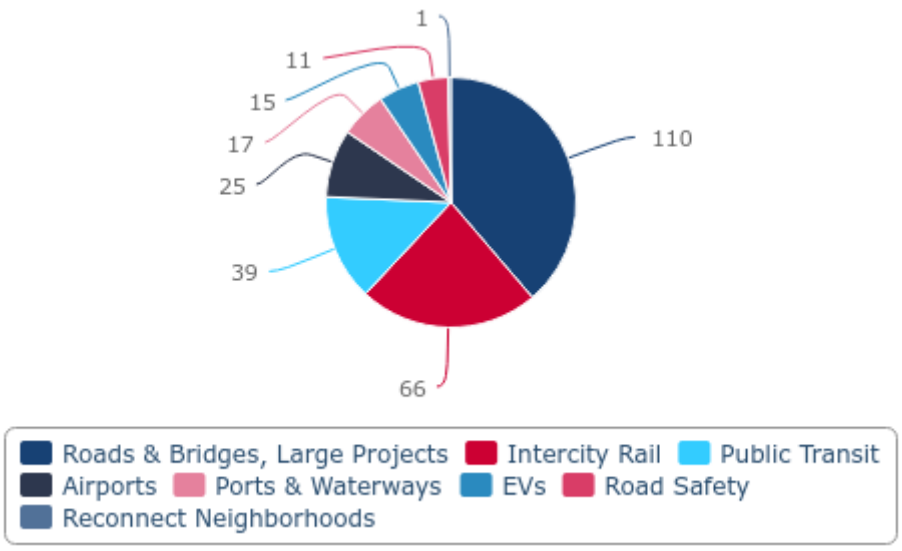
USD1trn in spending, of which about USD550bn is new spending, with the remainder going to a five-year extension through to 2026 of federal transport infrastructure funding programmes. Transport infrastructure is set to see the greatest injection of funding as a result of the passage of the IIJA, with the sector accounting for the largest share of new spending included in the law. The IIJA includes about USD284bn in new spending on transport projects, accounting for over 50% of the total value of all new spending included in the law. The IIJA also includes a five-year extension of key federal funding programmes for transport infrastructure, including funding for highways and public transit. Those programmes, previously extended for five years in 2015, with the passage of the Fixing America's Surface Transportation Act (FAST Act), were extended by one year by the US Congress in September 2020, as the five-year extension included in the FAST Act came to an end. The five-year extension of these programmes included in the IIJA gives added certainty around future funding levels to key stakeholders, including state governments and contractors, facilitating long-term planning.

We do note an increase in uncertainty in the transport infrastructure sector, given the potential for a shift in federal policy approach under the Trump administration. Already we have seen the administration place a freeze on IIJA funding as part of broader efforts to slow federal spending and review existing programmes. While we expect that prior support for the IIJA from some Republicans in Congress should prevent any major legislative changes to IIJA programmes, we do see scope for the Trump to look to alter decisions made by the Biden administration in regards to infrastructure grants and other forms of support for projects. During Trump's first term, we saw this play out in the case of the California High-Speed Rail project, as the FRA in 2019 cancelled a USD929.0mn grant for the project, later restored by the Biden administration. We will be closely monitoring steps taken by the incoming administration and will adjust our forecasts accordingly.

Within the transport sector, road and bridge infrastructure will be a key target of investment over the coming years, with USD110.0bn set aside in the IIJA for road and bridge infrastructure projects, and funding for major infrastructure projects too large or complex for traditional funding programmes. Bridge replacements, maintenance and upgrades will be a central focus of this investment, with USD40.0bn set aside for bridges in the IIJA.

Roads And Bridges, Rail Major Funding Targets

IIJA - New Transport Infrastructure Spending By Segment (USDbn)



Source: The White House, BMI. Last updated: September 2023

Rail infrastructure is also set to see robust investment, with intercity railways to be a focus of infrastructure development over the coming years, in line with funding levels included in the IIJA. Among its funding targets, the IIJA provides USD66.0bn in new funding

for intercity passenger and freight railways, including USD24.0bn in Federal-State Partnership grants for improvements to the Northeast Corridor (NEC), linking Washington DC and Boston via Philadelphia and New York City as well as considerable funding for intercity railways nationally. The funding marks a massive expansion in federal funding for intercity rail projects in the market between 2022 and 2026, compared with funding levels seen in previous years as well as pre-IIJA projections of federal spending.

Public transit will also see a considerable increase in federal funding, with the law including USD39.0bn in new spending on public transit projects. This marks a significant expansion of federal funding in this segment, largely accounted for by transit formula grants, which the CBO in July 2021 had projected would see average outlays of USD11.2bn annually between 2022 and 2026, not accounting for the passage of additional funding via the IIJA. Port and waterway infrastructure as well as airport infrastructure will see significant, though comparatively lower, levels of new spending compared with the road and bridge and rail sectors under the IIJA. Port and waterways are allotted USD17.0bn in new spending, while airport infrastructure is set to see new investment of USD25.0bn under the IIJA.

Rail Projects To See Strong Investment Uptick As IIJA Funds Start To Flow

Rail construction will be a particular growth area over the next several years in the US, bolstered by a strong increase in federal funding for such projects as a result of the IIJA. The IIJA includes a total of USD66.0bn in funding directly for intercity rail. This includes USD22.0bn in grants to Amtrak for investments such as the repair or replacement of assets as well as station improvements. The USD66.0bn set aside for intercity rail in the IIJA also includes USD44.0bn for FRA discretionary grants to support various improvements to passenger and freight railroads. This includes USD36.0bn for the Federal-State Partnership for Intercity Passenger Rail Grant Program (FSP) - a programme created by the IIJA that provides funding for capital projects that reduce the state of good repair backlog, improve performance, or expand or establish new intercity passenger rail service. In addition to the USD66.0bn for intercity rail, the IIJA includes USD39.0bn in funding for public transit projects, a large share of which is likely to go towards rail projects such as metro, light rail and commuter rail infrastructure.

The NEC, an existing rail line linking Washington DC to Boston via Philadelphia and New York City, is set to be a key focus of rail investment in the US over the coming years, given a considerable maintenance backlog and a strong emphasis on the NEC's investment within the IIJA. Of the USD36.0bn set aside for the FSP, USD24.0bn is set to go to funding NEC projects and USD12.0bn for projects outside of the NEC. In November 2022, the FRA announced its first NEC Project Inventory, a list of priority NEC projects released with the purpose of establishing a project pipeline to support long-term planning and guide federal funding through the FSP. The NEC Project Inventory includes 68 projects, including 15 projects listed as Major Backlog Projects and 53 projects listed as Capital Renewal, Stations and Improvement Projects. Among the 15 Major Backlog Projects is the Gateway Hudson Tunnel Project, a USD16.1bn project involving the construction of a new rail tunnel under the Hudson River between New York City and New Jersey to permit repairs to the two existing tunnels, which were damaged by Hurricane Sandy in 2012. Also included is the Baltimore & Potomac Tunnel Replacement Program, a USD6.3bn programme including the construction of a new tunnel in Baltimore to replace the 2.2km B&P Tunnel, opened in 1873. In November 2023, the FRA announced USD16.4bn in funding for 25 passenger rail projects through the FSP-NEC programme. This includes up to USD4.7bn for the B&P Tunnel Replacement Program: Frederick Douglass Tunnel; up to USD3.8bn for the Gateway Program Hudson Tunnel Project Systems and Fit Out; and up to USD2.1bn for the Susquehanna River Bridge Replacement Program.

NEC projects will benefit from other funding through the IIJA, with the Hudson Tunnel project particularly set to receive a grant of USD6.9bn from the FTA's CIG programme. In July 2024, the Gateway Development Commission, sponsor of the Gateway Program, which includes the Hudson Tunnel project, signed a Full Funding Agreement with the FTA for the USD6.9bn in funding. It also closed on USD4.1bn in RRIF loans from the Build America Bureau in order to fund the local share of the project.

While the NEC projects will be the primary beneficiary of IIJA rail funding, we highlight a growing pipeline of projects outside of the NEC as well. On December 8, 2023, the FRA announced the award of USD8.2bn in funding for 10 passenger rail projects through the Federal State Partnership for Intercity Passenger Rail (Fed-State National) Program. Most of the funding announced will go to two high-speed rail projects: the California High-Speed Rail project, with USD3.1bn; and Brightline West High-Speed Intercity

Passenger Rail System Project, with USD3.0bn. Other notable projects to receive funding include the North Carolina–Raleigh to Richmond Innovating Rail Program, with USD1.1bn and the Virginia–Transforming Rail in Virginia Phase II Project, with USD729.0mn.

This announcement points to a strong injection of federal funding for these projects, which will be key to their realisation. In the case of the California High-Speed Rail project, which aims to link San Francisco and Los Angeles via a roughly 800km electrified high-speed rail line, funding will go towards the completion of the project's Initial Operating Segment, a 275km segment linking Merced and Bakersfield. Currently, construction is ongoing on the 191km Central Valley Segment between Madera and Poplar Avenue in Shafter, with the construction advancing via three design-build construction packages (CP1, CP2-3 and CP4). According to the California High-Speed Rail Draft 2024 Business Plan, substantial completion of civil construction works included in one of the packages (CP4) has been reached, with substantial completion of the civil construction works on the other two packages (CP1 and CP2-3) to be reached in 2026. Procurement on trackwork and systems is to be advanced in 2024 while the California High-Speed Rail Authority plans to start construction on the extensions of the line north to Merced and south to Bakersfield by 2026, with the goal of bringing the full 275km Merced-Bakersfield segment into commercial operations between 2030 and 2033. The Merced to Bakersfield buildout is projected to cost between USD32.1 and USD35.3bn. Realisation of the long-term plans for the line to extend to San Francisco and Los Angeles are uncertain, given the funding which would be required to achieve it, with the construction of the full project estimated by the California High-Speed Rail Authority to cost between USD88bn and USD128bn.

In the case of the planned USD12.0bn Brightline West project, funding through the FSP provides a key boost to the project, which sponsors aim to complete by 2028. The project aims to link Las Vegas and Southern California via a new 350km electrified rail project, most of which would be located in the Interstate 15 right-of-way.

In the urban rail segment, there is large pipeline of projects being planned across the market. Among the largest is the planned USD7.7bn Second Avenue Subway Phase II project, which would extend the metro line in New York City from its current terminus at 96th street to 125th street in Harlem, with three new stations.

Infrastructure Law To Boost US Road Investment With Increased Focus On Bridges, EV Charging

Road and bridge infrastructure will be a key target of infrastructure investment in the US over the coming years with robust federal funding for road and bridge construction projects to be a major driver of investment, with public investment overall to remain the primary source of investment in the road infrastructure sector. The IIJA has a number of key implications of federal funding for road and bridge projects. The IIJA includes USD303.5bn in contract authority over FY2022-FY2026 for federal highway programmes funded from the Highway Trust Fund (HTF) and administered by the Federal Highway Administration (FHWA), extending current federal highway funding programmes through to 2026, with a roughly 30% increase in funding level compared with FY2021 levels. This includes the National Highway Performance Program, the Surface Transportation Block Grant Progam, the Highway Safety Improvement Program and the Congestion Mitigation and Air Quality Improvement Program, among others.

The extension and funding increase is facilitated by a USD90.0bn transfer of funds from the General Fund to the HTF in support of the continued solvency of the HTF. As such, the IIJA includes a significant boost in funding for federal highway programmes, which are one of the primary sources of investment for road and bridge construction projects in the country and will continue to have a central impact on investment levels over the coming years. By extending contract authority to FY26, the IIJA has given greater certainty around future funding for highway programmes in the country throguh to 2026, thereby bolstering the ability of federal, state and local governments to plan and advance highway projects. This marks a positive change for the industry following several short-term extensions on contract authority passed by the US Congress since 2020, when the previous five-year extension of highway programmes expired.

Uncertainty persists around the longer-term outlook for funding for highway programmes and, in particular, the solvency of the HTF, as HTF revenues have for over a decade been insufficient to cover approved funding levels, leading to transfers of funds from the General Fund. In particular, with expected growth of electric vehicle (EV) adoption and vehicle fuel efficiency likely to limit federal

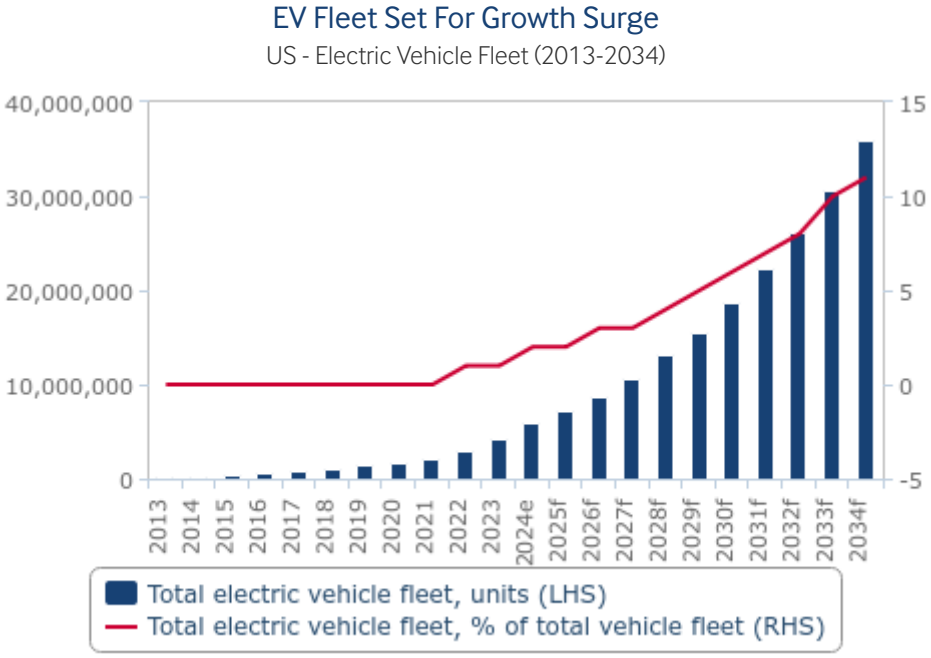
gasoline tax revenue (traditionally the primary funding source for the HTF), additional transfers from the General Fund or structural changes to the revenue structure of the HTF will likely be needed to maintain current levels of funding for highway programmes. Nevertheless, the passage of the IIJA has bolstered the solvency of the HTF over the short term, shifting risks later in the decade, while also highlighting robust support in the US Congress for highway infrastructure investment, indicating willingness will likely remain strong to avoid the HTF becoming insolvent in the future.

In addition to the extension of highway programmes, the IIJA includes USD47.3bn in funding between FY 2022 and FY 2026 from the General Fund for Highway Infrastructure Programs, of which 72.0% will be distributed as formula appropriations and 28.0% discretionary appropriations. Of this funding for highway infrastructure programmes, the largest share is set to go to investments in bridge repairs and replacements, with USD36.7bn to go to bridge funding programmes. Also standing out among planned investments is USD5.0bn in funding for the National Electric Vehicle (NEVI) Formula Program, which will support the construction of EV charging infrastructure along the market's highway corridors.

Bridges will see increased focus within federal funding for road and bridge projects, and will be a key area of road investment overall, with efforts advancing to repair and replace ageing bridges in the country. The Bridge Replacement, Rehabilitation, Preservation, Protection, and Construction Program, created by the IIJA, will be funded with advance appropriations from the General Fund and will provide USD26.5bn in formula funding over five years to state governments, as well as the District of Columbia and Puerto Rico over five years, and USD825.0mn for Tribal transportation facilities. The programme, to be administered by the FHWA, will represent the largest single dedicated bridge investment in the US since the construction of the interstate highway system, and aims to repair 15,000 highway bridges in the market. The IIJA also created a discretionary programme to support bridge investments, the Bridge Investment Program, with USD12.5bn in total funding, including USD9.2bn in advance appropriations from the General Fund and USD3.3bn in Contract Authority from the HTF.

We expect bridge repair and reconstruction will remain a priority in the US over the long term, with ageing bridge infrastructure representing a key infrastructure challenge in the market. According to the American Road & Transportation Builders Association (ARTBA)'s 2022 Bridge Report, the US has over 220,000 bridges in need of replacement or rehabilitation, with over 40,000 of these bridges being structurally deficient. According to the ARTBA report, the cost of replacing only structurally deficient bridges would be over USD58.0bn.

EV charging infrastructure is set to see a boost in investment over the coming years, supported by growing EV adoption, as well as federal funding to support charging infrastructure development. Our Autos team forecasts the EV fleet size in the US to grow sharply between 2023 and the end of our 10-year forecast period in 2033, rising from 4.4mn vehicles in 2023 to 34.7mn in 2033. This will boost the share of the US vehicle fleet accounted for by EVs from 1.6% in 2023 to 11.7% in 2033. The rapid expansion of EV adoption in the market will sharply increase demand for charging infrastructure, supporting rising private investment in EV charging station construction. At the same time, federal funding is set to support EV charging infrastructure development, with USD5.0bn set to be provided between FY22 and FY26 through the NEVI Formula Program, created by the IIJA. Funding will include formula funding provided to state governments, as well as the District of Columbia and Puerto Rico, following the same formula shares used for federal-aid highway programmes. Under provisions included in the IIJA relevant to the NEVI Formula Program, the US Department of Transportation must designate national EV charging corridors, and funded projects will need to be located near them.



e/f = BMI estimate/forecast. Source: National Sources, BMI

While private investment will remain a relatively limited source of road investment funding, we expect public-private partnerships (PPPs) to continue to be a growing feature of the US road sector, primarily large-scale highway projects. The US market hosts 35 large-scale road and bridge PPP projects in pre-construction or construction stages, according to data from our Infrastructure Key Projects Data (KPD), which include information on projects over USD30.0mn in value. This amounts to 12.0% of all road and bridge projects in the market at those stages included in our KPD. In terms of project value, road and bridge PPP projects in the US involve a combined USD34.0bn in investment, accounting for roughly 30% of the value of the total US road and bridge project pipeline, highlighting the relatively higher value of road PPPs compared with other road projects in the US market. While we expect PPPs to continue to account for a relatively small share of road and bridge projects in the market, with public investment to remain the key driver of road and bridge development, we nonetheless expect PPPs to remain a significant part of the US road and bridge infrastructure development landscape.

State governments will remain the key driver of project development within the US road PPP market, with PPP development to vary significantly by state, due to differences in legislation and varying levels of state government support for PPP use. States that have advanced sizeable road and bridge infrastructure projects via the PPP model in recent years include Texas, Florida, Virginia and Colorado.

Federal Funding Boost And Momentum For Key Projects Underpin Strong US Airport Investment Outlook

Airport infrastructure will see considerable investment in the US over the coming decade, as government support, the continued recovery of airport traffic and greater confidence in the future demand for airport assets will gradually support the launch of new projects. Among transport infrastructure assets in the US, airports were particularly impacted by the Covid-19 pandemic, with the market seeing a sharp decline in air traffic starting in March 2020 leading to the number of passengers carried on US scheduled service airlines declining from 926.7mn passengers in 2019 to 369.2mn passengers in 2020 before partially recovering in 2021 with 673.7mn passengers. This sharp decline in passengers weighed on airport revenues, straining the finances of airport operators and concessionaires, and raised considerable uncertainty around future demand outlooks for airport infrastructure assets, in turn weighing on the willingness to invest in new projects.

As a result of these factors, a number of airport projects in the market suffered disruptions, including delays, re-evaluation and downsizing of planned investments and cancellation. These factors have weighed on airport infrastructure investment since 2020,

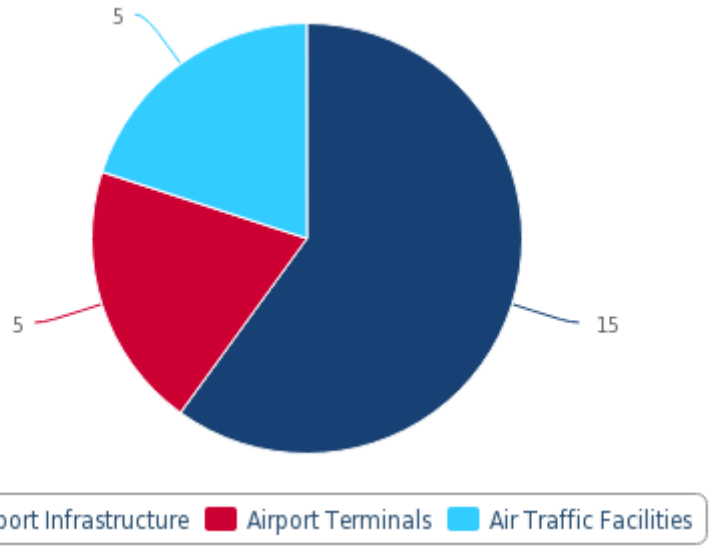
although substantial federal relief for airports helped to prevent more dramatic impacts on projects as the US Congress provided USD20.0bn to airports in the market in a series of Covid-19 relief bills passed between 2020 and 2021, including USD10.0bn provided by the Coronavirus Aid, Relief and Economic Security Act passed in March 2020. This included USD2.0bn provided by the Coronavirus Response and Relief Supplemental Appropriations Act passed in December 2020 and an additional USD8.0bn provided by the American Rescue Plan Act passed in March 2021.

A substantial injection of additional federal funding for airport investment projects over the coming years will be a key driver of investment in the sector, following the passage in November 2021 of the IIJA. Within USD1.2tn in new funding to be provided by the federal government under the IIJA, USD25.0bn will go to airport infrastructure, with the funding to be spread over five years between FY22 and FY26. Of this, USD20.0bn will be administered by the Federal Aviation Administration (FAA)'s Office of Airports. This includes USD15.0bn towards grants for airport infrastructure projects aimed at increasing safety and increasing capacity and USD5.0bn towards grants for airport terminal investments. The remaining USD5.0bn of the total will instead be administered by the FAA's Air Traffic Organization and will go toward improvements of the physical condition of FAA air traffic control facilities.

This additional funding for airport infrastructure will mark a considerable increase compared with previous federal support for airport investments, represented primarily by annual funding of USD3.4bn provided in formula grants via the Airport Improvement Program.

IIJA To Provide Robust Airport Infrastructure Funding

US - IIJA Airport Funding, USDbn (FY22-FY26)

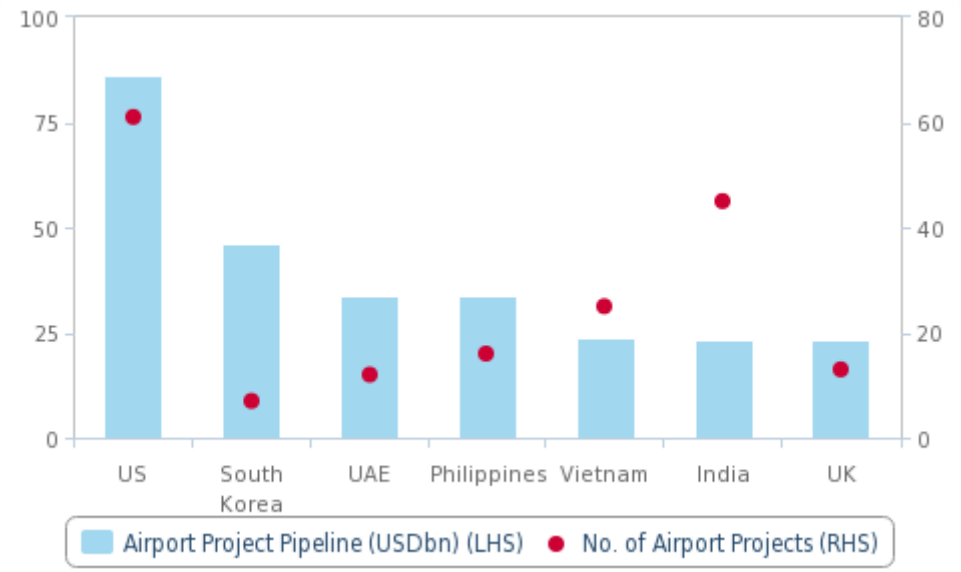


Source: US Federal Aviation Administration, BMI

Robust private investment in a select number of large airport projects is set to be a key feature of the airport infrastructure landscape in the US over the coming years, as short-term disruptions related to the Covid-19 pandemic recede and projects see new momentum. According to our proprietary KPD, which include infrastructure projects over USD30mn in value, the US market hosts 61 airport infrastructure projects either in preconstruction or construction stages, with airport projects in the market involving a combined USD86.0bn in investment. This places the US as the leading market globally in terms of airport project pipeline value and in terms of the number of projects.

US Leads Globally For Airport Pipeline Value

Global - Top Seven Markets By Airport Project Pipeline Value, USDbn



Source: BMI Infrastructure Key Projects Data

Private investment will play a significant role in the advance of a number of the country's largest airport infrastructure projects, and growing momentum points to an uptick in private investment in supporting the construction of these projects over the coming years. We highlight New York's JFK International Airport as a focus of investment overall, and private investment in particular, within the US over the coming years. Four large-scale infrastructure projects at varying stages of advance are currently moving forward under the umbrella of the JFK Redevelopment programme, advanced by Port Authority of New York and New Jersey. In total, the JFK Redevelopment programme will involve roughly USD19.0bn in overall investment, accounted for by USD3.9bn in public investment and over USD15bn in private investment.

Standing out among projects to be undertaken within the programme is the USD9.5bn New Terminal One project, involving the construction of a new 23-gate terminal on the site of the current Terminals 1 and 2 and the site of the former Terminal 3. The project is being developed by consortium New Terminal One made up of The Carlyle Group, JLC Infrastructure and Ullico, with a JV made up of Munich Airport International and Carlyle Airport Group Holdings to serve as technical services partner, and construction to be undertaken by a design build team led by AECOM Tishman and Gensler. A revised plan for the project was announced in December 2021, after an initial delay as the deal behind the project was restructured amid the impact of the Covid-19 pandemic on air travel. Construction began in September 2022, with the first phase of the project to be completed in 2026 and the full project planned for completion in 2030.

Also advancing is the USD4.2bn New Terminal 6 project, being built by consortium JFK Millennium Partners (JMP), made up of Vantage Airport Group, American Triple I and RXR Realty, involving construction of a new ten-gate terminal on the site of the former Terminal 6 and Terminal 7. The project began construction in 2023 and is scheduled to reach completion in 2028. AECOM Hunt has been selected by JMP as the design-build partner for the project.

Among the projects underway or recently completed at JFK International Airport are the USD1.5bn Terminal 4 expansion project, being built by Delta and JFK International Air Terminal, and the recently completed USD400.0mn Terminal 8 expansion, undertaken by American Airlines.

The programme will further consolidate the position of the New York City metropolitan area as a central market for airport investment in the US, coming after USD9.0bn in investment in the nearby LaGuardia Airport in recent years as two projects have been advanced there. These include both a USD5.1bn reconstruction of Terminal B, undertaken under a PPP by consortium LaGuardia Gateway Partners, and a USD4.0bn redevelopment of Terminals C and D advanced by Delta. Combined, the two projects have been a key focus of airport infrastructure investment overall in the US since 2016. Also the focus of significant airport infrastructure investment in recent years in the New York City metropolitan area has been Newark Liberty International Airport, where the USD2.7bn Terminal Redevelopment Program has seen a number of modernisation works undertaken, including the replacement of Terminal A with a new 33-gate terminal as well as roadway and airside improvements.

US – Major Transport Infrastructure Projects

Project Name	Project Risk Metric	Value (USDmn)	Size	Companies	Status
Denver (Colorado)-Albuquerque (New Mexico) High Speed Railway Project	na	40,000	na	Government of the US [Sponsor] {US}	At planning stage
Cleveland (Ohio)-Chicago (Illinois) Hyperloop Project	2.5	29,800	503.7km	Illinois Department of Transportation [Sponsor] {US}, Hyperloop Transportation Technologies [Feasibility] {US}, Northeast Ohio Areawide Coordinating Agency (NOACA) [Sponsor] {US}, Ferrovial [Construction] {Spain}	At planning stage
Dallas-Houston High Speed Rail Project, Texas	5.5	24,000	386.2km	WSP Global [Consultant/Project Management] {Canada}, Ferrovial Agroman [Consultant/Project Management] {Spain}, RENFE [Operator] {Spain}, Webuild [Construction] {Italy}, Central Japan Railway [Equipment] {Japan}, Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development [Financier] {Japan}, Bechtel Corporation [Consultant/Project Management] {US}, Fluor Corporation [Design/Architect] {US}, Archer Western [Consultant/Project Management] {US}, US Federal Transit Administration [Sponsor] {US}, Mass Electric Construction [Construction] {US}, Texas Central Partners [Sponsor] {US},Kiewit Infrastructure South [Construction] {US}	At planning stage
Pueblo (Denver)-Cheyenne (Wyoming) Hyperloop Track Project	2.5	na	579.0km	Hyperloop One [Sponsor] {US}, Government of Colorado [Sponsor] {US}, AECOM [Consultant/Project Management] {US}, Colorado Department of Transportation [Sponsor] {US}	At planning stage
Texas Triangle/Dallas-Houston Hyperloop, Texas	2.6	20,000	386.2km	Webuild [Construction] {Italy}, AECOM [Consultant/Project Management] {US}, Lane Construction [Construction] {US}, US Department of Transportation [Sponsor] {US}, Hyperloop One [Sponsor] {US}, Texas Central Partners [Sponsor] {US}	At planning stage

Note: Top five projects by value. na = not available. Project Risk Metric scores out of 10; lower score = more attractive market. Source: BMI Infrastructure Key Projects Data

Energy & Utilities Infrastructure

Key View: *Energy and utilities infrastructure projects are set to see robust investment over the coming years, driven by a combination of public and private investment. Power and transmission infrastructure will be a core focus of investment in the sector, led by electrification and renewables expansion.*

Latest Developments

- Trump's victory in the November 2024 US presidential election significantly increases the uncertainty facing the power sector, given the potential for significant shifts in federal policy towards the Inflation Reduction Act (IRA) and other policies aimed at driving non-hydro renewables investment. Steps already taken by the Trump administration include a freeze of IRA funding, boosting uncertainty.
- On April 7, 2025, Argan, Inc. announced that subsidiary Gemma Power Systems had entered into an engineering, procurement and construction services contract with Sandow Lakes Energy Company for the development of a 1.2 GW ultra-efficient natural gas-fired plant in Lee County, Texas. According to the announcement, construction on the project is expected to begin in mid 2025, with an expected project completion date of 2028.
- On April 8, 2025 President Trump signed a raft of executive order aimed at boosting the declining US coal industry. The measures, designed to remove the barriers currently facing coal generation and mining, have been received positively by the industry.
- Leading US tech companies are increasingly turning to private procurement to meet their growing electricity demands, particularly for powering data centres and supporting artificial intelligence operations. For example, Google has signed a groundbreaking deal to purchase energy from small modular reactors (SMRs) developed by Kairos Power. The tech company has ordered six or seven SMRs, with the first expected to be completed by 2030 and the rest by 2035. This initiative aims to provide low-carbon energy for Google's data centres, following similar moves by Microsoft and Amazon. Google will also buy 500MW of power from Kairos, which is building a demonstration reactor in Tennessee, set for completion in 2027.

Energy And Utilities Infrastructure Data (United States 2024-2034)

Indicator	2024	2025f	2026f	2027f	2028f	2029f	2030f	2031f	2032f	2033f	2034f
Energy and utilities infrastructure industry value real growth, % y-o-y	9.8	3.1	2.6	2.0	2.0	2.2	2.5	2.4	2.3	2.2	2.1
Power plants and transmission grids infrastructure industry value real growth, % y-o-y	11.9	3.1	4.2	4.1	3.7	3.8	3.7	3.6	3.5	3.4	3.3
Oil and gas pipelines infrastructure industry value real growth, % y-o-y	-7.4	-3.3	0.8	1.2	0.9	0.7	0.8	0.9	1.0	1.1	1.2
Water infrastructure industry value real growth, % y-o-y	11.5	4.6	0.3	-1.3	-0.8	-0.3	0.6	0.5	0.2	-0.1	-0.4

e/f = BMI estimate/forecast. Source: US Census Bureau, BEA, BMI

Structural Trends

Energy And Utilities Infrastructure Outlook

Energy and utilities infrastructure development will be an important driver of infrastructure investment overall in the US over the coming decade. Power infrastructure in particular is set to be the leading focus of investment, driven by robust demand for power infrastructure.

We note an uptick in uncertainty facing the sector, given ongoing shifts in policy at the federal level under the Trump administration, in office since January 2025. For the power sector, we note a number of steps which have reduced federal support for decarbonisation efforts, including instituting a freeze on funding from the Inflation Reduction Act, withdrawing Offshore Continental Shelf areas from wind leading, as well as the establishment of import duties and anti-dumping tariffs on solar panels. At the same time, the government has taken steps to boost fossil fuel production, raising upside risk for midstream and thermal power infrastructure over the coming years.

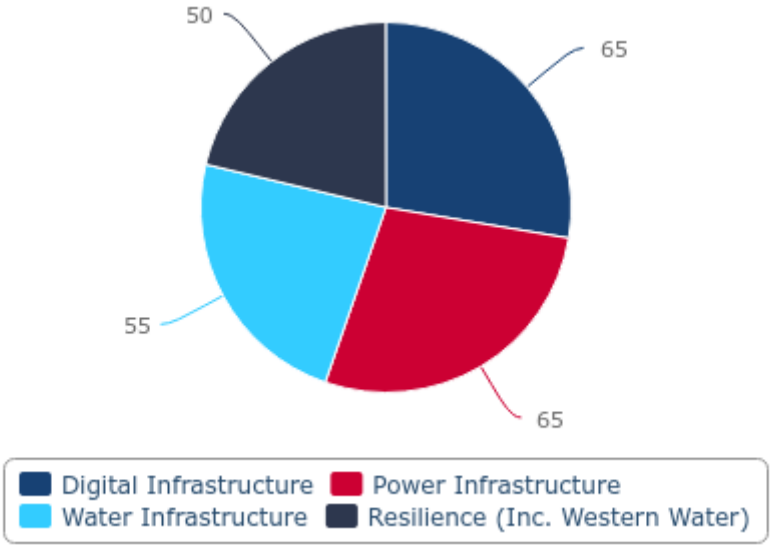
Decisions On Federal Policies Will Have Significant Implications

Of key importance to influencing the future course of energy and utilities infrastructure development will be decisions by the Trump administration and Congress regarding large-scale federal programmes launched under the previous administration, namely the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA).

The IIJA includes USD55bn for water infrastructure and USD65bn for power infrastructure, along with an additional USD50bn for infrastructure resilience, with water infrastructure in western US set to be a focus of that investment.

Substantial Spending Across Multiple Infrastructure Segments

IIJA - New Digital, Power, Water Infrastructure Spending By Segment, USDbn



Note: Last Updated in September 2023. Source: The White House, BMI

The IRA, in turn, includes USD300bn in funding for climate programmes, primarily to go toward tax credits and incentives for clean energy investment and production, marking the largest climate-dedicated funding programme in US history. IIJA and IRA programmes have each been affected by a Trump administration freeze on spending, generating uncertainty around federal support for their continuation. In the case of the IIJA, we see scope for the administration to make changes to programmes and review individual projects. Given the relatively strong support from Republicans for the IIJA's passage in 2021 and the relatively uncontroversial nature of large portions of its programmes, we continue to view major changes as unlikely. In the case of the IRA, the potential for changes is significantly higher, given the President Trump and many Republicans have been very critical towards the IRA. While we still do not see complete repeal of the IRA's climate provisions as our base case, we see considerable scope for significant changes the law's implementation or perhaps legislative changes to the law itself. This, combined with other policies

aimed at strengthening fossil fuel generation and reducing federal support for renewable technologies such as offshore wind, could weigh significantly on renewables growth in the market.

Power Infrastructure Development Outlook Remains Strong

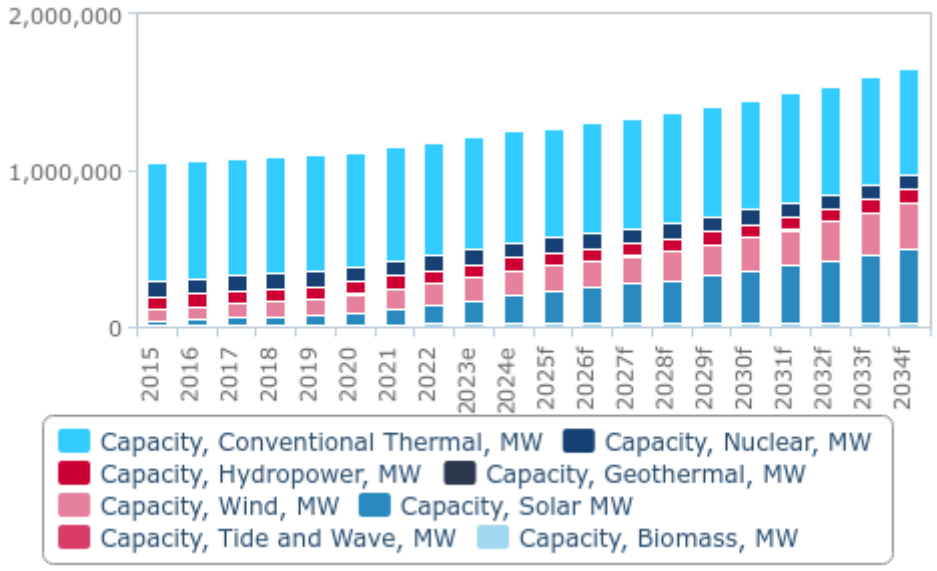
While we acknowledge rising uncertainty given the policy shifts noted above, our outlook for power infrastructure investment in the US remains strong. Our Power & Renewables team forecasts that US power capacity will grow by 484GW between the end of 2024 and the end of 2034, rising from 1,306GW to 1,790GW. This will come alongside a sharp increase in power consumption in the market, which our Power & Renewables team expects will rise by 14.2% over the period, increasing from 4146TWh in 2024 to 4736TWh in 2034.

Solar and wind power are set to drive the growth in capacity in the US over the coming years, leading non-hydro renewables capacity to grow by 120% over the next decade, increasing from 363GW to 798GW. This will continue a trend of robust growth for non-hydro renewables over the past decade, as government support and the increasing cost competitiveness of renewables saw non-hydro renewables capacity expand from 101GW at the end of 2014 to 363GW at the end of 2024, a 261% increase.

Within the renewables segment, our Power & Renewables team expects solar capacity to see the strongest growth, rising 295GW over the coming decade, from 176GW at the end of 2024 to 471GW at the end of 2034.

Renewables To Drive US Power Infrastructure Expansion

US - Power Capacity By Source, MW (2015-2034)



e/f = BMI estimate/forecast. Source: EIA, BMI

Federal policies aimed at supporting renewables development, namely the Renewable Energy Production Tax Credit (REPTC) and the Energy Investment Tax Credit (EITC) included in the IRA, stand to be a significant driver of the continued robust growth of renewables in the US. As such, any rollback of these programmes stands to weaken this outlook and dampen the prospects for new renewables projects.

While renewables development faces headwinds, we note rising upside risk for thermal power infrastructure development, given the Trump administration's focus on achieving energy security and increasing the production of traditional fossil fuels, while reducing

regulatory barriers for the industry. This includes the natural gas-fired power sector which our Power & Renewables team expects will drive capacity growth within the US's thermal power sector over the coming decade.

Midstream Development Stands To Benefit From More Supportive Federal Stance

Oil & gas midstream infrastructure development stands to see a strengthening of investment over the coming years. This will be spurred by a more supportive approach at the federal level both for oil and gas production as the sector stands to benefit from efforts to deregulate the oil and gas sector, to loosen environmental standards and to open more acreage for drilling. At the same time, we expect the Trump administration will be considerably more supportive of midstream development. Upon entering office in January 2021, President Joe Biden issued an executive order revoking the permit for the construction of the Keystone XL Pipeline, the largest oil pipeline project under development in the market at the time. The move blocked the project and marked a key setback for oil pipeline development in the market, given the size and prominence of the project, which, if completed, would see the development of a 1,200m-long pipeline connecting Hardisty in oil-rich Alberta with Steele City in Nebraska, adding additional capacity of 830,000b/d to the existing Keystone Pipeline System. In contrast, we anticipate the Trump administration will be very favourable toward midstream development, reducing the potential for federal opposition to midstream projects.

Significant opposition from environmental groups will however likely persist as a challenge to midstream development, as legal actions led by such groups have slowed the advance of a number of projects.

US – Major Energy And Utilities Infrastructure Projects

Project Name	Sector/ Sub-Sector	Project Risk Metric	Value (USDmn)	Size	Companies	Status
Alaska LNG Pipeline Project, Alaska	Oil & Gas Pipelines	6.3	38,700	40.3bn cu m	Bank of China [Sponsor] {Mainland China}, China Petroleum & Chemical Corporation [Sponsor] {Mainland China}, China Investment Company [Sponsor] {Mainland China}, ExxonMobil [Sponsor] {US}, Goldman Sachs [Financier] {US}, Alaska State Government [Sponsor] {US}, Alaska Gasline Development Corporation [Sponsor] {US}, BP [Sponsor] {UK}	At planning stage
Turkey Point NPP Units VI & VII, Florida	Power Plants & Grids: Nuclear	6.4	21,800	2,200MW	Florida Power and Light [Operator] {US}	At planning stage
Fermi III Nuclear Power Plant, Michigan	Power Plants & Grids: Nuclear	0	10,000	1,560MW	DTE Energy Company [Operator] {US}, Hitachi [Equipment] {Japan}, General Electric [Equipment] {US}	At planning stage
Dominion Energy Offshore Wind Project, Virginia	Power Plants & Grids: Wind-Offshore	7.1	7,800	2,640MW	Siemens Gamesa Renewable Energy [Equipment] {Spain}, Ramboll [Consultant/Project Management] {Denmark}, Dominion Energy [Sponsor] {US}	At planning stage
Project Compass Transmission Line	Power Plants & Grids: Grid Infrastructure	7.2	6,000	500kV	PPL Electric Utilities [Sponsor] {US}	At planning stage

Note: Top five projects by value. Project Risk Metric scores out of 10; lower score = more attractive market. Source: BMI Infrastructure Key Projects Data

Residential/Non-Residential Building Forecast

Key View: *Building construction activity will slow in 2025 amid elevated interest rates, weakening macroeconomic conditions in the market and an uptick in economic uncertainty.*

Latest Developments

- We now expect building construction activity to weaken in 2025, as we have revised down our forecast for building construction industry growth in 2025 to a contraction of 0.2% y-o-y, compared with a previous forecast of growth of 0.4% y-o-y.
- From 2026, we continue to expect a strengthening of building construction activity, with the sector to grow in real terms by 2.6% y-o-y in 2026 and see annual average real growth of 2.1% y-o-y over our 10-year forecast period to 2034.
- US housing starts over the first two months of 2025 declined by 2.9% y-o-y compared with the same period in 2024. We do note an upswing in seasonally adjusted terms, as February 2025 saw housing starts jump by 11.8% compared with January 2025 and hit an annual rate of 1.5mn housing units for only the second time since February 2024. We remain skeptical regarding any consolidation of this recovery in starts over the coming months.
- Reinforcing this view, housing permits have remained weak, falling by 6.8% y-o-y in January and February 2025 compared to the same period of 2024. This followed a decline of 2.6% y-o-y in the full year of 2024. In seasonally adjusted terms, permits moved back toward five-year lows with three straight months of declines leading to February 2025, pointing to continued weakness.
- In January 2025, SoftBank and partners announced plans to invest USD500bn over four years in AI infrastructure for OpenAI with an immediate USD100bn deployment in the US. The project, backed by SoftBank, OpenAI, Oracle and MGX, seeks to secure US leadership in AI, create jobs and bolster national security. Key partners include Microsoft, NVIDIA, Oracle and OpenAI with construction under way in Texas as per the Press Release of Soft Bank.

Residential And Non-Residential Building Industry Data (United States 2024-2034)

Indicator	2024	2025f	2026f	2027f	2028f	2029f	2030f	2031f	2032f	2033f	2034f
Residential and non-residential building industry value real growth (%)	4.9	-0.2	2.6	3.2	3.0	2.5	2.1	2.2	2.0	1.7	1.4
Residential Building Industry Value Real Growth (%)	4.6	-0.3	2.9	3.9	2.9	2.4	2.2	1.9	1.8	1.7	1.6
Non-residential Building Industry Value Real Growth (%)	5.3	0.0	2.3	2.3	3.2	2.5	2.0	2.6	2.1	1.7	1.2

f = BMI forecast. Source: US Census Bureau, BEA, BMI

Structural Trends

Residential And Non-Residential Building Construction Outlook

We now anticipate that building construction activity will weaken in 2025, as we have revised down our forecast for building construction industry growth in 2025 to a contraction of 0.2% y-o-y, compared to a previous forecast of growth of 0.4% y-o-y.

Our near-term outlook is driven by our expectation that the effects of elevated interest rates seen since 2022 will continue to weigh on activity over the coming quarters, as high borrowing costs have weighed on project launches. The Fed launched its loosening cycle in September 2024, with a 50bps cut that took the funds rate down to 5.00%. This was followed by cuts of 25bps in November 2024 and again in December 2024 to bring the rate to 4.50% at the end of the year. Over the remainder of 2025, our Country Risk team currently anticipates a further 150bps in cuts, taking the Fed funds rate to 3.00% by the end of the year. While positive for the sector, the impact of loosening monetary policy on building construction activity will not emerge until 2026, given the generally delayed effect of interest rate changes on construction activity. Additionally, we note considerable uncertainty around our Country Risk team's outlook any sharp rise in long-term inflation expectations could delay the start of the cutting cycle and result in a more shallow cutting cycle.

Along with the ongoing effect of elevated interest rates, we also anticipate building construction activity will be negatively impacted by a weakening of macroeconomic conditions in the US as a result of the impact of tariffs. As of April 11, 2025, our Country Risk team anticipates the US will see real GDP growth of 0.7% in 2025, down from a previous growth forecast of 1.9%. This estimate implies that the US economy would experience a recession, defined by two consecutive quarters of q-o-q contractions. This weakened environment, paired with considerable economic uncertainty, will in our view weigh on new project launches in both the residential and non-residential building segments, negatively impacting activity.

We note that manufacturing construction activity remains a bright spot, following a trend seen over the past several years. We expect that this will continue into 2025, with manufacturing construction helping to bolster non-residential building construction activity and offset the impact of weakness elsewhere in the non-residential building segment, including office construction. However, it will be much less of a growth driver from 2025 onwards, as high frequency data point to a flattening of manufacturing construction underway.

From 2026, we continue to anticipate a strengthening of building construction activity, with the sector to grow in real terms by 2.6% y-o-y in 2026 and see annual average real growth of 2.1% y-o-y over our ten-year forecast period to 2034. Falling interest rates will contribute to this strengthening, combined with an improvement of macroeconomic conditions from 2026. We note significant uncertainty around this outlook, however, given broader uncertainty around economic policy direction and the direction of monetary policy over the coming quarters and years.

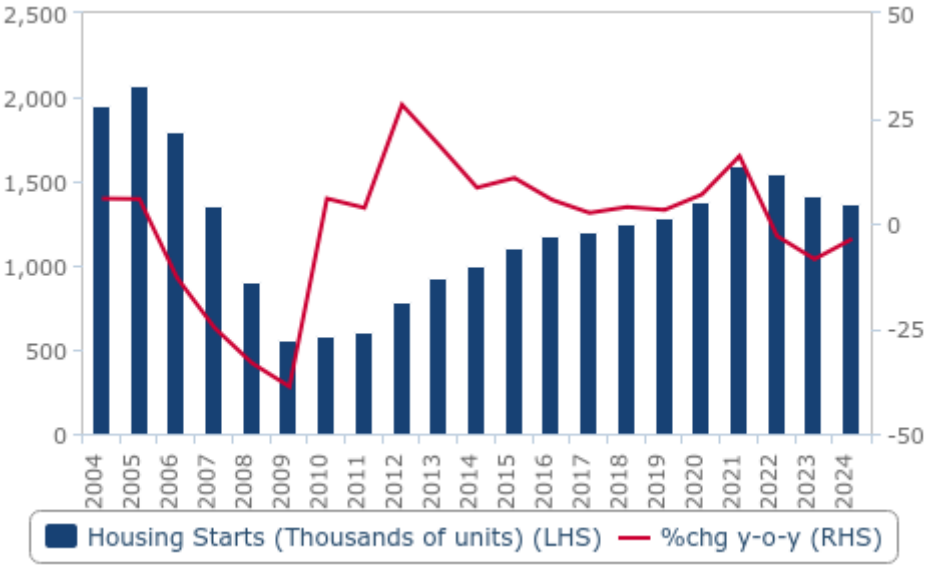
Residential Building

We forecast residential building to see a softening over the near term, with the value of the residential building industry to contract by 0.3% y-o-y in 2025. This will come as a result of the continued effects of a reduction in project launches since 2022 in turn tied to higher interest rates over this period. It will also be the result of the economic impact of tariffs, which, as noted above, our Country Risk team anticipates will weaken US economic growth in H2 2025 below previous expectations.

The contraction of the sector in 2025 will follow on a broad weakening of residential building activity since 2022, as the sharp tightening of monetary policy in the market in 2022 and 2023 weighed on the launch of new projects. According to data from the US Census Bureau, the number of housing units started in the market fell by 3.0% y-o-y in 2022, by 8.5% y-o-y in 2023 and by 3.7% y-o-y in 2024. This came after the market in 2021 saw the highest number of housing starts in a single year since 2006.

New Housing Project Launches Down From 2021 High

US - Housing Units Started (Thousands of Units)



Source: US Census Bureau, BMI

Single family homes drove the decline in H2 2022 and H1 2023, falling respectively by 22.6% y-o-y and 21.2% y-o-y over the two periods, before rebounding with growth of 14.5% y-o-y in H2 2023 and of 6.9% y-o-y in 2024. Multifamily housing starts have accounted for the continued weakness seen since mid-2023, falling by 26.1% y-o-y in H2 2023 and by 26.7% y-o-y in 2024, as higher rates have dissuaded developers from launching new projects.

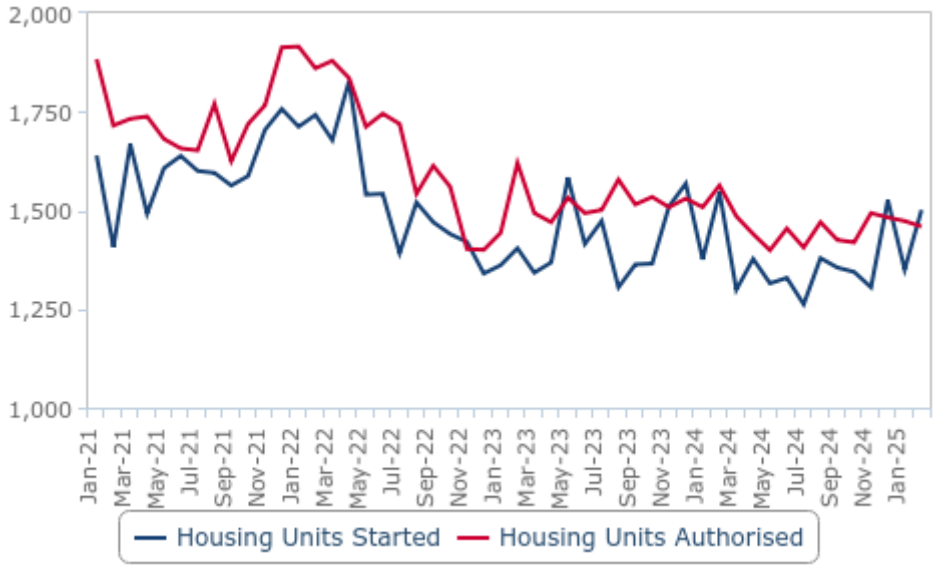
As new housing project launches fell since 2022, residential building activity overall has seen a weakening, with 2023 in particular seeing a significant decline. According to data from the US Census Bureau, construction spending on residential building fell by 5.9% y-o-y in nominal terms in 2023. We estimate that this translated to a 13.3% y-o-y decline in residential building construction industry value in 2023 in real terms. After the sharp decline seen in 2023, construction spending on residential buildings increased 6.0% y-o-y in nominal terms in 2024, which we estimate translated into real growth of 4.6% in residential building industry value. Given the scale of decline seen in 2023, however, this marked only a partial recovery for the sector.

Our muted outlook for residential building construction in 2025 is reinforced by high frequency data. While construction spending on residential building projects saw an annual increase in 2024, monthly seasonally adjusted figures have shown a flattening in recent months, with the indicator in February 2025 remaining below a peak seen in May 2024, as the sector has yet to fully recover from a 3.1% m-o-m decline in June 2024. Monthly figures for housing starts and housing permits from the US Census Bureau also remain fairly weak. In the case of housing starts, the first two months of 2025 saw a continued decline in annual terms, with housing starts in January and February 2025 declining by 2.9% y-o-y compared to the same period in 2024. We do note an upswing in seasonally adjusted terms, as February 2025 saw housing starts jump by 11.8% compared to January 2025 and hit an annual rate of 1.5mn housing units for only the second time since February 2024. We remain skeptical regarding any consolidation of this recovery in starts over the coming months.

Reinforcing this view, housing permits have remained weak, falling by 6.8% y-o-y in January and February 2025 compared with the same period of 2024. This followed a decline of 2.6% y-o-y in the full year of 2024. In seasonally adjusted terms, permits moved back toward five-year lows with three straight months of declines leading to February 2025, pointing to continued weakness.

Key Housing Construction Indicators Remain Subdued

US - Housing Units Started And Authorised By Month '000 (Seasonally Adjusted At Annual Rate)

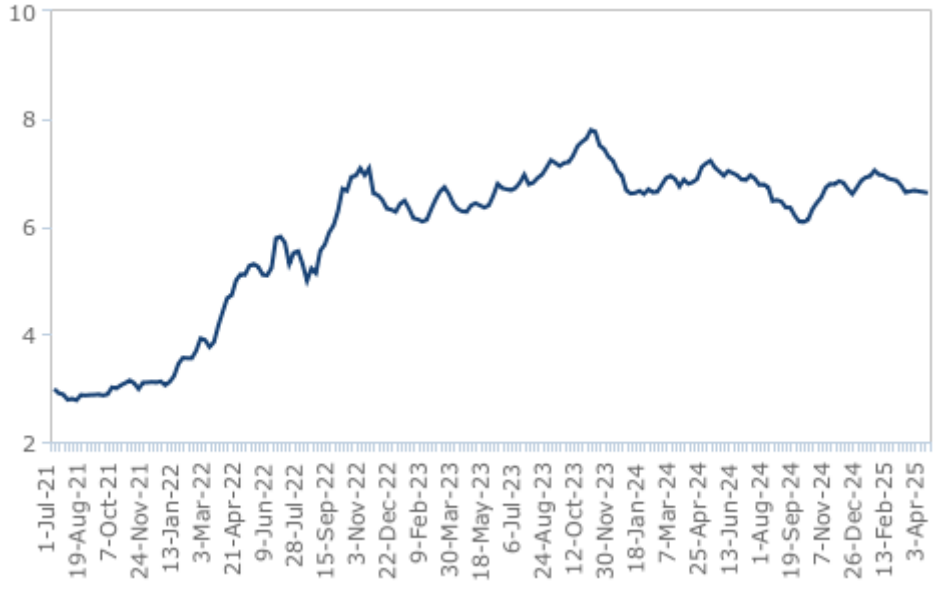


Source: US Census Bureau, BMI

While we expect weakness to persist in the near term, falling interest rates still appear likely to provide a boost to the sector from 2026, though we note higher uncertainty around the pace of cuts. High borrowing costs have remained an impediment to housing project development in recent quarters, while elevated mortgage rates in particular have contained housing demand. Currently we forecast residential building to expand by 2.9% y-o-y in 2026 and expand on average by 2.1% y-o-y over our ten-year forecast period to 2034.

Mortgage Rates Remain At Elevated Levels

US - Average Rate For 30-year Fixed Rate Mortgage



Source: Freddie Mac, BMI

Non-Residential Building

We now forecast a deceleration for non-residential building construction in the US over the near term, with the segment to see zero growth in 2025 following on robust growth in 2023 and 2024.

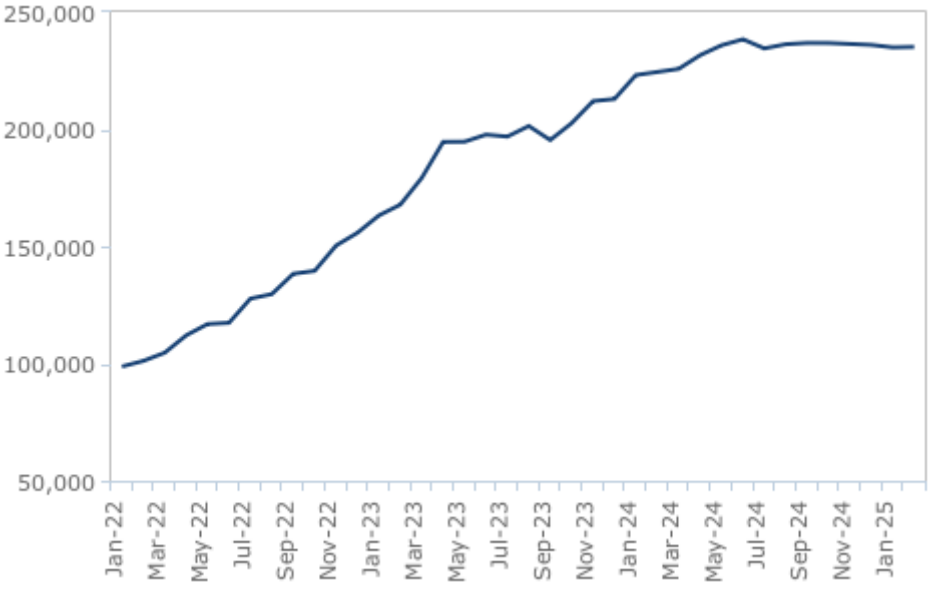
Manufacturing construction will remain at elevated levels, as the segment drove the growth of non-residential building construction overall over the past several years. According to data from the US Census Bureau, construction spending on manufacturing facilities rose by around 54.9% y-o-y in 2023, compared with an increase of some 6.4% y-o-y for construction spending overall. This follows growth for manufacturing construction spending of 52.0% y-o-y in 2022, compared with growth of 15.0% y-o-y for construction overall. While growth slowed in 2024, it remained significant with manufacturing construction spending rising 20.4%, compared with growth of 6.6% y-o-y for construction overall.

Among areas of focus of investment over the past several years have been semiconductor production facilities and manufacturing plants linked to clean energy technologies such as electric vehicle (EV) batteries. This is supported by considerable federal funding in support of these activities resulting from the passing of two laws by the US Congress in 2022, namely the CHIPS and Science Act and the Inflation Reduction Act (IRA).

Looking ahead, we anticipate that the non-residential building sector will be affected by a continued moderation of manufacturing construction growth, combined with continued weakness across other segments. Our view regarding manufacturing construction is anchored in recent trends as monthly manufacturing construction spending has as of February 2025 remained largely flat since May 2024 (*see chart below*).

Manufacturing Construction Spending Flattening After Strong Growth

US - Manufacturing Construction Value Put In Place (USDmn) Seasonally Adjusted Annual Rate



Source: US Census Bureau, BMI

Combining with the manufacturing construction deceleration to lead to tepid non-residential building activity will be weakness in other segments. This will include office construction which has been a point of weakness for the broader non-residential building sector over the past five years, amid reduced demand for office space amid wide adoption of remote working exacerbates. According to data from the US Census Bureau, construction spending on offices rose by around 6% y-o-y in 2022 and 3.8% y-o-y in 2023. Compared with growth of roughly 15% y-o-y and 6.4% y-o-y respectively in each year for construction spending overall, this

represented sharp declines in construction spending on offices in real terms given double-digit increases in construction materials prices in both years. In 2024, office construction growth spending again trailed the growth of construction spending overall, with office construction spending increasing by just 2.3% y-o-y over the period, which is well below the 6.6% y-o-y growth for construction overall. We anticipate that office construction in 2025 will remain subdued compared with pre-pandemic levels, continuing this trend.

A softening of economic activity in the US in 2025, combined with an uptick in economic uncertainty, will further weigh on non-residential building across all segments, as firms pull back on investments, particularly with interest rates still at relatively elevated levels.

Beyond 2025, we continue to anticipate that easing monetary policy will bolster non-residential building construction, contributing to growth of 2.3% y-o-y in 2026 for the sector, and average annual real growth of 2.0% y-o-y over our ten-year forecast period.

We do note risks due to uncertainty around the approach of the federal government under the Trump administration to the CHIPS and Science Act and the IRA as President Trump has been critical of both pieces of legislation, raising the potential for substantial changes or even repeal of enacted programmes. The CHIPS and Science Act includes USD52.7bn for semiconductor research, development, manufacturing and workforce development, a level of support that has been expected to accelerate a growing trend of investment in new semiconductor facilities in the US. According to the Semiconductor Industry Association, as of August 2024, more than 90 projects involving over USD450bn in investment had been announced since the introduction of the CHIPS Act in Congress. Among notable projects underway or planned are a new USD40.0bn facility for Taiwan Semiconductor Manufacturing Company in Phoenix, Arizona; a USD20.0bn investment by Intel in Chandler, Arizona; and a USD25.0bn investment by Samsung in Taylor, Texas.

The IRA in turn contains over USD300bn in uncapped tax credits and other funding over the coming decade for clean energy technologies, including renewable energy deployment, battery storage and EVs. This has been a key factor driving strong growth of planned manufacturing facilities for clean energy technology, such as EV batteries and renewables components.

While a any steps to weaken these programmes could impact the sector as soon as 2025, the longer-term impacts would also be substantial, as these programmes are contributing funding to large multi-year projects currently in very early stages.

We also note potential opportunities and challenges over the longer term due to tariffs. If sustained, tariffs on US trading partners could spur new investment in US manufacturing capacity and related projects, as firms could look to bolster US production in order to mitigate the impact of tariffs. At the same time, however, higher construction costs due to tariffs also risk undermining the attractiveness of large construction projects.

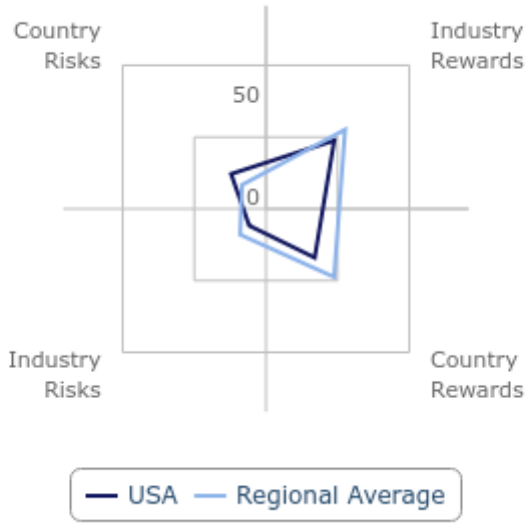
Industry Risk/Reward Index

United States Infrastructure Risk/Reward Index

Key View: *The US infrastructure market stands out as one of the most attractive globally, underpinned by relatively low risk in the market as well as significant rewards.*

Risk/Reward Snapshot

US & NAWE Region - Infrastructure Risk/Reward Index



Note: Scores out of 100; lower score = more attractive market. Source: BMI Infrastructure Risk/Reward Index

Global And Regional Ranks

- Global rank (out of 104): 9th
- Regional rank (out of 17): 3rd

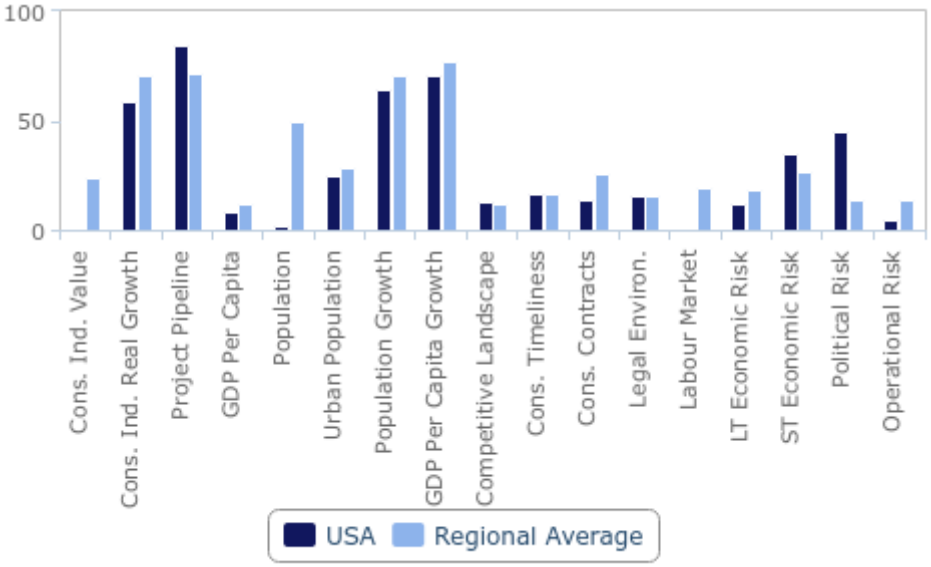
Key Features And Latest Updates

- The US market stands out globally for its low risk, with a score of 16.8 in the Risks component of our Infrastructure Risk/Reward Index. This is far better than the global average of 50.0. A diverse and relatively open competitive landscape, combined with strong legal frameworks and established institutions, underpin the low risk of the country's infrastructure market. The labour market also remains a strength for the market, although limited availability of labour in recent quarters presents an increasing challenge to the construction industry.
- The US market's low risk is supported by relatively low operational risks in the market as well as a high level of political stability.
- The US market presents substantial rewards, given the scale of the market's construction industry, the largest across the North America and Western Europe (NAWE) region, as well as a growing pipeline of large infrastructure projects.
- The passing of the Infrastructure Investment and Jobs Act in November 2021 represented a sharp increase in federal investment in infrastructure development in nominal terms, with USD1.2trn in public spending over the period between FY2022 and FY2026 included in the law.

- There is an uptick in uncertainty, particularly around federal spending programmes following Trump's victory in the 2024 US presidential election, with significant potential for steps by the incoming Trump administration to reduce federal investment programmes.
- A sharp increase in US tariffs (and their subsequent reversal) on foreign goods imports is also generating uncertainty around the US macroeconomic outlook and in turn the demand for infrastructure and building projects.

Risk/Reward Matrix Breakdown

US & NAWE - Infrastructure Risk/Reward Index By Component



Note: Scores out of 100; lower score = more attractive market. Source: BMI Infrastructure Risk/Reward Index

Competitive Landscape

As one of the largest infrastructure and building construction sectors globally, the US is a key driver of opportunities across project functions, including construction, operation, sponsorship and financing. The opportunities presented by the market are particularly attractive, given the market's low risk, bolstered by a strong bureaucratic environment and relatively limited political and economic policy uncertainty. The size of the market and strong variation of structure across different segments of the infrastructure and building sectors means that both the type and scale of opportunities present in the market can vary considerably across segments.

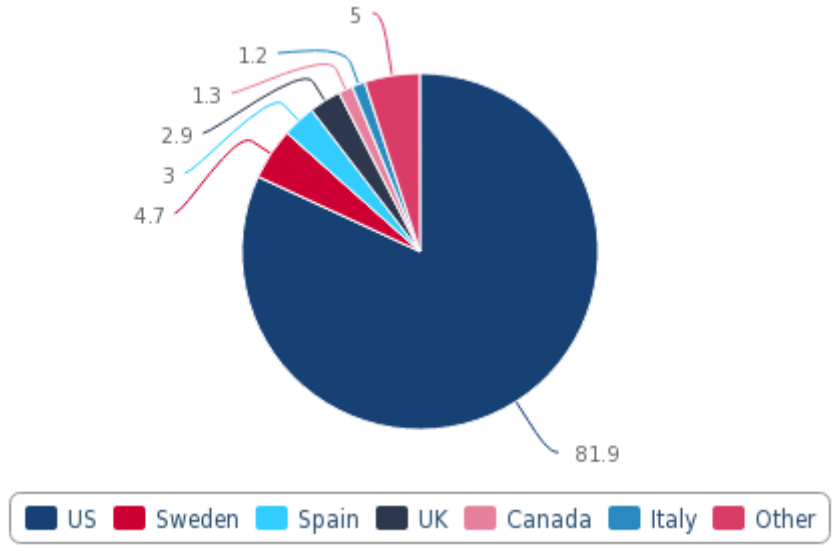
Infrastructure And Building Construction

Given its large size, the US market has provided a robust level of construction contracting opportunities across sectors for numerous decades. In part as a result of this strength, US construction firms are among the largest globally, with the US home to numerous large-scale firms active across the country, most of which are primarily focused on the domestic market. Among these are Bechtel, Turner, Kiewit Corporation, Fluor, Tutor Perini Corporation and AECOM. The market is home to many local and regionally focused medium-size construction firms. Given this strong presence of domestic construction firms, direct international involvement in construction contracting in the US market has been relatively limited relative to the size of the market, a trend reflected in data from our Key Projects Data (KPD), which show US-based companies accounting for around 82% of construction contracting roles on infrastructure and building construction projects in the market.

Investments by international firms in existing US-based companies have been significant, as international infrastructure and construction firms look to gain a presence in the market while taking advance of the established nature of existing construction firms. Turner, one of the largest US-based construction firms, has since 1999 been a subsidiary of Germany-based infrastructure firm Hochtief following Hochtief's acquisition of the firm, while Lane Construction, another leading US-based infrastructure builder, became part of Italy-based Webuild Group (then under the name Salini-Impregilo) following a merger in 2015.

US-Based Firms Dominate Market

US - Share Of Construction Roles By Company Origin, %



Note: May include territories, special administrative regions, provinces and autonomous regions. Source: BMI Infrastructure Key Projects Data

Sponsorship, Operation And Financing

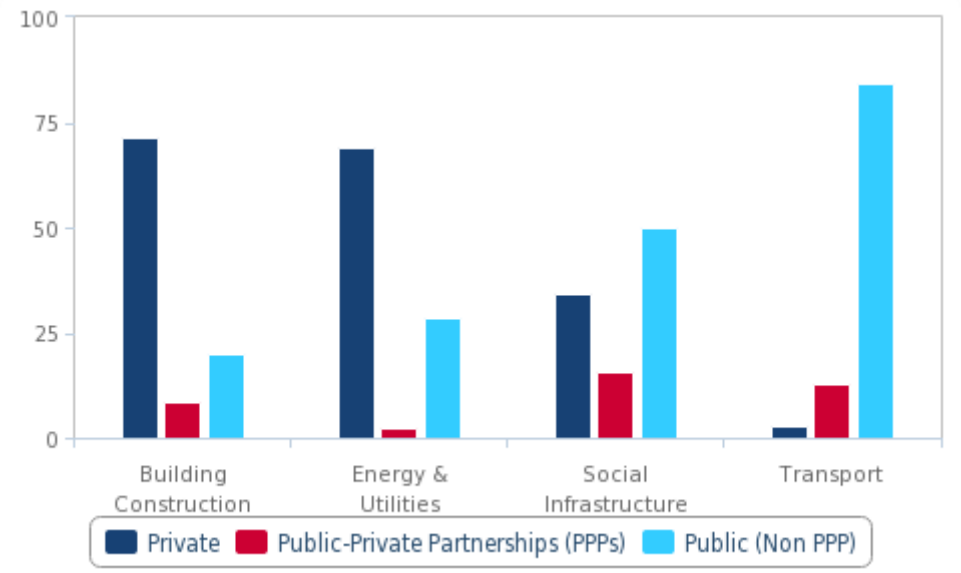
While infrastructure construction is typically undertaken by private companies, the operation and finance of infrastructure assets in the US, as well as the sponsorship of construction projects, varies considerably depending on the sector. Residential and non-residential building sponsorship, funding and operation are mostly undertaken by private companies, with the exception of social infrastructure, such as educational facilities, in which local and state governments play a much larger role. In the case of infrastructure projects, these roles are largely handled by public entities, including state and local governments, publicly owned transit authorities and local water utilities. These entities in most cases have numerous decades of experience in overseeing the building, management and operation of infrastructure assets and systems, with funding for operational and capital expenses typically derived from a combination of federal, state and local government funding programmes as well as from bond issuances from publicly owned entities via the municipal bond market. This structure, which has remained largely the same for much of the market's recent history, provides general stability and predictability to the US infrastructure sector, while limiting the role of private firms in much of the sector, due to the large involvement of different levels of government as well as public entities.

While public entities account for the largest share of operators, we note a significant role of private firms in pockets of the infrastructure sector, namely in the power sector. Publicly regulated utility companies have been the primary firms involved in the operation and development of power infrastructure assets in the US since the 19th century despite notable cases of direct government involvement, including the creation of the construction of the Hoover Dam in Nevada and Arizona as well as the formation of the Tennessee Valley Authority, both developments occurring in the 1930s. The growth of renewables development in recent years has provided an additional boost to investment in the sector while leading to a significant increase in the number of private firms involved in power infrastructure development, as renewables projects have facilitated the entry of numerous new firms into the operation and development of US power assets. While still limited compared with public sector involvement, we note the growing, though still small, role of private infrastructure firms in the development and operation of transport infrastructure assets. A rising number of public entities in the US have also employed public-private partnerships (PPPs) for the construction, operation and maintenance of transport infrastructure assets including roadways, bridges, airports and public transit lines.

Illustrating these trends, data from our KPD indicate that public projects account for over 84% of transport projects in the US market and 50% of social infrastructure projects, while private projects account for over 71% of building construction projects and 69% of energy and utilities projects in the market. Highlighting the growing use of PPPs within the transport sector as well as in social infrastructure development, PPPs account for nearly 13% of all transport projects in the market and over 15% of social infrastructure projects, compared with just 8.8% of building construction projects and 2.3% of energy and utilities projects.

Strong Variation Across Sectors

US - Share Of Projects Per Project Contracting Type By Sector, %



Source: BMI Infrastructure Key Projects Data

Having considered the main trends across building and infrastructure construction in the US market, we will examine the competitive landscape more closely at the sector level, including transport infrastructure, energy and utilities infrastructure, and residential and non-residential building.

Transport Infrastructure

The construction of transport projects is a major source of revenue for many of the market's largest construction firms, with highway projects, in particular, standing out as a key area of investment in the market in recent decades. Opportunities outside of construction contracting roles on transport projects are relatively limited, as state and local governments remain the primary actors responsible for the sponsorship, operation and financing of transport infrastructure despite a growing use of PPPs in recent years.

Road and bridge construction projects account for the largest share of total transport construction industry value, 63.5% in 2019 compared with 19.4% for rail construction, 14.6% for airport and 2.6% for port construction. Road and bridge construction activity is largely generated by public works projects tendered by state and local governments, which generally own and maintain the country's roadways. In some cases, these projects are backed with grants provided by the federal government, with the largest share provided to the states as formula grants funded by the Highway Trust Fund. As a result of the structure of the industry, the competitive landscape for road and bridge construction projects is highly regionalised, with each state typically home to numerous contractors that compete for state and local construction contracts within the state, as well as a larger number of smaller specialty contractors that bid for lower value public works contracts or work as sub-contractors for larger firms. Despite this regionalisation, a number of firms are active across numerous states or at the national level within the road and bridge segment, with these firms typically involved in higher value and higher complexity highway and bridge projects. Among examples of large-scale infrastructure firms frequently involved in road and bridge projects in the US market are Fluor, Kiewit Corp, Granite Construction, Lane Construction, Skanska USA, Webber and Flatiron Construction.

While private involvement in the sponsorship and operation of road and bridge infrastructure remains limited, we note that recent years have seen an increasing use of PPPs by state governments in a number of states, particularly for highway projects, with a number of major projects launched over the past decade. Texas, Florida, Georgia, Virginia and New York are all examples of states to have advanced such projects, underpinning a growing market for road and bridge PPP development in the country. This increasing use of PPPs has provided significant opportunities for large-scale infrastructure developers, a number of which have been active on road PPP projects in the market including Skanska USA, Meridiam, Ferrovial and John Laing.

As in the case of road and bridge infrastructure, rail infrastructure in the US is largely owned and operated by public entities, typically local or state public transit agencies. Contracting opportunities are concentrated in larger urban areas, where public transit systems are more prominent, most notably the metropolitan areas of New York City, Los Angeles and Chicago. The Metropolitan Transport Authority, the primary agency in charge of operating and maintaining public transit systems in the New York City metropolitan area, stands out as a key source of public transit contracting opportunities in the US; this is likely to remain in place over the coming years with the agency advancing a USD51.0bn capital plan, with major investments planned both in the modernisation and expansion of the NYC subway system.

Given the generally larger scope and increased technical complexity of rail infrastructure projects compared with road and bridge projects, construction roles are more frequently held by larger firms, many of which have a regional or national geographic focus. Such firms frequently involved in rail project construction include Tutor Perini Corporation, Kiewit Corporation, Fluor, Lane Construction, Walsh Construction and Skanska USA.

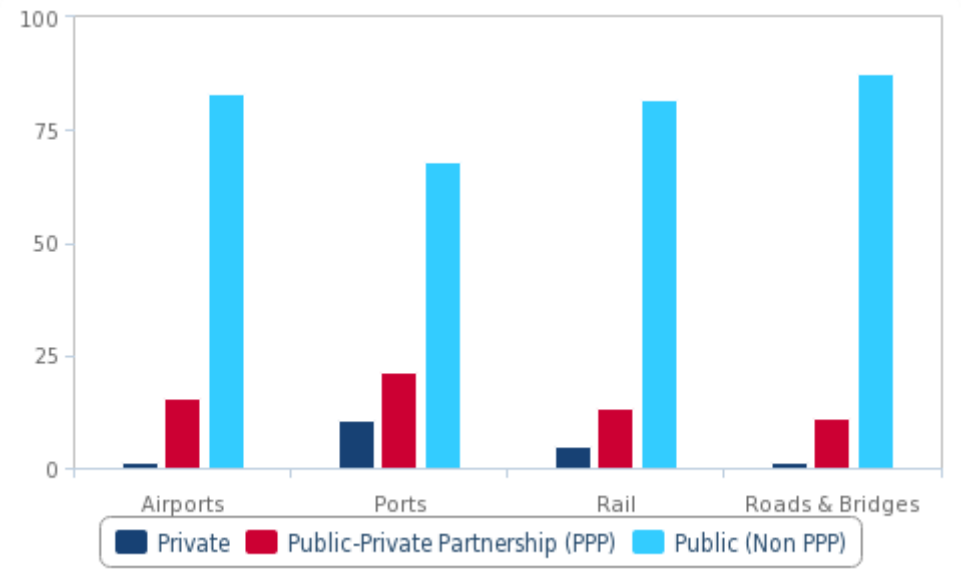
Airport infrastructure in the US is nearly entirely publicly owned, with state and local entities the primary operators of airports as well as the sponsors of airport construction projects, in some cases backed by federal government funding. Private firms play a significant role in operating terminals and sponsoring land-side terminal projects, under agreements typically reached between public entities in control of the entire airport and private firms. Such arrangements have been a driver of major infrastructure investments in the country's airports in recent years, including a USD8.0bn reconstruction of LaGuardia Airport in New York. Under a PPP, consortium LaGuardia Gateway Partners, made up of Vantage Airport Group, Skanska, Meridiam and JLC Infrastructure, recently undertook a USD4.0bn reconstruction of Terminal B at the airport while Delta Air Lines is undertaking a USD4.0bn redevelopment of Terminal C.

Across fully publicly funded projects and privately funded projects, airport construction is generally undertaken by larger infrastructure firms, due to the large scope and technical complexity of airport projects.

In port infrastructure, there is considerable involvement by private firms in the development and operation of port facilities, most notably port terminals. These firms are often large-scale port operators with a global presence, with examples including APM Terminals, PSA International and SSA Marine. There is also considerable involvement by energy companies in port developments, given a focus in recent years in the US on the development of LNG export facilities as well as other oil- and gas-related port infrastructure facilities. Construction and maintenance projects at port infrastructure facilities in the US are undertaken by a variety of firms, working for private port terminal operators or public firms, which also play a significant role in the market, with examples of major public entities involved in port management and the sponsorship of port infrastructure projects being the Port of New York and New Jersey, the Los Angeles Harbor Department and the Harbor Department of the City of Long Beach. Land side port projects are largely undertaken by infrastructure firms which often work on other types of infrastructure projects, particularly given the overlap of port terminal projects with building construction as well as other transport construction segments, including road and rail infrastructure. However, dredging projects are more typically undertaken by specialised firms with experience in dredging for port channels.

Public Works Projects The Primary Contracting Method

US - Share Of Transport Projects Per Project Contracting Type By Sub-Sector, %



Source: BMI Infrastructure Key Projects Data

Energy And Utilities Infrastructure

As in the case of transport infrastructure, the development of energy and utilities projects also serves as a key area of construction opportunities in the US market, particularly with robust investment in recent years both in the development of midstream infrastructure amid the US shale boom, as well as in the expansion of non-hydro renewables capacity amid a growing focus on decarbonisation. Compared with the transport infrastructure segment, however, the energy and utilities sector hosts a much larger level of private sector involvement beyond project construction, with infrastructure project sponsorship as well as financing and infrastructure asset operation within the energy and utilities segment often undertaken by private firms. This is particularly the case of the power and midstream infrastructure segments, with the water sector instead seeing a much greater public sector role.

In the power sector, the development of non-hydro renewables projects, in particular, has emerged as a key area of investment, as the US has seen a rapid expansion of non-hydro renewables capacity, most notably the construction of solar photovoltaic and onshore wind projects. This expansion, which saw the US add over 175GW of non-hydro renewables capacity between 2010 and 2020, has led to a considerable diversification of the power sector competitive landscape across multiple project-related functions, including project construction, financing and operation.

Numerous new entrants with a focus on renewables projects, in particular, have entered the US power market across functions, including both international and domestic firms. These have included domestic firms aiming to compete for opportunities in the renewables sector, such as Invenergy, Sunrun and Tesla. These have included already existing international firms, particularly Europe-based companies. Among these are EDP Renewables, EDF Renewables and ENEL Green Power. The offshore wind segment has especially drawn the involvement of a number of large Europe-based infrastructure firms with substantial experience undertaking offshore wind projects, including Equinor, BP, Ørsted, Shell and EDF Renewables.

While renewables growth has led to entry of new firms, the emergence of renewables has created new opportunities for existing power companies which have, in many cases, become involved in renewables development. This includes power utility companies that have engaged in renewables development as part of overall capacity expansion plans. Examples of such involvement are numerous, including NextEra Energy, Dominion Energy, Avangrid and Duke Energy.

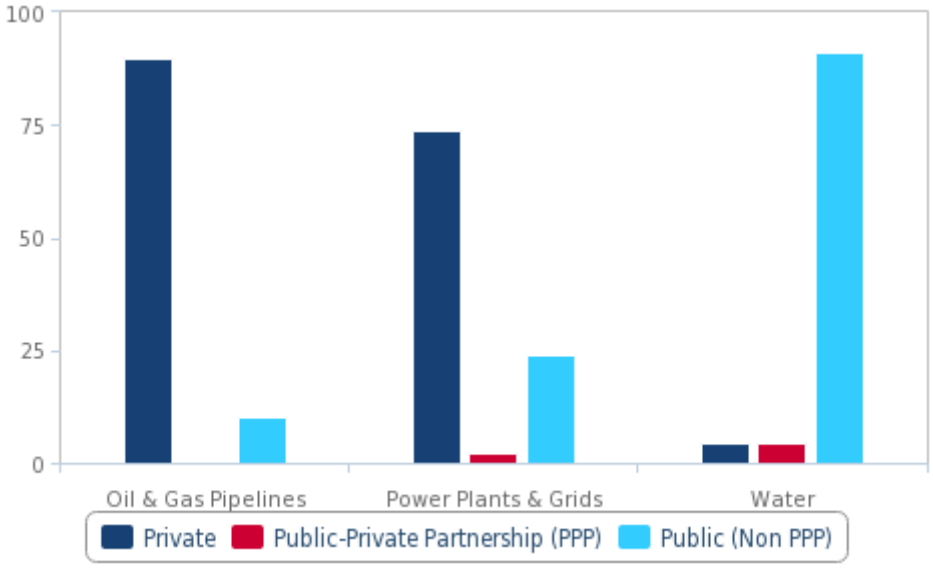
As in the case of the power sector, oil & gas pipeline development and operation is largely undertaken by private companies. Midstream infrastructure has seen robust investment over the past decade in the US, driven primarily by the market's shale boom, leading to substantial opportunities for infrastructure firms specialised in pipeline construction and operation. However, increased scrutiny at the federal level has led to a more challenging environment for the launch of new pipeline projects, a point highlighted by the cancellation of the Keystone XL pipeline project earlier in 2021, following the decision of the Biden administration in January 2021 to revoke the presidential permit for the project. In terms of pipeline project sponsorship and pipeline operation, a number of large-scale firms are heavily active in the US pipeline segment, including TC Energy, Kinder Morgan, Enbridge and Williams. In terms of pipeline construction and project management, a number of specialised pipeline builders are present in the market, including Associated Pipe Line Contractors, US Pipeline and Michels, as well as more broadly focused infrastructure companies, including Bechtel and Fluor.

Compared with the power and oil & gas segments, water infrastructure development and operation is largely the task of public entities in the US. These entities, generally local or regional water utilities, have, since the 19th century, been the primary actors in the development, operation and maintenance of water infrastructure in the US, including clean drinking water provision, drainage and wastewater disposal as well as flood control. A federally owned entity, the US Army Corps of Engineers, also plays a central role in the US water sector, managing the operation and maintenance of much of the market's canals, dams and inland waterway infrastructure.

The water segment provides private firms with opportunities, particularly in project construction and water system maintenance work. However, the bulk of these contracts are relatively low sum contracts tendered at the local level, which are well below the threshold value for inclusion in our KPD.

Greater Private Involvement In Energy And Utilities Sector

US - Share Of Energy & Utilities Projects Per Project Contracting Type By Sub-Sector, %



Source: BMI Infrastructure Key Projects Data

Residential And Non-Residential Building

Given its large scale, accounting for an estimated 79.6% of all construction activity in the US as of 2021, the building construction sector is the largest driver of development and construction opportunities in the US. The residential building segment accounts for the largest portion of that, at 63.8% of building construction industry value and 50.8% of construction industry value overall as of 2021. Within the residential building segment, single-family home construction accounts for a large share of overall construction activity, with roles in both construction and project sponsorship and development largely accounted for by firms specialised in this area. This includes a number of large-scale national or regional home developers including Lennar, DR Horton, Toll Brothers, NVR and PulteGroup. Most project roles on single-family housing projects in the US are held by smaller regional or locally focused firms with on-site construction on single-family homes typically undertaken by local small- and mid-size construction contractors, including general contractors and specialised construction trades.

Outside of the single-family home development market, the US hosts a robust market for the development of multi-unit buildings, particularly in urban areas. These projects are often developed and built by relatively larger real estate and construction firms, many of which are also active in the development and construction of other types of large-scale building construction projects, such as commercial buildings. While many of these firms still have a regional or local focus, their reach is in many cases broader than that of firms typically involved in single-family home construction, given the larger scale needed to undertake large-scale building projects as opposed to single-family home constructions. Most of these firms - examples of which include real estate developers Avalon Communities and Greystar Real Estate Partners and construction companies Turner, Skanska USA, Gilbane, Whiting-Turner and Sto Building Group - are also involved in other types of building development and construction projects, particularly commercial buildings.

In the non-residential building segment, a number of large-scale developers and building firms are highly active in building projects, particularly in urban areas where larger projects are concentrated. This is particularly the case in terms of construction companies, with a strong overlap between builders employed in large-scale residential projects and those involved in large non-residential building developments. Within the non-residential building segment, numerous large infrastructure firms with a considerable presence in other infrastructure areas, including transport and energy are present, including Fluor, Gilbane and AECOM. This trend, as well as the involvement of numerous specialised infrastructure developers and contractors, is notable in the cases of energy and industrial building projects, given the scale and complexity of such projects.

Company Profile

Construction Key Players: Caterpillar

Overview

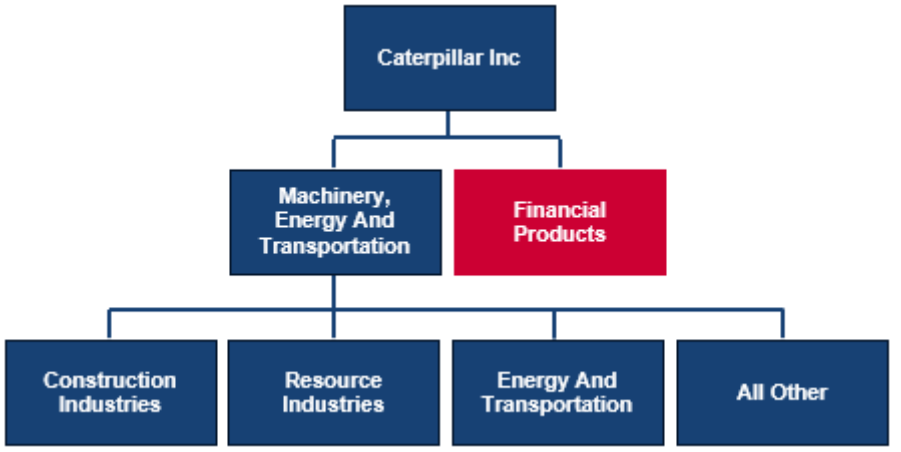
Caterpillar is a United States-based company which manufactures machinery and equipment used across the construction, infrastructure, mining and related industries. Founded in 1925, the company directly employs around 113,000 full-time persons and distributes its machinery via its network of 156 independent dealers spanning 191 markets. Overall, it stands as one of the largest providers of construction machinery globally.

Caterpillar operates across 5 segments:

- **Construction Industries:** The provision of machinery used in infrastructure, building construction, and forestry activities. Products in this segment include excavators, loaders, and small tractors.
- **Resource Industries:** The provision of machinery used in mining, heavy construction, and quarry activities. Products in this segment include trucks, compactors, shovels, mining machinery, and large tractors.
- **Energy And Transportation:** The provision of machinery used in oil and gas, power generation, transportation, and other industrial activities. Products in this segment include reciprocating engines, generator sets, turbines, diesel-electric locomotives, and energy storage systems.
- **Financial Products:** The provision of financing to customers and dealers for Caterpillar products and services, entailing wholesale and retail loans and leases.
- **All Other:** Business activities relating to company strategy, product development, parts distribution, logistics, and other distribution services.

In the discussion of its activities, Caterpillar groups its respective Construction Industries, Resource Industries, Energy And Transportation and All Other segments into a combined Machinery, Energy And Transportation (ME&T) category. This serves to distinguish these 4 segments, which involve the design, manufacturing and distribution of capital goods, from its Financial Products segment which facilitates the purchase and lease of these capital goods.

Caterpillar - Company Structure



Source: Caterpillar

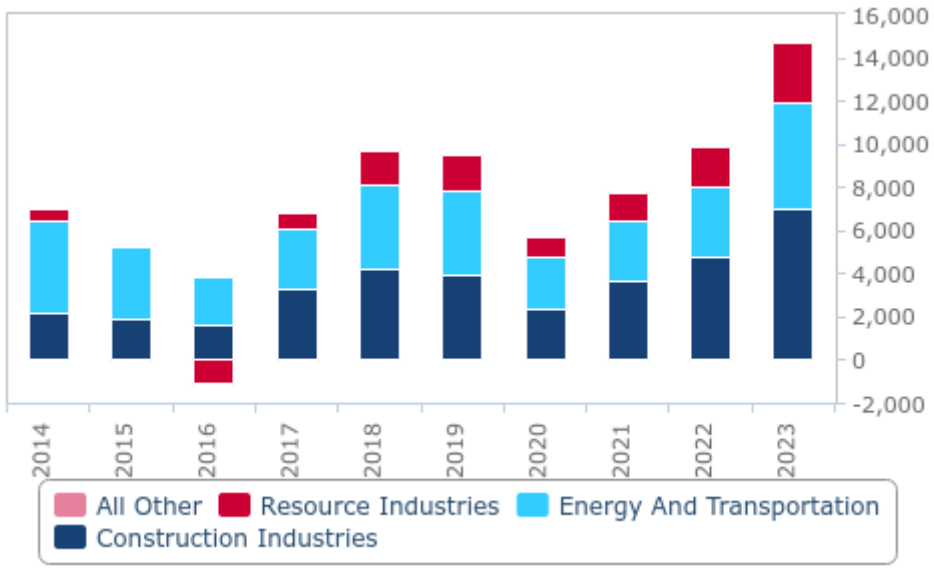
Aside from its flagship Caterpillar brand, the company also operates under several other brands to generate sales in specific industries, geographic markets, and at specific price points. Caterpillar Qingzhou Ltd, formerly Shandong Engineering Machinery Co. Ltd (SEM), is Caterpillar's primary brand for construction machinery in Mainland China, while Progress Rail is Caterpillar's primary brand for rolling stock and related rail infrastructure components.

Caterpillar's latest full-year results for the year ended 31 December 2023 show that its largest segment, Construction Industries, generated operating income of USD6,975mn. This represented a 47% increase since 2022, in which the segment generated operating income of USD4,743mn. Energy And Transportation, meanwhile, generated USD4,936mn of operating income during 2023, followed by Resource Industries with USD2,834mn. This resulted in ME&T generating operating income of USD12,659mn during 2023; a 70% increase from USD7,433mn during 2022.

Caterpillar's Financial Products segment generated operating income of USD909mn during 2023; a slight increase on USD890mn in 2022.

Construction, Energy And Transportation Segments Driving Operating Income Growth

Caterpillar - Operating Income By Segment, USDmn

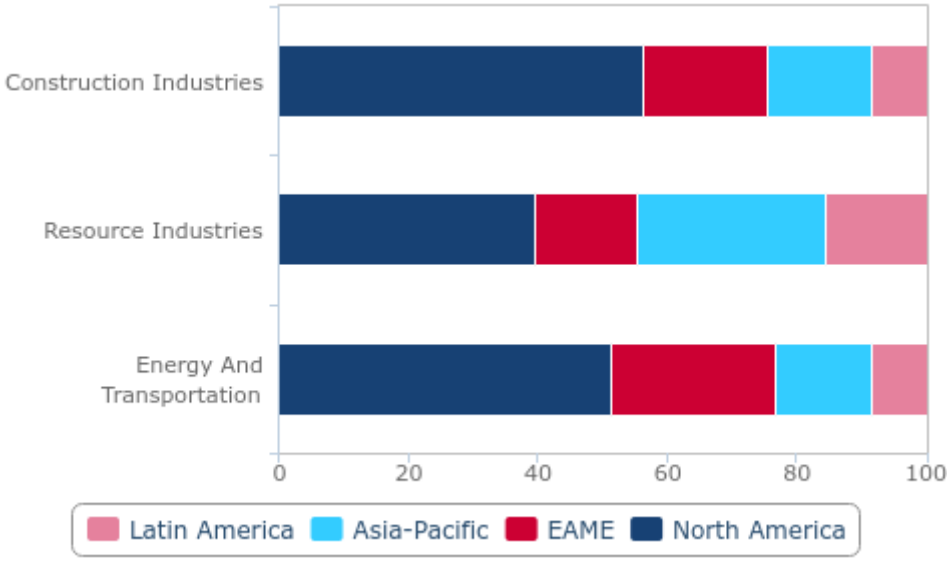


Note: US GAAP results. Figures according to segment reporting. Source: Caterpillar

Geographically, North America remains Caterpillar's core market despite the company's broad global presence. Across each segment in ME&T, the region accounted for the largest share of revenue during 2023; 56.2% in Construction Industries, 39.7% in Resource Industries, and 51.3% in Energy And Transportation. Europe, Africa and the Middle East (EAME) generated most of their revenue in Energy And Transportation, whereas Asia-Pacific and Latin America respectively generated most of their revenue in Construction Industries.

North America The Dominant Sales Region Across Each Segment

Caterpillar - % Of Revenue By Segment, 2023



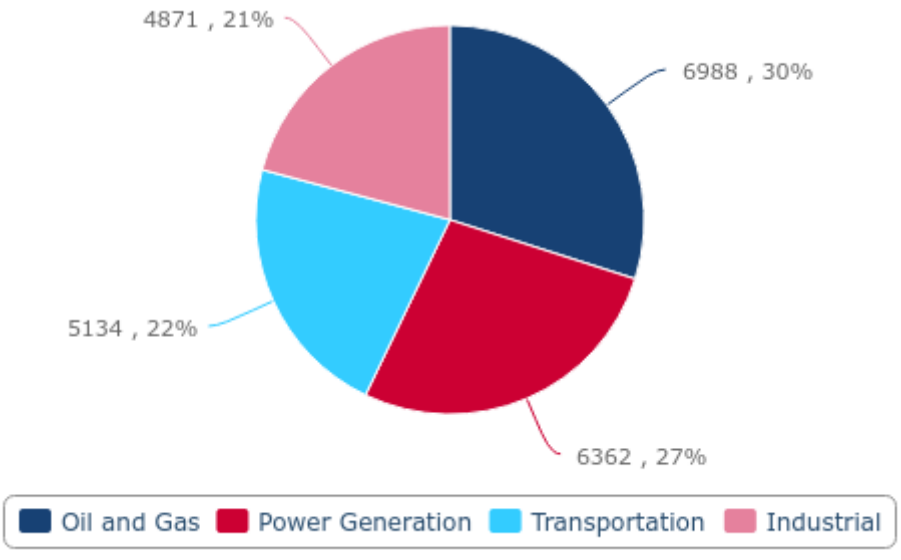
Note: EAME = Europe, Africa and the Middle East. US GAAP results. Figures according to segment reporting. Source: Caterpillar

Strategy

Caterpillar's high level of brand recognition, diversification across end-users, and crucially its ability to drive the investment cycle for construction machinery underpin its operations. In an industry already characterised by high barriers to entry, Caterpillar's global prominence reinforces its competitiveness both in its domestic market, the US, and across emerging markets when competing with local suppliers.

Energy And Transportation Sales Remain Diversified Across Industries

Caterpillar - % Of Energy And Transportation Revenue By Application, 2023



Note: US GAAP results. Figures according to segment reporting. Source: Caterpillar

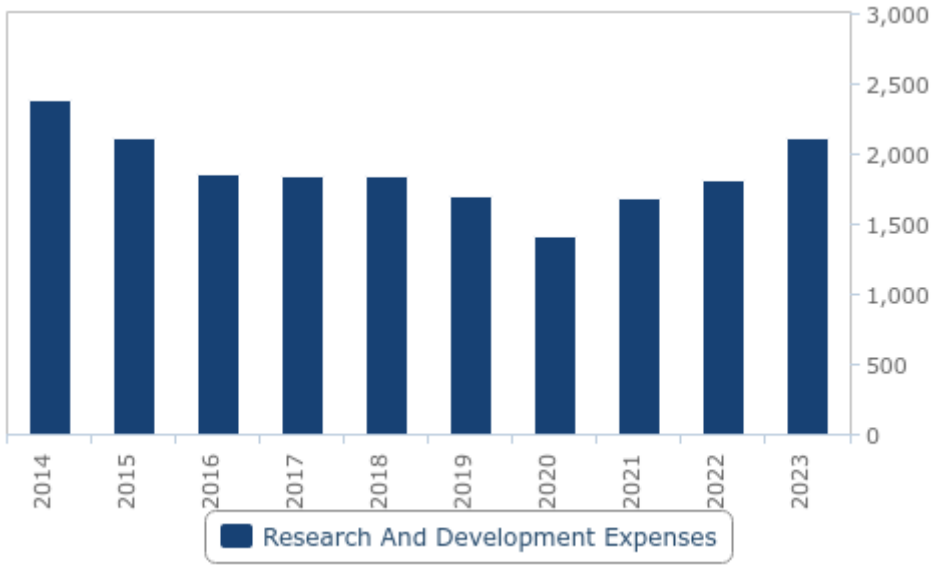
Caterpillar's customers in emerging markets tend to be more price-sensitive, often seeking to add to capital stock amid a relatively high growth environment. The company's activities across its other brands, such as CAT Reman, Hindustan, and SEM, enable it to compete effectively at specific price points without conceding discounts on its headline products. Customers in such markets may also be more exposed to commodity price fluctuations, and thus would exhibit great volatility in their demand for Caterpillar's machinery.

In contrast, Caterpillar's customers in developed markets tend to purchase machinery to replace existing capital stock due to obsolescence. This customer segment seeks more productive capital, providing Caterpillar with the opportunity to seek to dictate the upgrade cycle and, ultimately, to demonstrate meaningful technological progress in its products versus its competitors.

As a result, research & development expenses remain a major operating expense for Caterpillar to ensure the company's competitive position. In 2023, Caterpillar's research and development expenses reached USD2,108mn; the highest level since 2014. Such expenses will remain especially key for Caterpillar's Energy And Transportation segment, where the company's products are subject to increasingly stringent regulatory emissions standards globally.

Sizable R&D Expense Set For Further Growth Amid Ratcheting Emissions Standards

Caterpillar - Research And Development Expenses, USDmn



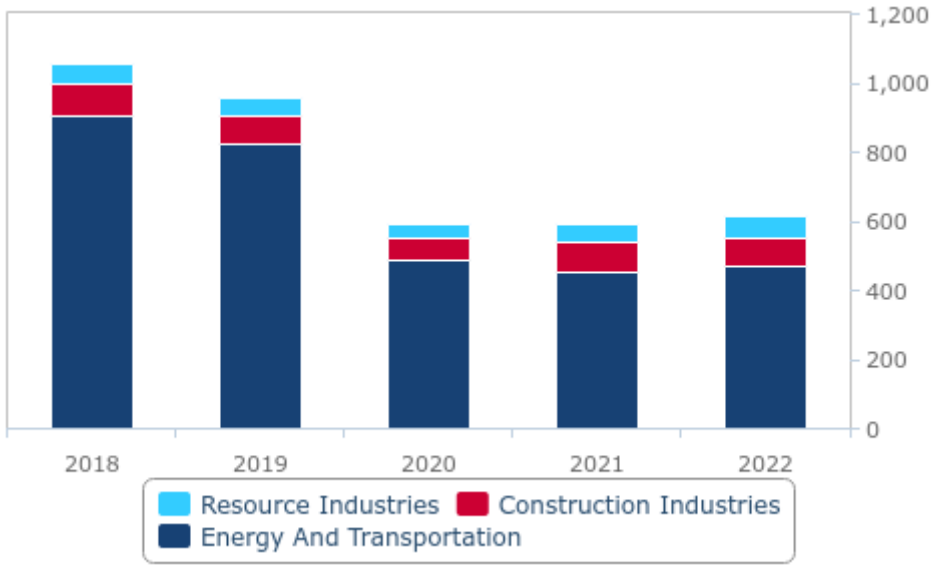
Note: US GAAP results. Source: Caterpillar

Caterpillar's stated company strategy comprises 4 overarching areas; enhancing the operational safety and quality of its machinery, adopting nascent technologies where appropriate, developing its service functions to increase customer retention, and ensuring an integrated approach to sustainability-related activities. The latter is of particular importance to Caterpillar's long-term operations given the company's exposure to various emissions-intensive activities; the embodied emissions in construction and mining, the recycling of obsolete machinery, and the aforementioned regulatory emissions standards affecting its Energy and Transportation segment.

Caterpillar notes that, as of 2022, scope 3 emissions account for over 95% of the company's scope 1, 2, and 3 emissions inventory, with the use of sold products being the largest scope 3 category. As such, the company's scope 3 emissions under the use of sold products were 613mn tonnes of CO2e during 2022, down significantly from 1,053mn in 2018. Within this, the Energy And Transportation segment continues to account for the vast majority of scope 3 emissions.

Energy And Transportation The Key Contributor To Scope 3 Emissions

Caterpillar - Scope 3 Emissions, Use Of Sold Products (mn tonnes of CO2e)

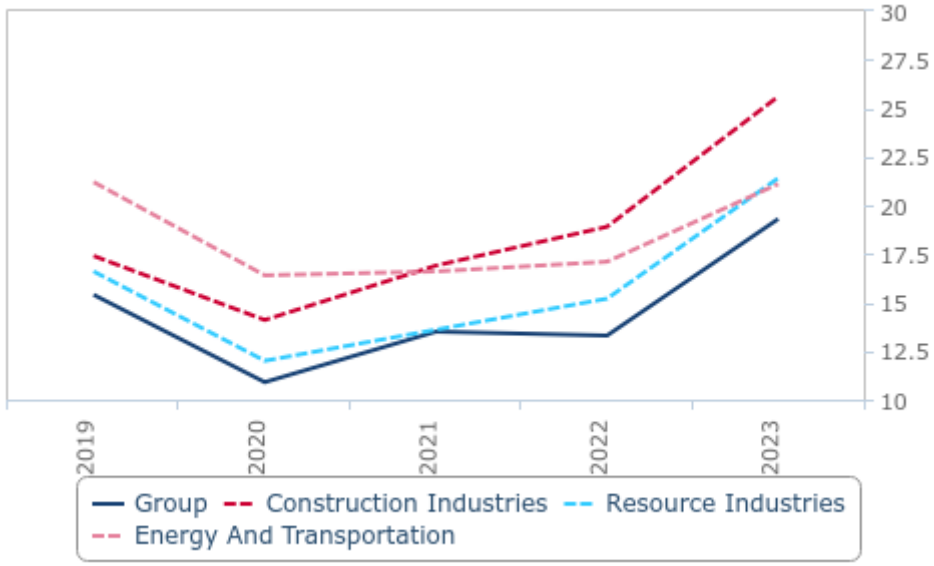


Source: Caterpillar

Both at the group level and across its respective capital goods segments, Caterpillar exhibits robust operating margins. At the group level, the company achieved an operating margin of 19.3% in 2023, having seen steady margin expansion over the past decade. Across Construction Industries, Resource Industries, and Energy And Transportation, the company exhibited respective operating margins in 2023 of 25.6%, 21.4%, and 21.1%. In each segment, its operating margin is at least in line with or above its operating margin in 2019.

Solid Margin Expansion Across Machinery Segments

Caterpillar - Operating Margin By Segment, %



Note: US GAAP results. Figures according to segment reporting. Source: Caterpillar

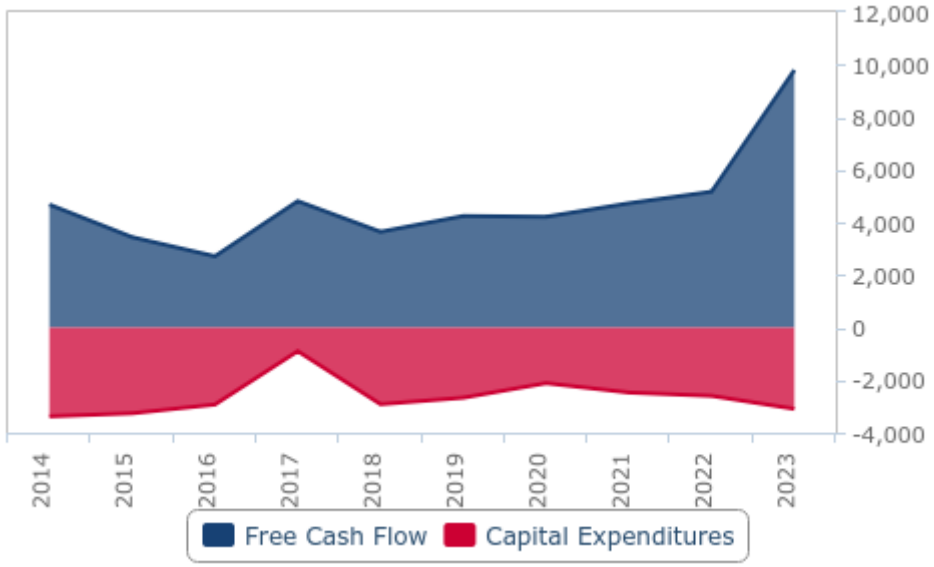
While its effort to drive the investment cycle characterises Caterpillar's means of expansion, the company has also historically undertaken occasional M&A transactions to deepen its activities. Notable recent acquisitions include SPM Oil & Gas, formerly Weir Oil & Gas, which provides products and services to the oil and gas industry. SPM Oil & Gas was absorbed into Caterpillar's Energy And Transportation segment in February 2021. Elsewhere, Caterpillar acquired Tangent Energy Solutions in May 2022, a US energy-as-a-service provider, which was similarly absorbed into the company's Energy And Transportation segment.

In contrast, Caterpillar divested its longwall mining business to Germany-based Hauhinco, completing this transaction in February 2023.

Ultimately, Caterpillar continues to exhibit steady growth in its free cash flow that would leave it capable of conducting M&A activity where it deems it appropriate. Given Caterpillar's scale and global presence, this would likely entail bolt-on acquisitions akin to the acquisition of Tangent Energy Solutions. 2023 saw Caterpillar's free cash flow reach a record high of USD9,793mn, at a time when the company also enacted USD3,092mn of capital expenditures.

Free Cash Flow At A Record High

Caterpillar - Free Cash Flow, Capital Expenditures, USDmn

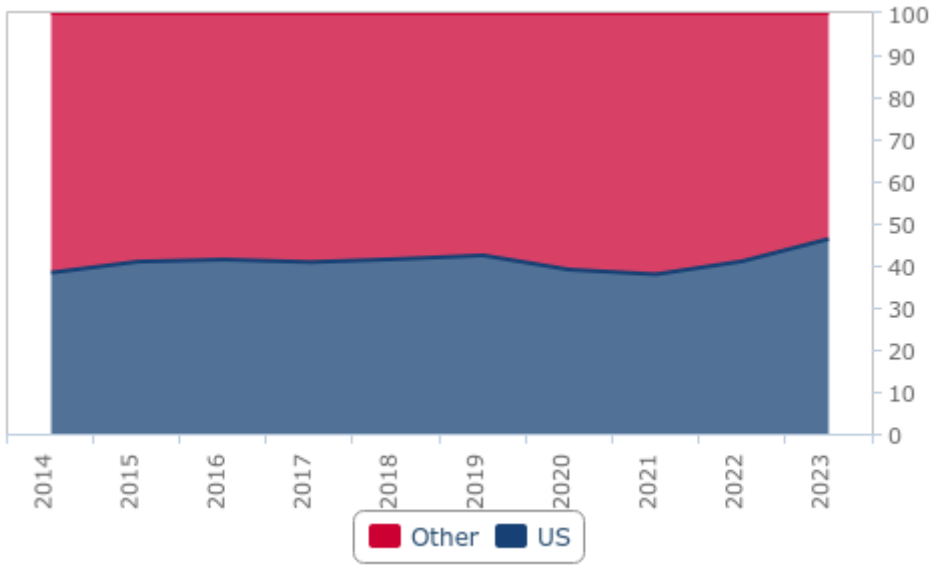


Note: US GAAP results. Source: Caterpillar

Despite the company remaining competitive globally, the US is expected to remain the core market for Caterpillar's revenue generation. As of 2023, the US accounted for 46.3% of Caterpillar's group revenue; an increase from 38.3% in 2014.

US' Role For Revenue Generation Continues To Dominate

Caterpillar - % Of Group Revenue By Market



Note: US GAAP results. Figures according to segment reporting. Source: Caterpillar

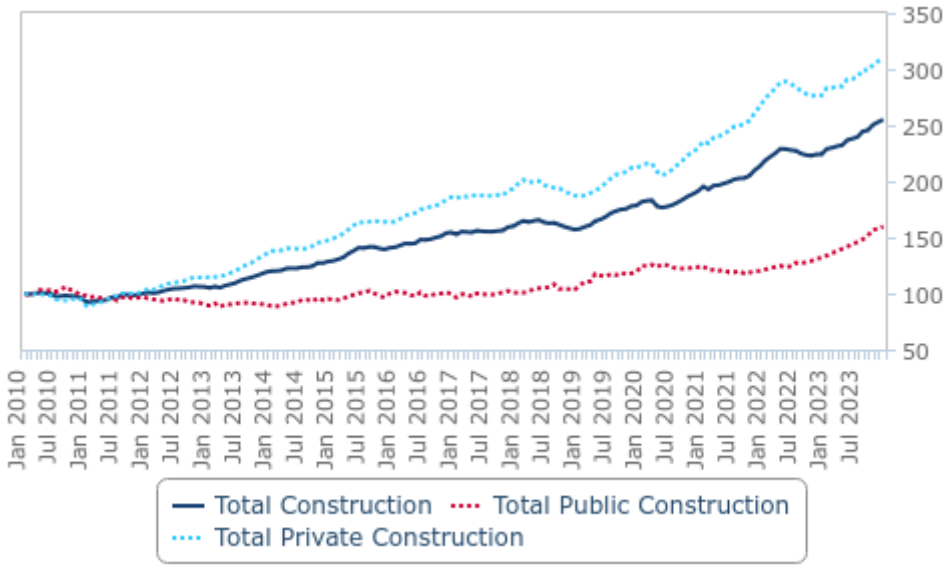
Outlook

The outlook for Caterpillar is underpinned by its ability to facilitate several secular trends; the low-carbon energy transition, the encouragement of nearshoring among developed markets, data centre construction, and growing demand for autonomous equipment in heavy industry:

- **Low-Carbon Energy Transition:** The development of renewable energy assets, transport infrastructure to facilitate low-emission travel, and energy-efficient building stock will provide broad, global demand for Caterpillar's machinery across each segment. This is particularly so in the US, the company's domestic market, given both the extent of its infrastructure investment needs and the continued willingness of policymakers to support such investment.
- **Nearshoring:** Efforts among both US and European policymakers to re-orient company supply chains towards their domestic and neighbouring markets are already shifting manufacturing construction activity, to the benefit of construction industry participants such as Caterpillar to facilitate new construction work.
- **Data Centres:** Demand for the construction of data centres globally to facilitate cloud computing, data processing, and AI deployment, is expected to grow rapidly over the coming decades. Caterpillar's Construction Industries segment, in particular, is well-placed to provide the machinery necessary to realise this significant build-out in industrial construction.
- **Autonomous Equipment:** The closed, repetitive environment entailed in some heavy industry settings is likely to sustain demand among end-users for autonomous on-site equipment. Already, Caterpillar supplies autonomous ready vehicles via its Resource Industries segment for use in mining and heavy construction.

Further Upside For US Public Construction Spending Amid Legislative Push

US - Construction Spending (Jan 2010 = 100)

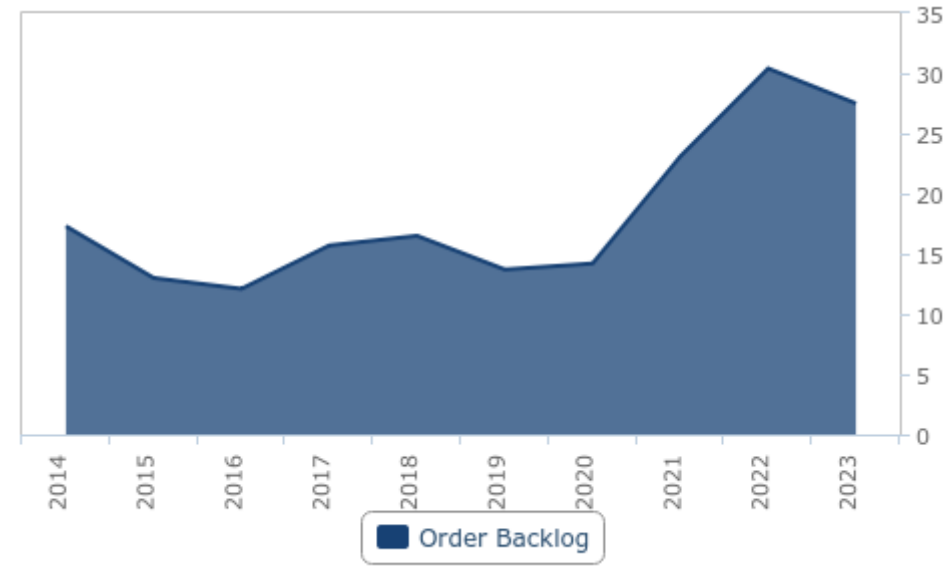


Source: US Census Bureau, BMI

As of end-2023, Caterpillar exhibits an order backlog of USD27.5bn, down slightly from a record high of USD30.4bn seen at end-2022. Management notes that, of its current order backlog, around USD5.8bn of its order backlog is expected to be filled during 2024.

Slight Slip In Order Backlog Since 2022

Caterpillar - Order Backlog, USDbn

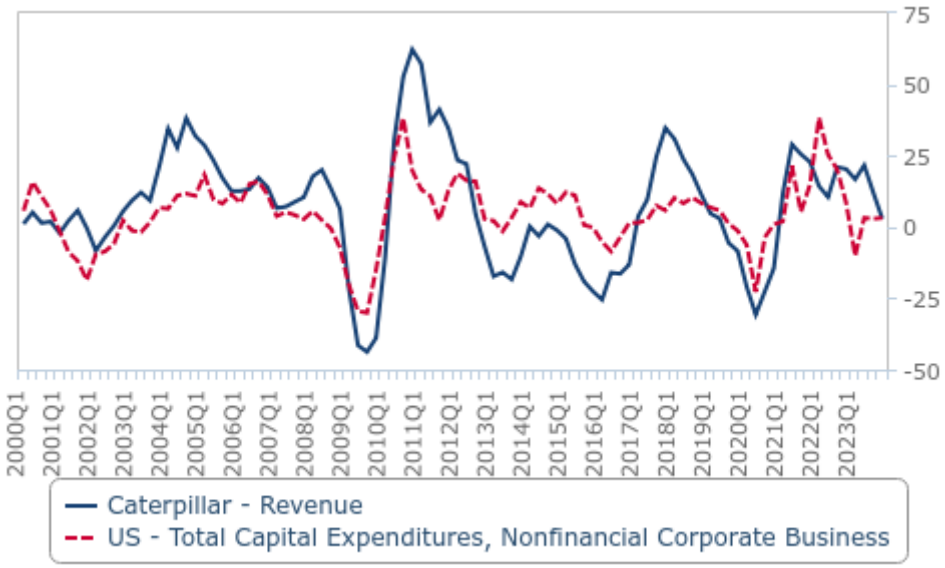


Source: Caterpillar

Though Caterpillar's output is relatively exposed to short-term fluctuations in financing availability, industry sentiment, and commodity price fluctuations, its diversification across end-users in longer cycle industries, such as infrastructure, provides a degree of stability. For example, purchasers of Caterpillar's machinery typically finance this capital expenditure using a blend of debt and equity financing equivalent to the purchaser's overall capital structure. A general lack of financing availability for a smaller-scale construction company, for example, would limit its ability to secure funding sources to enact a purchase of Caterpillar's machinery. **As such, Caterpillar's revenue generation is fundamentally linked to capital expenditures, especially in the US.**

US Capex A Fundamental Revenue Driver For Caterpillar

US - Total Capital Expenditures, Nonfinancial Corporate Business And Caterpillar Revenue, % y-o-y



Note: Total capital expenditure figures shown at seasonally adjusted annual rate. Source: Caterpillar, Board of Governors of the Federal Reserve System

Caterpillar's sensitivity to capital expenditures provides additional opportunities for the company to drive the investment cycle, particularly if the relative cost of labour is high. As we have previously highlighted, a lack of labour availability following the Covid-19 pandemic is expected to translate into longer-term constraints on labour availability in construction across developed markets. As this persists, we expect industry participants to consider greater investment in labour-saving technologies where financially feasible. Companies are likely to, ultimately, conclude that the cost of sanctioning fixed investment is ultimately lower than the costs associated with a constrained workforce. This would provide Caterpillar with sustained opportunity to demonstrate that, at a time of elevated labour costs, its machinery can replace labour and meaningfully lower industry participants' operating costs while also offering scope for productivity gains.

Group Income Statement

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Revenue From Machinery, Energy And Transportation	52,142	44,147	35,773	42,676	51,822	50,755	39,022	48,188	56,574	63,869
Revenue From Financial Products	3,042	2,864	2,764	2,786	2,900	3,045	2,726	2,783	2,853	3,191
Revenue	55,184	47,011	38,537	45,462	54,722	53,800	41,748	50,971	59,427	67,060
Costs Of Goods Sold	-40,718	-33,546	-27,782	-31,087	-36,815	-36,508	-29,039	-35,513	-41,350	-42,767
Gross Income	13,842	12,878	9,897	13,556	17,003	16,416	12,077	15,003	17,512	23,263
Selling, General And Administrative Expenses	-6,504	-4,951	-4,383	-4,999	-5,478	-5,162	-4,642	-5,365	-5,651	-6,371
Research And Development Expenses	-2,380	-2,119	-1,853	-1,842	-1,850	-1,693	-1,415	-1,686	-1,814	-2,108
Operating Income	3,314	3,785	1,162	4,460	8,293	8,290	4,553	6,878	7,904	12,966
Net Income	2,452	2,512	-67	754	6,147	6,093	2,998	6,489	6,705	10,335
Gross Margin, %	*25.1%*	*27.4%*	*25.7%*	*29.8%*	*31.1%*	*30.5%*	*28.9%*	*29.4%*	*29.5%*	*34.7%*
Operating Margin, %	*6.0%*	*8.1%*	*3.0%*	*9.8%*	*15.2%*	*15.4%*	*10.9%*	*13.5%*	*13.3%*	*19.3%*
Net Margin, %	*4.4%*	*5.3%*	*-0.2%*	*1.7%*	*11.2%*	*11.3%*	*7.2%*	*12.7%*	*11.3%*	*15.4%*

Note: US GAAP results. Values in USDmn unless otherwise stated. Source: Caterpillar

Group Balance Sheet

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trade Receivables	7,609	6,677	5,919	7,376	8,714	8,484	7,167	8,227	8,856	9,310
Finance Receivables	9,027	8,991	8,522	8,757	8,650	9,336	9,463	8,898	9,013	9,510
Finished Goods	6,504	5,122	4,576	4,761	5,241	5,598	6,054	6,907	8,138	8,308
Raw Materials	2,986	2,467	2,102	2,802	3,382	4,263	4,021	5,528	6,370	6,492
Work In Process	2,455	1,857	1,719	2,254	2,674	1,147	1,052	1,318	1,452	1,411
Other Inventory	260	254	217	201	232	258	275	285	310	354
Total Current Assets	38,867	33,508	31,967	36,244	38,603	39,193	39,464	43,455	43,785	46,949
Net Property Plant And Equipment	16,577	16,090	15,322	14,155	13,574	13,528	13,004	12,715	12,028	12,680
Long-Term Receivables	16,008	14,821	14,585	14,532	14,447	13,844	13,407	13,911	13,278	13,902
Intangible Assets	3,076	2,821	2,349	2,111	1,897	1,565	1,308	1,042	758	564
Goodwill	6,694	6,615	6,020	6,200	6,217	6,196	6,394	6,324	5,288	5,308
Total Non-Current Assets	45,814	44,834	42,737	40,718	39,906	39,260	38,860	39,338	38,158	40,527
Total Assets	84,681	78,342	74,704	76,962	78,509	78,453	78,324	82,793	81,943	87,476
Total Current Liabilities	27,877	26,242	26,132	26,931	28,218	26,621	25,717	29,847	31,531	34,728
Total Non-Current Liabilities	39,978	37,215	35,359	36,265	36,211	37,203	37,229	36,430	34,521	33,245
Total Equity	16,826	14,885	13,213	13,766	14,080	14,629	15,378	16,516	15,891	19,503
Total Liabilities And Equity	84,681	78,342	74,704	76,962	78,509	78,453	78,324	82,793	81,943	87,476
Inventory To Sales, %	*22.1*	*20.6*	*22.4*	*22.0*	*21.1*	*20.9*	*27.3*	*27.5*	*27.4*	*24.7*
Inventory To Total Assets, %	*14.4*	*12.4*	*11.5*	*13.0*	*14.7*	*14.4*	*14.6*	*17.0*	*19.9*	*18.9*

Note: US GAAP results. Values in USDmn unless otherwise stated. Source: Caterpillar

Group Cash Flow Statement

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cash Flow From Operating Activities	8,057	6,699	5,639	5,706	6,558	6,912	6,327	7,198	7,766	12,885
Capital Expenditures	-3,379	-3,261	-2,928	-898	-2,916	-2,669	-2,115	-2,472	-2,599	-3,092
Cash Flow From Investing Activities	-3,627	-3,517	-1,780	-966	-3,212	-1,928	-1,485	-3,084	-2,541	-5,871
Cash Flow From Financing Activities	-3,170	-4,063	-3,171	-3,619	-3,776	-4,582	-3,768	-4,217	-7,475	-7,042
Cash Flow For The Period	1,260	-881	688	1,121	-430	402	1,074	-103	-2,250	-28
Free Cash Flow	*4,678*	*3,438*	*2,711*	*4,808*	*3,642*	*4,243*	*4,212*	*4,726*	*5,167*	*9,793*

Note: US GAAP results. Values in USDmn. Source: Caterpillar

Key Financials By Segment

	2019	2020	2021	2022	2023
Revenue					
Construction Industries	22,556	16,876	21,994	25,127	27,294
Resource Industries	9,813	7,446	9,502	12,013	13,244
Energy And Transportation	18,485	14,664	16,670	19,337	23,355
Operating Income					
Construction Industries	3,931	2,373	3,706	4,743	6,975
Resource Industries	1,629	896	1,291	1,827	2,834
Energy And Transportation	3,910	2,405	2,768	3,309	4,936
Operating Margin, %					
Construction Industries	*17.4%*	*14.1%*	*16.9%*	*18.9%*	*25.6%*
Resource Industries	*16.6%*	*12.0%*	*13.6%*	*15.2%*	*21.4%*
Energy And Transportation	*21.2%*	*16.4%*	*16.6%*	*17.1%*	*21.1%*

Note: US GAAP results. Figures according to segment reporting. Values in USDmn unless otherwise stated. Source: Caterpillar

Construction Key Players: CRH

Overview

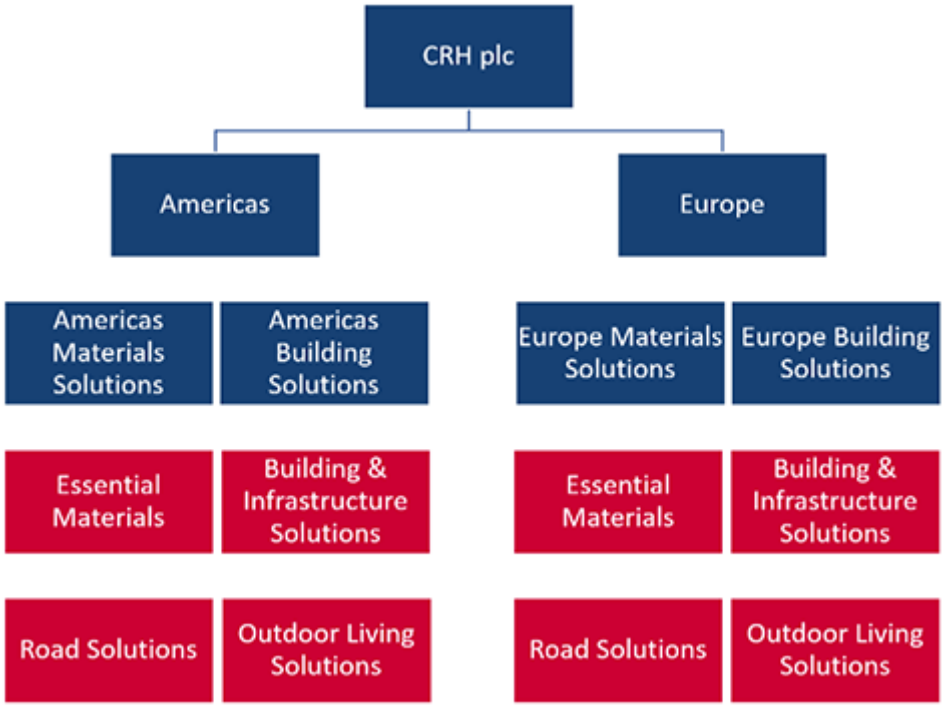
CRH is an Ireland-based construction and building materials company and is among the largest suppliers of building materials globally. Founded in 1970 via the merging of Cement Limited and Roadstone Limited, the company employs around 79,000 persons across 29 markets.

CRH operates across 4 segments, split both by geographic region and by the nature of the company's operations:

- **Americas Materials Solutions:** The provision of building materials, including aggregates, cement, ready mixed concrete and asphalt, for the construction and maintenance of infrastructure, residential and non-residential buildings. This segment also undertakes paving and construction services.
- **Americas Building Solutions:** The provision of building solutions for civil infrastructure and outdoor living, including water, energy, transport and telecommunications infrastructure.
- **Europe Materials Solutions:** The provision of building materials, including aggregates, cement, readymixed concrete and asphalt, for the construction and maintenance of infrastructure, residential and non-residential buildings. CRH's activities in Australia, Brazil and the Philippines are also accounted for within this segment.
- **Europe Building Solutions:** The provision of building solutions for civil infrastructure, residential and non-residential buildings and outdoor living.

Prior to January 1 2023, CRH operated across 3 segments; Americas Materials, Europe Materials and Building Products. Similarly, effective January 1 2023, the company transitioned from International Financial Reporting Standards (IFRS) to US Generally Accepted Accounting Principles (US GAAP).

CRH - Company Structure



Source: CRH

CRH's supply of materials and building products covers 5 overarching areas:

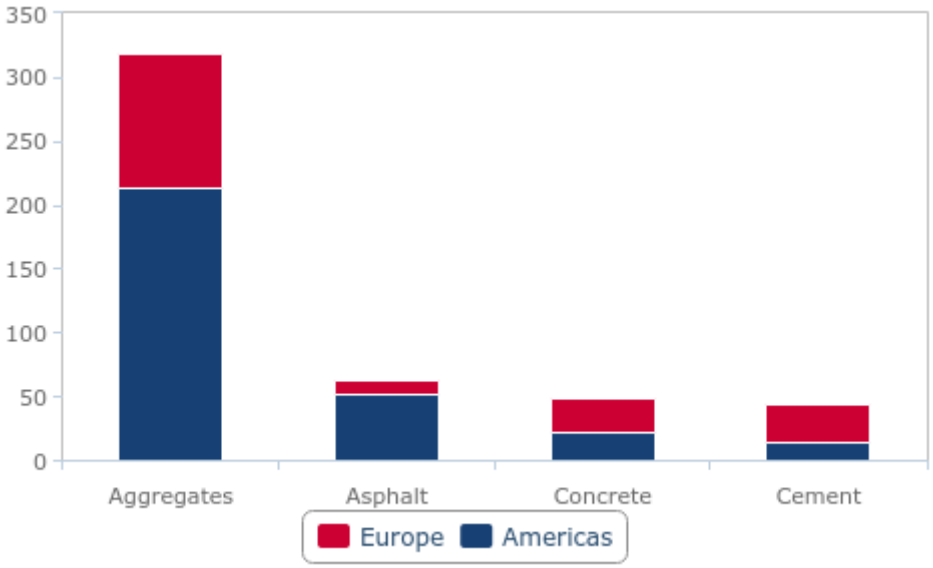
- Aggregates
- Cement
- Concrete
- Asphalt
- Building Products

CRH's materials activities are undertaken across 1,235 locations, covering 226,153 hectares of owned land and 97,046 of leased land. The bulk of CRH's locations involve aggregate extraction; 1,161 properties covering 189,361 of owned land and 91,283 of leased land.

In addition to these materials and products, CRH is in the process of exiting its lime operations in Europe, having announced an agreement to divest these operations to SigmaRoc in November 2023. The full divestment of CRH's lime operations is expected to complete by the end of 2024.

Aggregates The Key Composite Material For CRH

CRH - Annualised Materials Sales Volume, mn tons (2023)

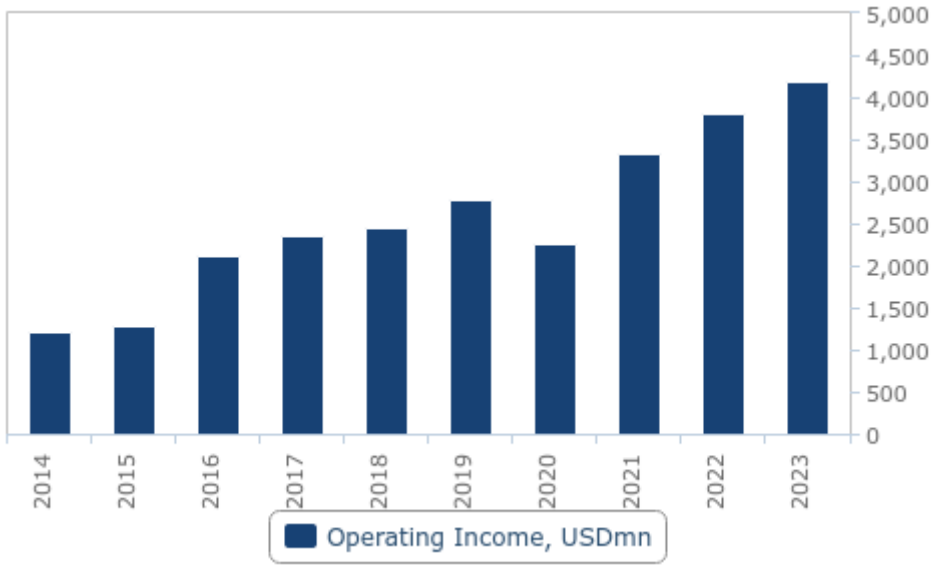


Source: CRH

CRH's latest full-year results, for the year ended 31 December 2023, show that the company reported operating income of USD4,186mn, up 9.9% from USD3,809mn in 2022.

Solid Expansion In Operating Income Over Previous Decade

CRH - Operating Income, USDmn

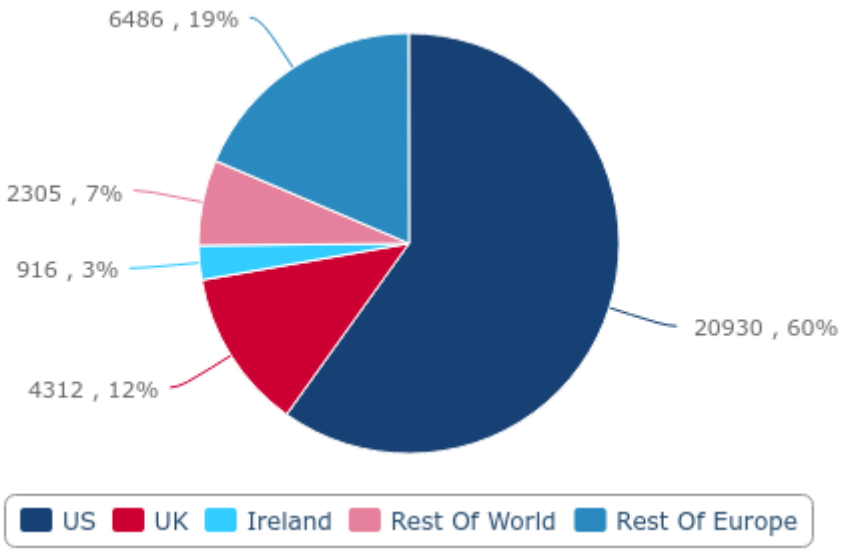


Note: IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Source: CRH

Though CRH's operations began in Ireland and diversified across other Western Europe markets shortly after, the company has also been present in the United States for the majority of its existence; CRH entered North America via the acquisition of a US-based concrete products company in 1978. Reflective of CRH's global expansion since its founding, Ireland hosted just 2.6% of CRH's revenue in 2023.

Longstanding Presence In US Construction

CRH - Revenue By Market, USDmn & % Of Total (2023)

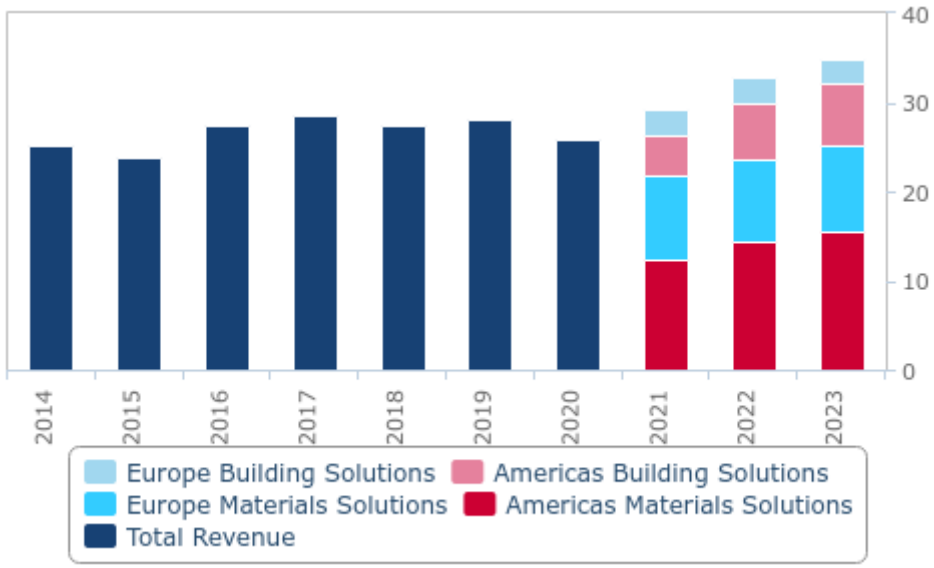


Note: US GAAP results. Source: CRH

In terms of revenue, Americas Materials Solutions is the dominant revenue generator among its current 3 segment structure. In 2023 this segment reported USD15.5bn of revenue, ahead of Europe Materials Solutions which reported USD9.7bn during the period. Noting the company's restated segment information for 2021 and 2022, Americas Materials Solutions typically accounts for around 43% of CRH's total revenue generation in a given year.

Materials The Key Revenue Generator

CRH - Revenue By Segment, USDbn



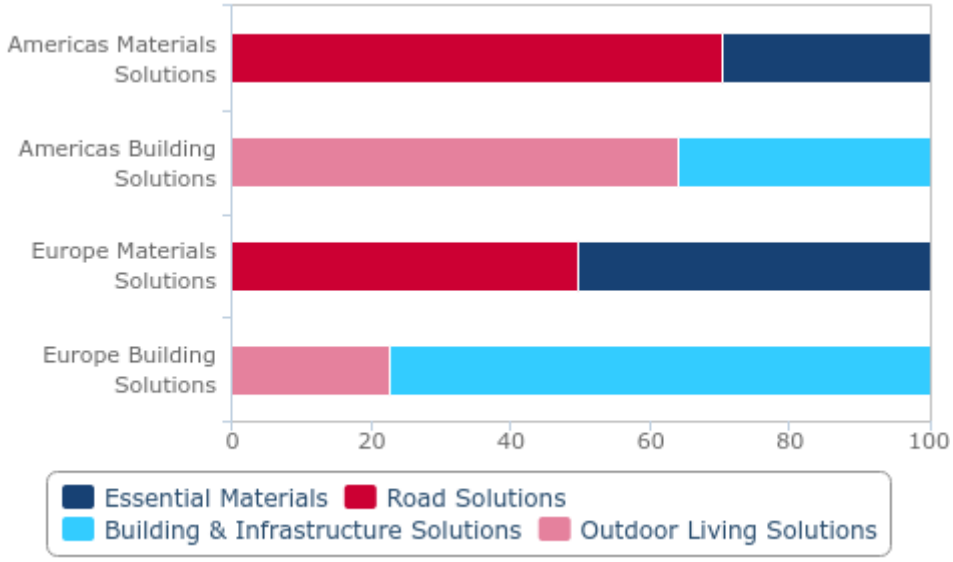
Note: CRH transitioned to its current 4 segment structure as of Jan 1 2023; segment information for 2021 and 2022 are restated. IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Source: CRH

Within each of its 4 segments, CRH further disaggregates its revenue by principal activity and product; the company's two Materials Solutions segments are disaggregated into Essential Materials and Road Solutions, while its two Building Solutions segments are disaggregated into Building & Infrastructure Solutions and Outdoor Living Solutions. This enables assessment of the company's vertical integration, for example between its asphalt production and its road construction activities, or between its provision of drainage systems and hardscape products.

For example, in Americas Materials Solutions, Road Solutions typically generates the majority of the segment's revenue. In 2023, Road Solutions accounted for USD10.9bn of revenue, equivalent to 70.3% of the segment's revenue, reflecting CRH's position as the largest road paver in North America.

High Share Of Revenue For Roads Works Via Americas Materials Segment

CRH - Revenue By Principal Activities And Products, % (2023)



Note: US GAAP results. Source: CRH

Strategy

Though CRH's operations are tilted towards upstream activities in the construction industry, the company's presence across all phases of the construction and infrastructure lifecycle ensures high vertical integration. CRH's stated strategy emphasises the intrinsic value of its assets, such as tangible materials reserves and intangible intellectual property, along with its management's ability to apply these assets and deliver construction and infrastructure assets. The company therefore exhibits a competitive advantage by offering the raw materials, construction products and technical expertise to deliver a variety of large-scale construction activities.

In part due to its scale and exposure to a range of end-users, CRH has achieved a steady expansion of its operating margin over the past decade. In 2023, the company exhibited an operating margin of 12.0%, up from 4.8% in 2014.

Near-Uninterrupted Margin Expansion Over Past Decade

CRH - Operating Margin, %

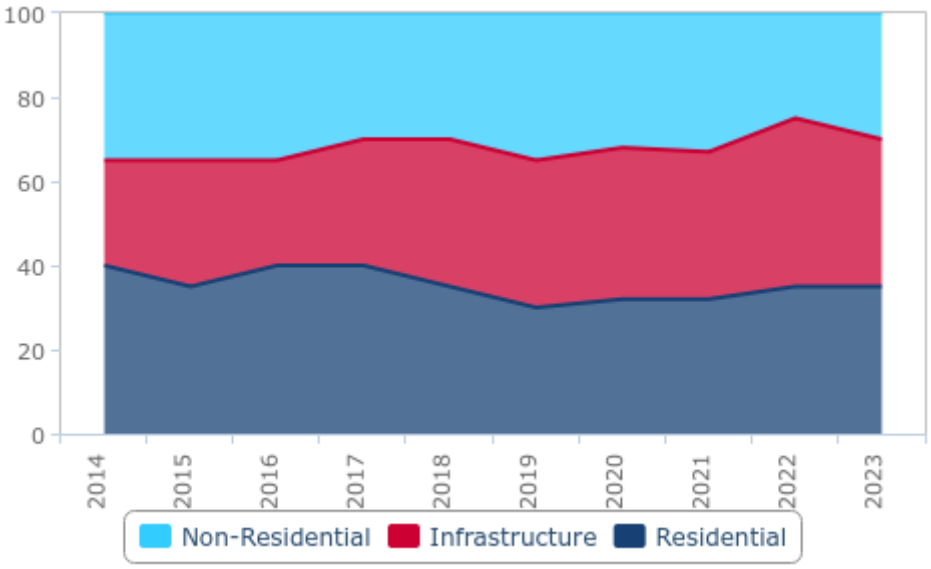
Note: IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Source: CRH

CRH's diversified client base across the respective infrastructure, residential and non-residential sectors also ensures the company's diversification across the economic cycle. Its activities involving roads construction or water utilities, for example, entail a relatively longer cycle than its activities involving residential building construction or hardscapes. This diversification benefit is further compounded by the fact that CRH serves both public and private clients, leaving it relatively insulated from cyclical fluctuations in either private sector business activity or public investment levels.

Over the past decade, CRH has seen little movement in the relative share of its revenue generated by the three key sectors it serves. In 2023, CRH estimate that the infrastructure sector accounted for 35% of its revenue generation, alongside the residential and non-residential sectors accounting for 35% and 30% respectively.

Company Remains Well-Diversified Among Its End-Markets

CRH - Revenue By Sector, %



Note: IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Source: CRH

Undertaking M&A is a core feature of CRH's strategy and is typically undertaken to deepen its presence in its existing markets and for greater vertical integration. Typically, this entails bolt-on acquisitions of small to medium-sized businesses and portfolios of materials assets, however CRH has also previously undertaken M&A to meaningfully alter the size and scope of its activities. In 2015, for example, CRH completed the acquisition of Tarmac and other materials assets from Lafarge and Holcim Cement, following the latter two's merger. As a direct result of the transaction, CRH doubled its cement production volumes and became the third-largest building materials company globally.

CRH - Key Brands & Subsidiaries

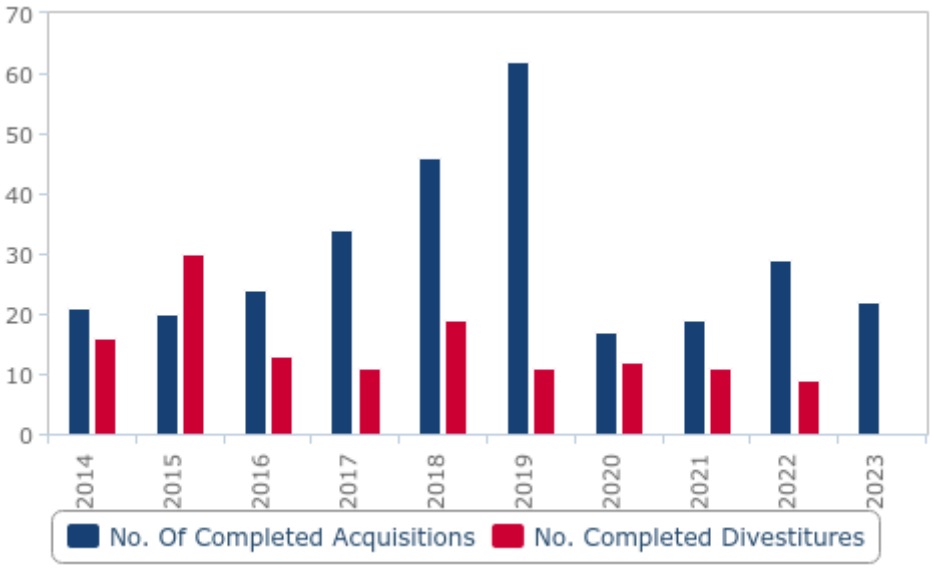
Essential Materials	Road Solutions	Building & Infrastructure Solutions	Outdoor Living Solutions
Adbri	Masfalt	Betonelment	Oldcastle APG
Ash Grove	Michigan Paving & Materials	Cubis	Belgard
Dufferin Aggregates	Midsouth Paving	Leviat	Barrette Outdoor Living
Irish Cement	Northstone	Martin Enterprises	Calstone
Mulzer Crushed Stone	Staker Parson	National Pipe & Plastics	Techniseal
Preferred Materials	Texas Materials	Normandy Products Company	Pebble Technology
Tarmac	W-L Construction & Paving	Oldcastle Infrastructure	EP Henry
The Shelly Company			Sakrete
Tilcon			

Source: CRH

CRH's recent M&A has included its acquisition of a majority stake in Australia-based materials producer Adbri, effective July 1 2024, to complement CRH's growing activities in the market. Elsewhere, CRH acquired water product and services company Hydro International via its Oldcastle Infrastructure subsidiary in 2023, and in 2022 CRH acquired building products company Barrette Outdoor Living to enhance CRH's Americas Building Solutions segment.

Regular Bolt-On Acquisitions Across CRH

CRH - No. Of Completed Acquisitions And Divestitures



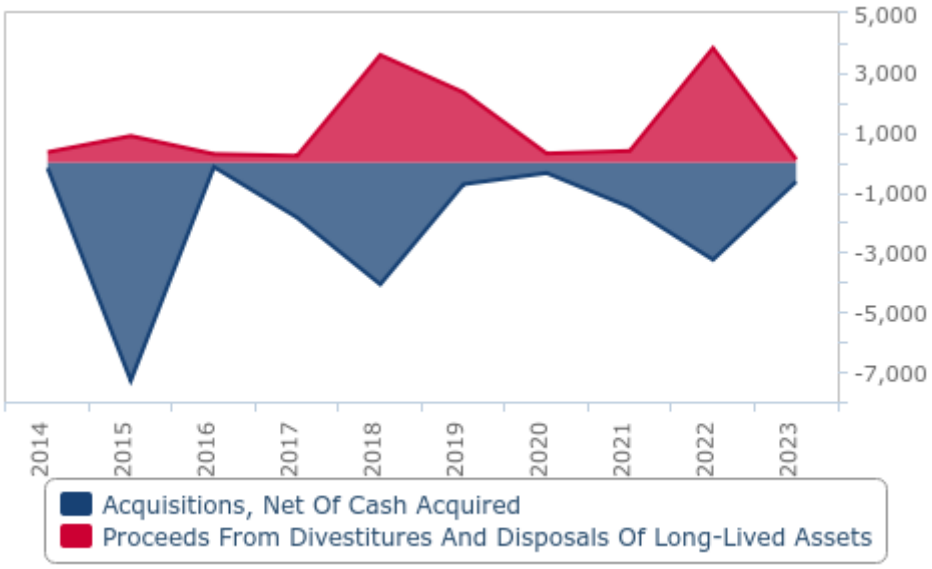
Source: CRH

The company also highlights its willingness to undertake divestiture activity among its overall portfolio of assets, whether amid its capital allocation strategy or in anticipation of shifting industry trends. Recent such activity includes CRH's ongoing divestment of its lime operations in Europe to SigmaRoc for a total consideration of USD1.1bn, its divestment in 2022 of its building envelope activities to KPS Capital Partners for a total consideration of USD3.8bn, and its divestment in 2019 of its Europe distribution activities for a total consideration of USD1.6bn.

Overall, 2023 saw CRH complete 22 acquisitions, having completed 294 acquisitions and 132 divestitures between 2014 and 2023.

Inorganic Growth Via M&A Remains Key To CRH's Strategy

CRH - Acquisitions And Proceeds From Divestitures And Disposals, USDmn

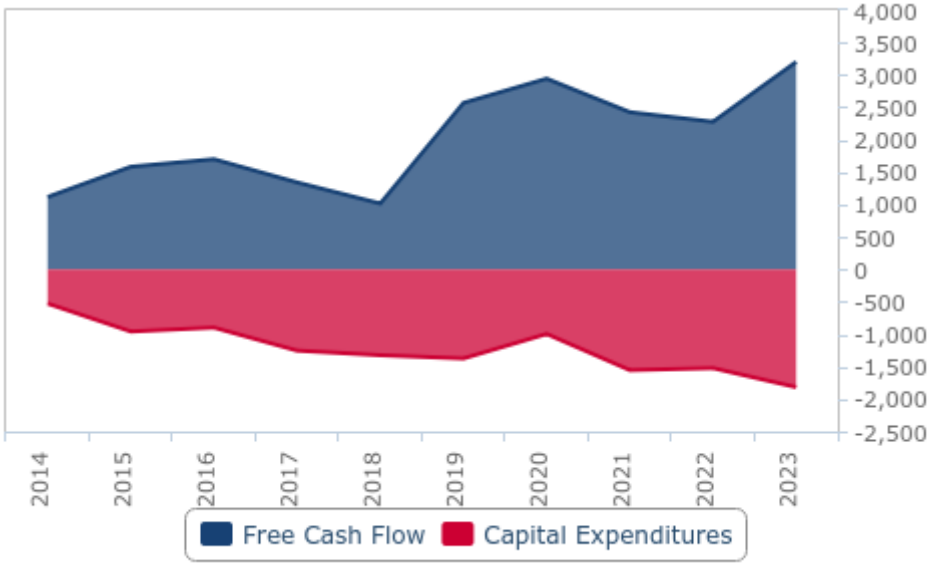


Note: IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Values in USDmn. Source: CRH

As a result, CRH's ability to generate adequate free cash flow is critical for the company to realise its aims to undertake appropriate M&A and to finance capital expenditures. In 2023, CRH generated USD3.2bn of free cash flow, up 41% from USD2.3bn during 2022. Capital expenditures in 2023, meanwhile, were USD1.8bn from USD1.5bn in 2022.

Solid Free Cash Flow Generation Ensures CRH's Ability To Enact Significant Capex, M&A Activity

CRH - Free Cash Flow, Capital Expenditures, USDmn

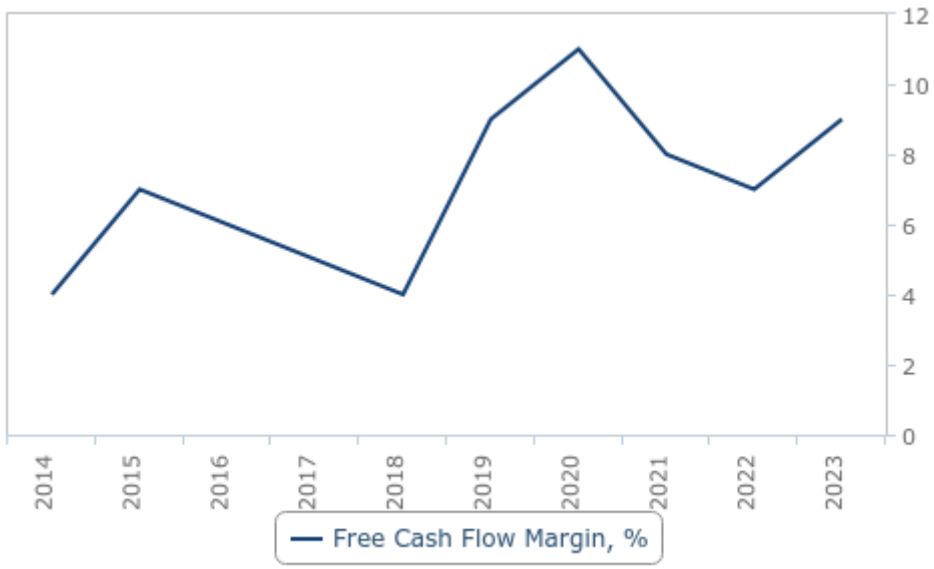


Note: IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Values in USDmn. Source: CRH

Exemplifying CRH's efficiency in generating free cash flow to realise its strategic aims, we highlight the steady overall rise in the company's free cash flow margin over the past decade. In 2023, CRH exhibited a free cash flow margin of 9%, following a steady upward rise from 4% in 2014.

CRH Achieved Steady Expansion In Its Free Cash Flow Margin Over Past Decade

CRH - Free Cash Flow Margin, %



Source: CRH

Sustainability

The high level of emissions entailed in construction materials, and in the construction industry generally, will ensure that sustainability-related efforts remain central to CRH's overall strategy in the long-term. The success of the low carbon energy transition is, ultimately, contingent on the timely decarbonisation of construction and infrastructure. The UN Environmental Programme estimates that, in 2022, emissions in the buildings and construction sector accounted for 37% of global greenhouse gas (GHG) emissions, of which 7% were attributed to construction materials.

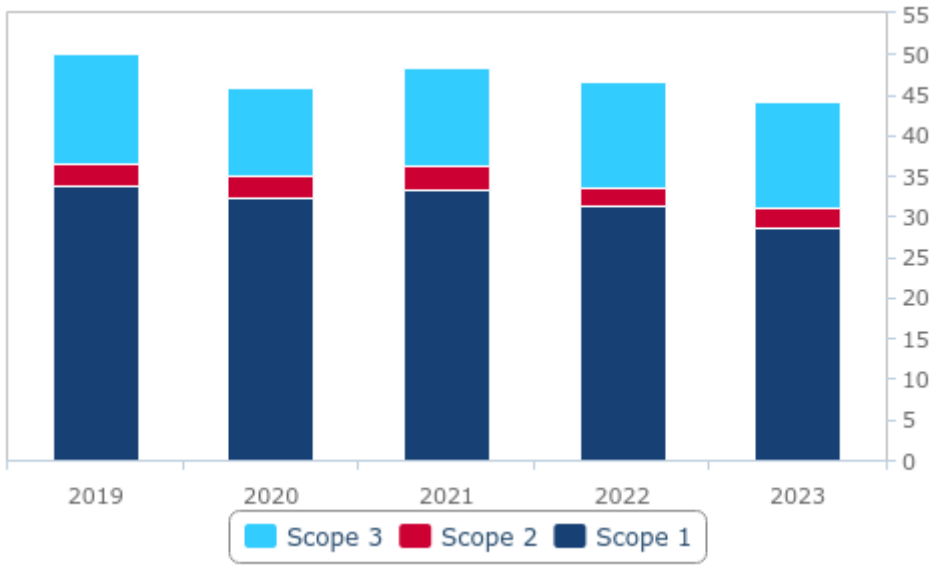
CRH maintains several overarching decarbonisation targets regarding its medium and long-term emissions reduction:

- 30% reduction in absolute Scope 1, 2 and 3 CO_2 emissions by 2030, relative to 2021 levels
- 33.5% reduction in Scope 1 and 2 GHG emissions per tonne of cementitious product by 2030, relative to 2021 levels
- 42% reduction in absolute Scope 1 and 2 GHG emissions from other activities by 2030, relative to 2021 levels
- 23.5% reduction in Scope 3 GHG emissions from purchased clinker and cement per tonne by 2030, relative to 2021 levels
- Achieve company-wide net-zero GHG emissions by 2050

CRH reported combined Scope 1 and 2 emissions of 31.0mn tonnes of CO_2 in 2023, alongside Scope 3 emissions of 13.1mn tonnes of CO_2, totalling 44.1mn tonnes of CO_2 during the year. To realise the company's 2030 emissions reduction target, its total emissions would need to reduce by a further 10.3mn tonnes of CO_2 to reach 33.8mn tonnes.

Sizable Emissions Reduction Ahead To Meet Medium-Term Targets

CRH - Scope 1, 2 & 3 Emissions, Tonnes CO2e



Note: Scope 2 emissions according to market-based method. Source: CRH

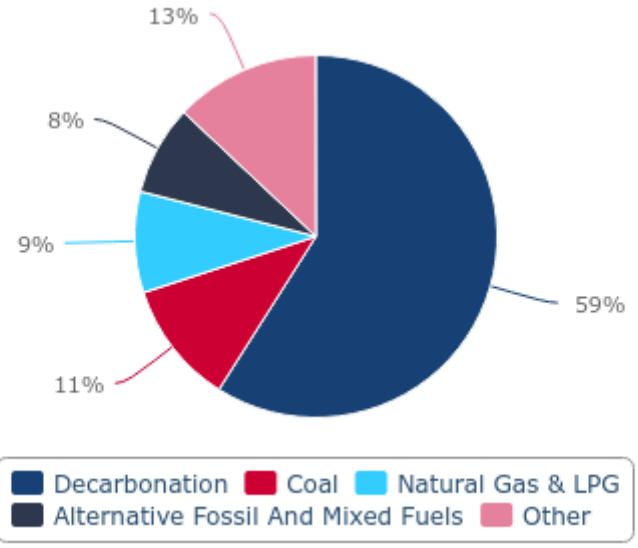
CRH's Scope 1 emissions are primarily process emissions entailed in the decarbonation of minerals, along with emissions from fuel combustion. In 2023, decarbonation accounted for 59% of CRH's Scope 1 emissions, when segmented by source, equivalent to around 17mn tonnes of CO_2. These emissions primarily arise during the production of clinker, the principal ingredient of cement, whereby the heating of raw materials to produce clinker also produces CO_2 emissions. The level of clinker content in cement is a key determinant of concrete's embodied carbon; substituting clinker can provide a direct means to reduce the embodied carbon in concrete.

As a result, cement accounted for 80% of CRH's Scope 1 emissions in 2023, when segmented by activity, equivalent to around 23mn tonnes of CO_2.

To this end, CRH is exploring the greater adoption of lower-emission materials to substitute for clinker. These include ground limestone, ground granulated blast-furnace slag (GGBS), fly ash, natural pozzolans, and calcined clay. For example, CRH has launched JURC ECO3; a lower-carbon cement product using calcined clay, KolmosBertta; a lower-carbon cement product using GGBS, and Portland Limestone Cement using ground limestone.

Decarbonation Of Minerals The Largest Source Of Scope 1 Emissions

CRH - Scope 1 Emissions By Source, 2023

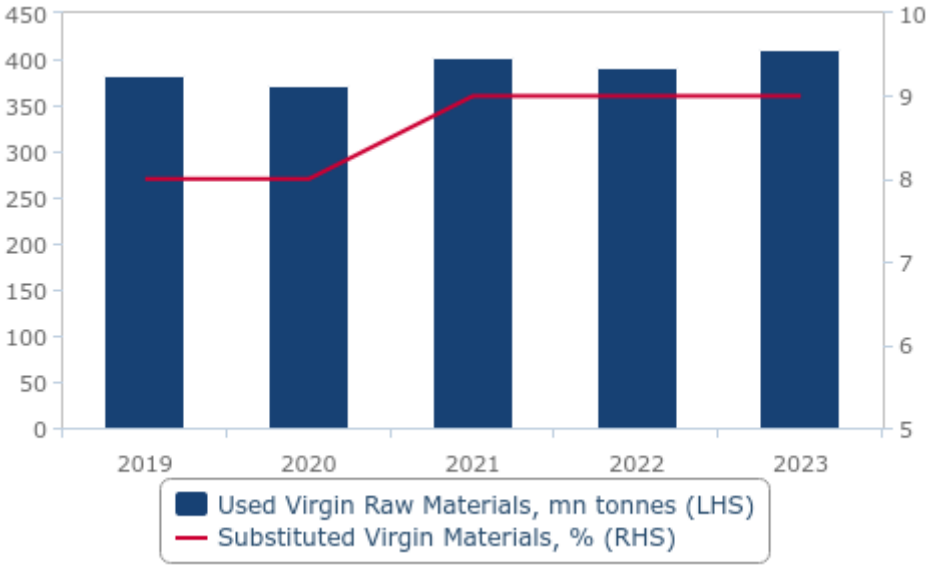


Source: CRH

Naturally, the involvement of virgin materials in CRH's operations remains significant and poses a significant sustainability-related challenge for the company to overcome. In 2023, the company used 411mn tonnes of virgin materials, up from 391mn in 2022. While the company notes that it continues to seek greater substitution of virgin materials, its percentage share of substituted virgin materials has only slightly increased from 8% to 9% over the past five years. In 2023, this equated to 41.7mn tonnes of virgin materials being substituted.

Significant Shift Required To Substitute Virgin Raw Materials

CRH - Used And Substituted Virgin Raw Materials

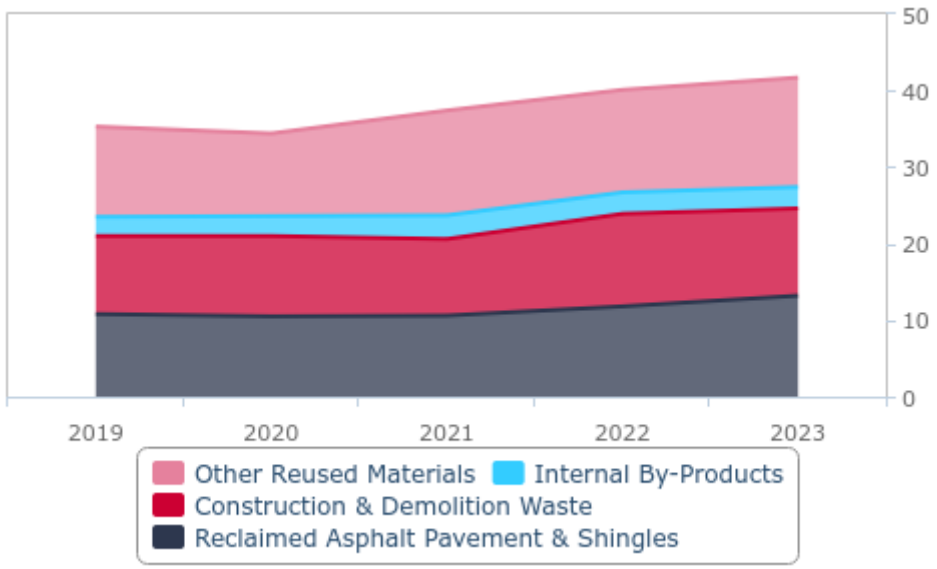


Source: CRH

That said, the company's position as the largest recycler of construction materials in North America enables it to integrate greater recycled materials volumes into its operations and the industry more broadly. Reclaimed asphalt pavement (RAP) and shingles (RAS) are notable recycled materials that CRH is adopting at scale, particularly in the US, by integrating these recycled materials into its roads construction activities. Similarly, CRH processes construction and demolition waste to produce recycled aggregates, while waste products such as fly ash and GGBS can be incorporated into CRH's aforementioned lower-emission cement products.

Asphalt Recycling A Key Sustainability Credential

CRH - By-Products & Wastes Used As Alternative Materials, mn tonnes



Source: CRH

Beyond emissions reduction within CRH's internal operations, the scale of its position within the construction and infrastructure industry offers it the potential to influence the direction and pace of broader decarbonisation efforts. This can entail the provision of lower-emission materials and products, utility infrastructure systems with low operational emissions, and outdoor public infrastructure to promote low-emission travel.

Outlook

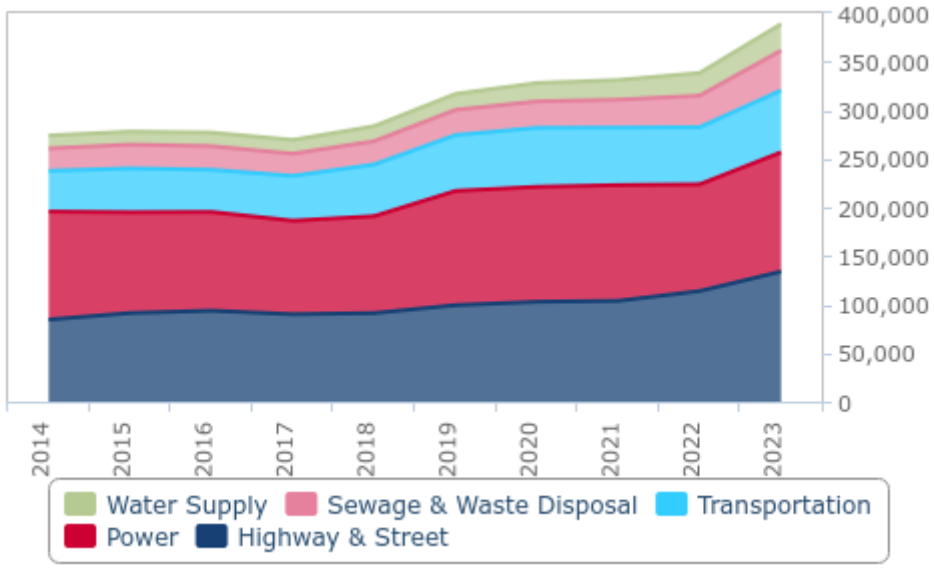
As one of the largest suppliers of construction materials globally, CRH commands a strong position to capitalise on robust construction demand in an industry already characterised by high barriers to entry. CRH's position as the largest building materials company in North America and Europe, in terms of volume, offers the company significant growth potential at a time when both regions are seeing significant public investment disbursed for construction and infrastructure development.

Across the 3 key sectors CRH serves, we highlight the broad investment tailwinds for the company to help facilitate:

- **Infrastructure:** The construction of greenfield infrastructure assets to facilitate the low-carbon energy transition, and the modernisation of existing infrastructure networks such as roads, highways, and water utilities.
- **Residential:** The construction of new and renovation of existing residential buildings, both to meet natural population growth and to mitigate existing shortages in residential building supplies.
- **Non-Residential:** The construction of commercial and industrial buildings to develop relatively nascent industries in CRH's key markets, including data centres, distribution facilities and manufacturing facilities.

Significant, Growing US Infrastructure Build-Out For CRH To Facilitate

US - Total Construction Spending By Infrastructure Sub-Sector, USDmn



Source: US Census Bureau

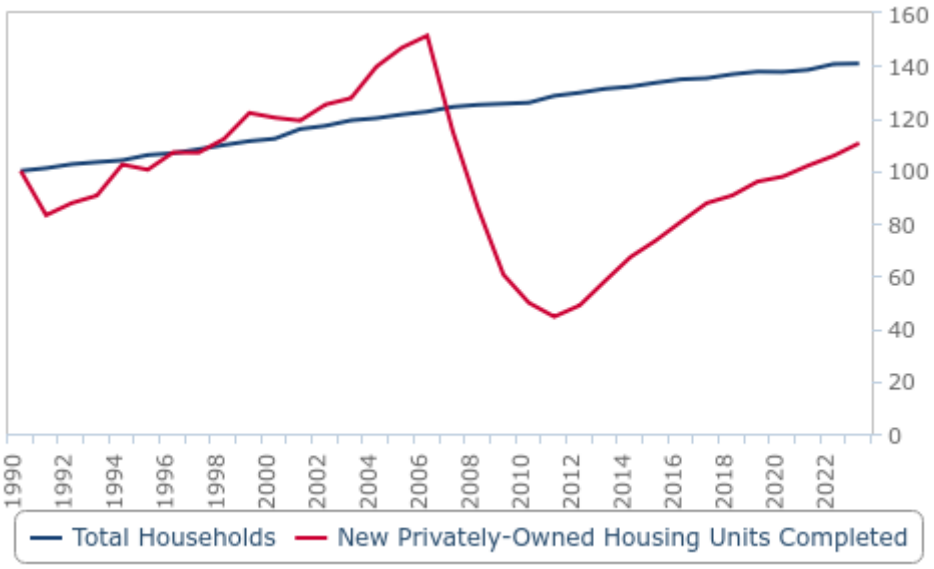
While CRH's activities in Western Europe remain substantial, the US' outsized contribution to the company's income generation will ensure that it remains the core market for CRH. This is reflective of the company's assets located in the US, its familiarity with the market, and crucially the growth prospects offered by the market's construction and infrastructure industry.

Ongoing public investment efforts, particularly the United States' Infrastructure Investment and Jobs Act (IIJA), entail significant funding for roads and bridges infrastructure for which CRH is well-placed to facilitate. Specifically, the IIJA includes around USD110bn for roads and bridges infrastructure. Additionally, the subsequent passage of the US' CHIPS and Science Act in 2022 entails targeted funding for manufacturing facilities and related non-residential buildings; familiar territory for CRH to support.

Following a period of excess supply in the US residential building market prior to the Global Financial Crisis, the market has since moved to a state of excess demand amid a subdued level of residential building construction, below the level of household formation. This has been further exacerbated amid the ongoing period of restrictive monetary policy in the US since early 2022, which has weighed on residential building starts, housing inventory, and housing affordability. Ultimately, the extent of the market's residential building shortage will ensure sustained demand across CRH's key activities, from its provision of materials and products for residential building construction through to its ancillary infrastructure activities.

Extent Of US Housing Shortage A Key Long-Term Growth Tailwind

US - New Privately-Owned Housing Units Completed, Total Households (1990 = 100)



Source: US Census Bureau

Regarding the scale and longevity of CRH's key assets, namely its materials reserves and facilities, the company maintains sufficient capacity to meet the construction and infrastructure industry's long-term demands. Its 1,161 aggregate extraction locations, of which 686 are in the US, achieved an annualised extraction of 211.6mn tons during 2023. Taking the average of the past three years' annualised extraction, this leaves CRH's aggregate extraction locations in the US with an estimated 85 years to depletion.

CRH - Aggregates Quarries/Pits

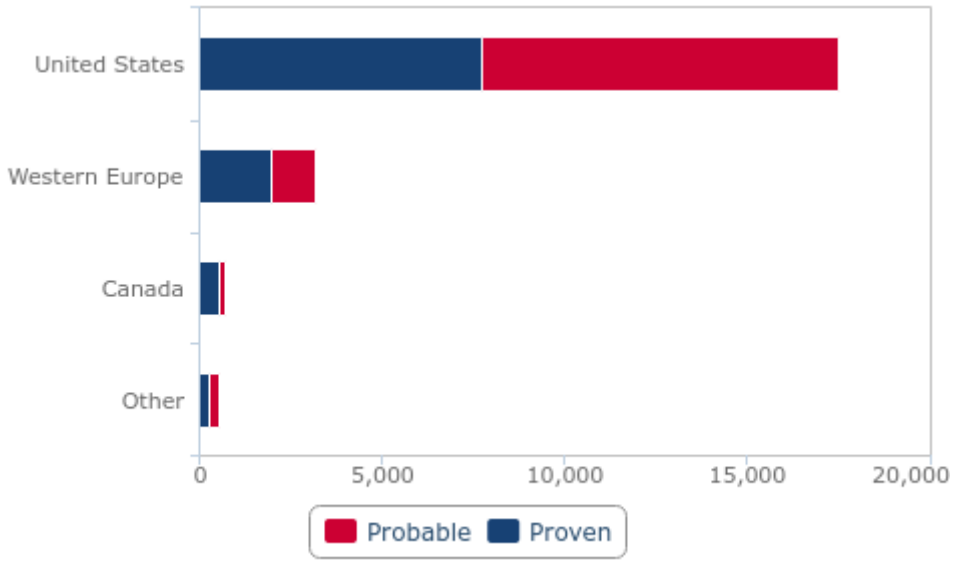
				Annualised Extraction, mn tons			
Market	No. Of Quarries/ Pits	Owned Surface Acreage, Acres	Leased Surface Acreage, Acres	2021	2022	2023	Years To Depletion
United States	686	132,342	63,667	195.3	203.2	211.6	85
Western Europe	398	39,381	24,224	87.8	85.8	79.6	38
Central And Eastern Europe	40	2,768	1,235	11.4	11.3	10.9	43
Canada	36	14,870	1,717	19.2	20.5	20.3	37
Philippines	1	-	440	-	-	-	-

Note: Figures as of 31 December 2023. Source: CRH

CRH's reserves total 25.4mn tonnes, of which 21.8mn tonnes are aggregates. As with the company's materials extraction locations, the majority of its aggregate reserves are located within the US; 17.3mn tonnes of which 7.8mn are proven and 9.5mn are probable.

Bulk Of Aggregates Reserves In US

CRH - Aggregate Reserves By Region, mn short tons



Note: Figures as at 31 December 2023. Source: CRH

Group Income Statement

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Revenue	25,124	23,760	27,437	28,492	27,449	28,132	25,888	29,206	32,723	34,949
Cost Of Revenue	-17,775	-16,331	-18,336	-19,096	-18,391	-18,859	-17,323	-19,379	-21,908	-22,986
Gross Income	7,349	7,429	9,101	9,396	9,058	9,273	8,565	9,827	10,815	11,963
Operating Income	1,218	1,294	2,112	2,367	2,446	2,793	2,263	3,331	3,809	4,186
Net Interest Income	-399	-366	-369	-331	-360	-365	-463	-315	-279	-170
Taxes	-235	-306	-477	-62	-467	-534	-445	-650	-762	-925
Net Income	776	715	1,316	2,047	2,889	1,738	1,009	2,686	3,889	3,072
Gross Margin, %	*29%*	*31%*	*33%*	*33%*	*33%*	*33%*	*33%*	*34%*	*33%*	*34%*
Operating Margin, %	*5%*	*5%*	*8%*	*8%*	*9%*	*10%*	*9%*	*11%*	*12%*	*12%*
Net Margin, %	*3%*	*3%*	*5%*	*7%*	*11%*	*6%*	*4%*	*9%*	*12%*	*9%*

Note: IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Values in USDmn unless otherwise stated. Source: CRH

Group Balance Sheet

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Raw Materials	741	908	866	1,064	1,316	1,283	1,403	1,737	1,988	1,865
Work In Process	97	115	99	111	125	144	144	136	181	186
Finished Goods	1,897	2,098	2,135	2,089	2,065	1,653	1,570	1,738	2,025	2,240
Total Inventories	2,735	3,122	3,100	3,264	3,505	3,080	3,117	3,611	4,194	4,291
Total Current Assets	10,560	10,211	9,908	11,747	10,892	17,258	14,977	14,044	14,833	16,885
Net Property, Plant & Equipment	8,981	14,193	13,384	15,742	18,050	19,574	19,317	19,502	17,768	17,841
Intangible Assets	188	450	385	371	363	382	341	397	1,088	1,041
Goodwill	4,862	8,047	7,801	8,301	9,294	9,093	9,032	9,451	9,199	9,158
Total Non-Current Assets	16,081	24,568	23,414	26,283	29,388	30,354	29,967	30,626	30,486	30,584
Total Assets	26,641	34,779	33,322	38,029	40,280	47,612	44,944	44,670	45,319	47,469
Total Current Liabilities	4,679	6,921	6,221	7,250	6,962	12,867	7,465	7,581	8,041	10,013
Total Non-Current Liabilities	9,622	13,141	11,869	12,773	14,361	15,111	17,131	16,175	14,546	16,168
Total Equity	12,340	14,717	15,233	18,005	18,958	19,634	20,348	20,914	22,732	21,288
Total Liabilities And Equity	26,641	34,779	33,322	38,029	40,280	47,612	44,944	44,670	45,319	47,469

Note: IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Values in USDmn. Source: CRH

Group Cash Flow Statement

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cash Flow From Operating Activities	1,694	2,562	2,340	2,189	2,246	3,881	3,938	3,979	3,800	5,017
Cash Flow From Investing Activities	-359	-8,177	-735	-2,685	-1,772	217	-1,060	-2,513	-917	-2,391
Cash Flow From Financing Activities	-332	4,753	-1,732	343	-226	-2,546	287	-3,107	-2,499	-2,380
Cash Flow For The Period	1,003	-862	-127	-153	248	1,552	3,165	-1,641	384	246
Free Cash Flow	*1,116*	*1,583*	*1,699*	*1,341*	*1,016*	*2,568*	*2,942*	*2,425*	*2,277*	*3,200*
Free Cash Flow Margin, %	*4%*	*7%*	*6%*	*5%*	*4%*	*9%*	*11%*	*8%*	*7%*	*9%*

Note: IFRS results for periods to Dec 31 2022, US GAAP results for periods on and after Jan 1 2023. Values in USDmn. Source: CRH

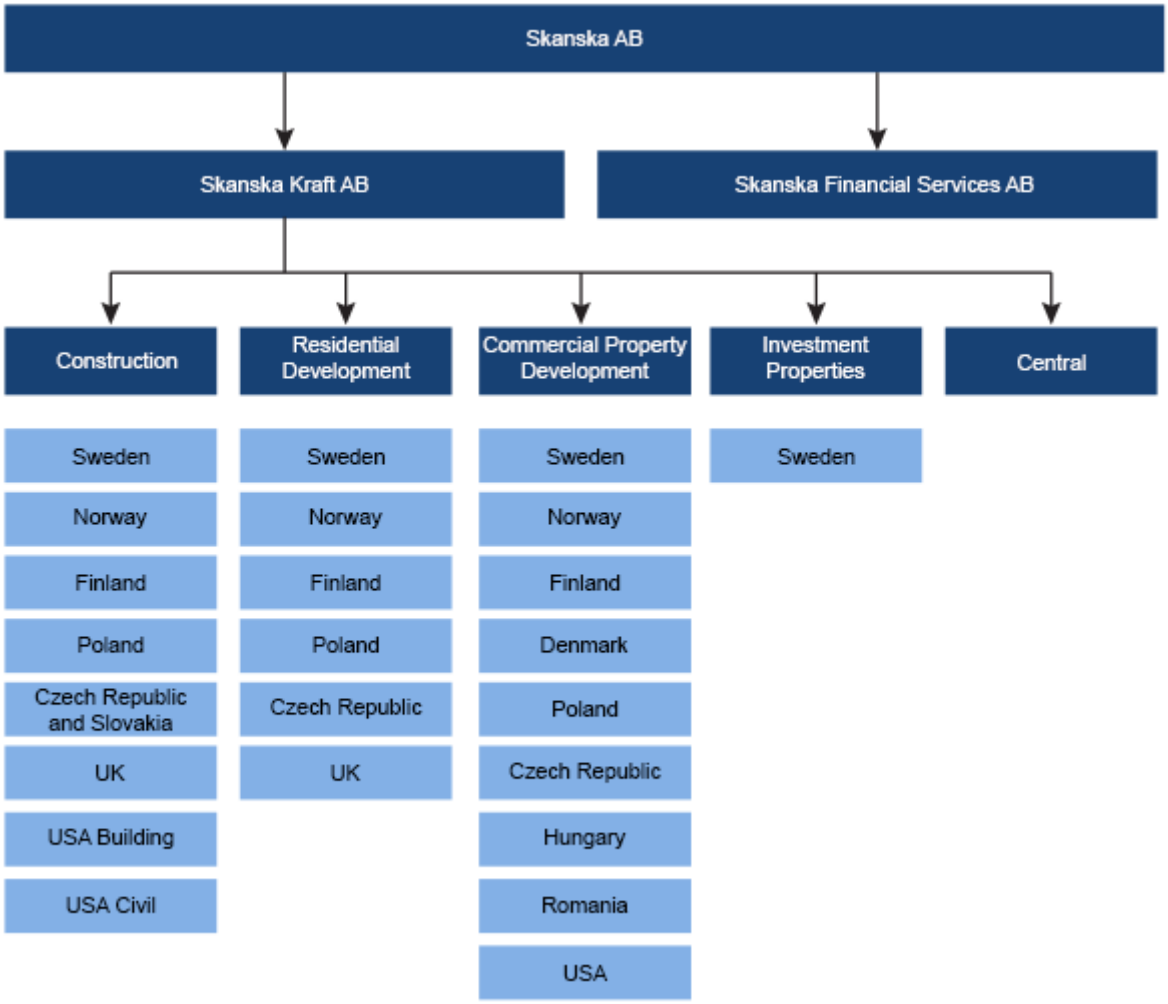
Construction Key Players: Skanska

Overview

Skanska is a leading multinational construction company and maintains well-diversified activities both geographically and within the construction and infrastructure industries. Founded in 1887, the Sweden-based company has over 27,000 employees and ranks among the largest construction majors globally in terms of its financial position, expertise and overall project capacity.

Activity Is Well-Diversified

Skanska - Company Structure & Active Markets



Note: All subsidiaries are independent limited companies, partnerships or equivalent legal forms in each market. Source: Skanska

Skanska operates across four key business lines:

- **Construction:** The construction and renovation of residential, commercial, and industrial buildings, alongside civil works on transport and social infrastructure.
- **Residential Development:** The development of single & multi-family residential buildings for immediate sale, with an emphasis on energy-efficient developments.

- **Commercial Property Development:** The development, lease, and divestment of commercial property, particularly office, retail, and logistics buildings.
- **Investment Properties:** The acquisition and management of high-quality, multi-tenant office property.

Whereas Construction has been a mainstay of Skanska's activities since it entered operations, its additional business segments have evolved over recent years. Most recently, in 2022, Skanska launched its Investment Properties segment to manage a portfolio of high-value real estate and complement its ongoing Commercial Property Development activities and ultimately generate additional cash flow. At the time of writing, this segment currently operates solely in Sweden.

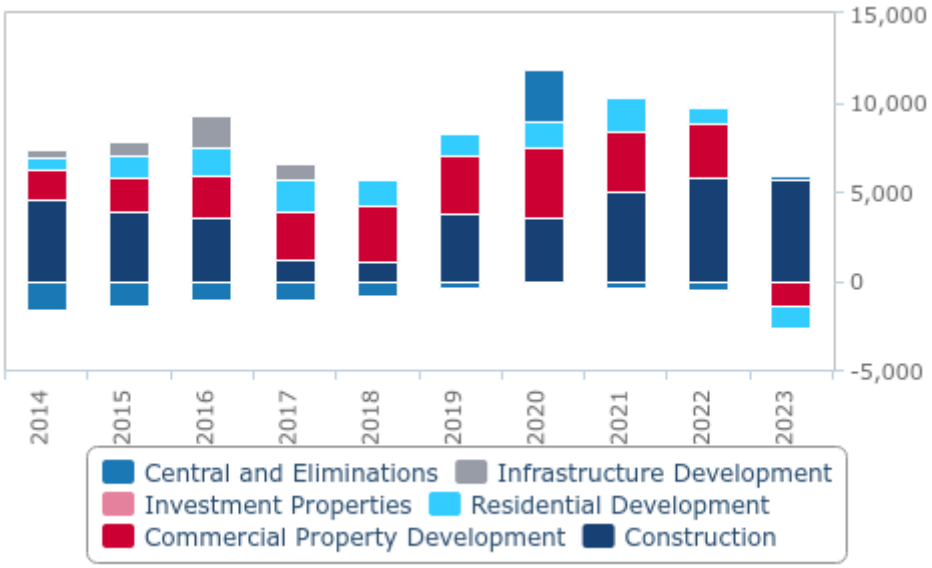
Both Skanska's Residential Development and Commercial Development activities entail a 5-7 year life-cycle respectively; from the initial concept to household purchase for Residential Development, and from attaining building permits to divestment for Commercial Development.

Skanska previously maintained an Infrastructure Development segment, responsible for managing its public-private partnership (PPP) assets, however 2018 saw Skanska wind down these activities and thus the segment ceased as of January 1 2019.

Regarding Skanska's latest full-year results across its respective segments, for the year ended 31 December, Construction reported operating income of SEK5,632mn in 2023, down 2.4% on SEK5,770mn in 2022. Each other key segment; Commercial Property Development, Residential Property Development, and Investment Properties, saw their respective operating income fall into negative territory during 2023. Specifically, Commercial Property Development saw operating income of -SEK1,365mn, Residential Development saw -SEK1,262mn, and Investment Properties saw -SEK62mn. These sizable drops in operating income were due to a combination of lower sales volumes in Residential Development, and impairment charges incurred in Commercial Property Development. Lower sales volumes were most marked in the Nordics, a key market for Skanska, whereas asset impairments were most significant across commercial property in the US. Overall in 2023, Skanska incurred an impairment loss of -SEK2,807mn of which Residential Development contributed -SEK1,117mn and Commercial Property Development contributed -SEK1,695mn.

Construction The Primary Business Line, Alongside Property Development

Skanska - Operating Income By Segment, SEKmn



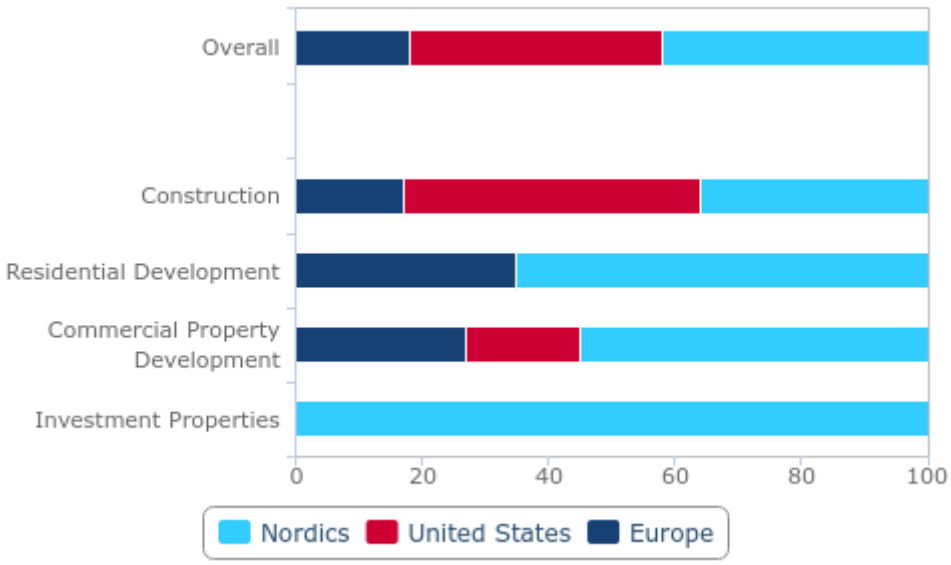
Source: Company Reports

Geographically, Skanska's operations are diversified across the Nordics, the United States, and Europe. Its longstanding presence in these markets also ensures economies of scale, familiarity with any unique operational factors, and crucially strong relationships with subcontractors, suppliers and other stakeholders to leverage in day-to-day operations.

Historically, Skanska also operated across Latin America, Asia, Africa, and a selection of other markets in Central and Eastern Europe (CEE). Skanska's exit from Latin America, completed in 2016, was driven by underwhelming profitability in the region. Its operations in Asia and Africa, meanwhile, were divested through 2004-2007.

Nordics Remain An Integral Market For Skanska

Skanska - % Of Revenue By Segment



Source: Skanska

Strategy

Skanska's overall strategy revolves around its highly integrated business model, with its Construction segment providing a stream of output for the other business lines. 2017 saw Skanska outline a strategic shift to de-risk the company, seeking greater cost efficiency, margin resiliency, and an increased focus on commercial property development. Overall, this has shifted the company's operations towards pure real estate development; particularly the provision of high-quality, energy-efficient buildings, to enhance the quality of its cash flow.

Through the active management of its land bank, and since the launch of its Investment Properties segment, Skanska has internal control from the initial land acquisition phase through to the operation of the real estate asset. Overall, this maximises Skanska's ability to exert cost control across its respective business lines, while the Investment Properties segment will increasingly enable Skanska to capture the long-term value of its real estate development via rental income generation.

Its diversification across geographies, segments of construction, and end-users provides significant cash flow resiliency while mitigating its sensitivity to the economic cycle. Its frequent partnering with public stakeholders adds to the security of its cash flow, particularly in its civil and social construction activities, while offsetting the more cyclically exposed areas of Skanska's cash flow, such as Residential Development.

Stable Operating Margin In Construction, Challenging Environment For Residential Development

Skanska - Operating Margin By Segment, %

Note: IFRS results. Figures according to segment reporting. Source: Skanska

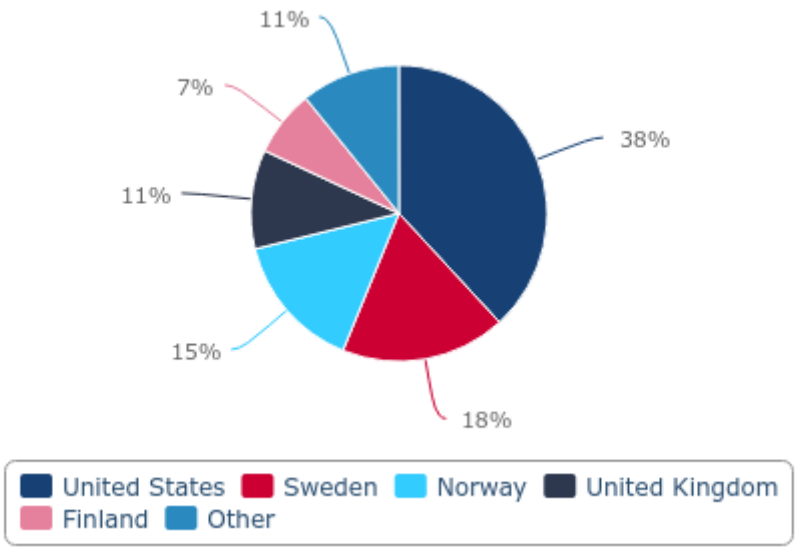
Skanska's sources of expansion largely entail reinvestment in existing operations, alongside entering new business streams across its existing markets. Its mature, lower-margin Construction segment remains focused on maintaining its existing market share, leaving its other Property Development segments, where feasible, to pursue a relatively more aggressive approach. That said, near-term weakness in Skanska's property development activities has led the company to take a more defensive position towards undertaking new work, following a material fall in operating income across these segments.

Its aforementioned Investment Properties business segment, launched in 2022, exemplifies Skanska's strategy for expansion; creating a partner for its Commercial Property Development segment to conduct internal transactions.

Skanska's M&A activity has been limited in recent years, with the acquisition of United Kingdom-based Atkins Highway Services Division in February 2013 being the most recent transaction of note. Similarly, regarding divestments, March 2016 saw Skanska complete the sale of Skanska Peru to Confipetrol Group, a Latin America-based contractor, which represented the culmination of Skanska's exit from the Latin America region.

US, Sweden Account For Bulk Of Skanska's Project Pipeline

Skanska - Project Pipeline By Market, %



Source: BMI Infrastructure Key Projects Data

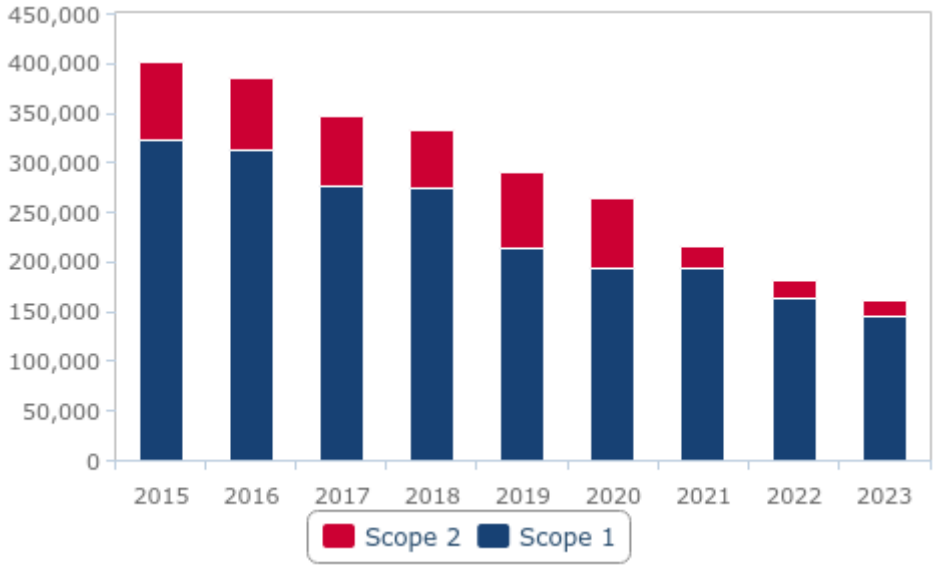
Strengthening Skanska's sustainability credentials is an overarching component of the company's strategy, with Skanska among the leading construction companies regarding the measurement and mitigation of its environmental impact. Skanska has historically shown a willingness to adopt nascent technologies, notably its early adoption of prefabricated construction in the 1970s. This has translated into using modular construction, 3D printing, and the adoption of circular construction principles. More broadly, recent decades have seen Skanska adopt Building Information Modelling (BIM) technologies, drone technology for site monitoring, and the use of robotics for site automation.

Skanska has measured and reported its greenhouse gas emissions since 2008, and currently maintains a target to realise net-zero scope 1, 2, and 3 emissions by 2045. Skanska estimates that 90% of its emissions are scope 3 emissions; materials, construction operations, and operational emissions of buildings & infrastructure. The company estimates that, on average between 2020 and 2023, its emissions are distributed across 52% in purchased materials, 36% in usage, and 12% in construction operations.

In the interim, Skanska targets a 70% reduction in scope 1 and 2 emissions by 2030 from 2015 levels, and a 50% reduction in scope 3 emissions by 2030 from 2020 levels. As of 2023, Skanska has achieved a 59,7% reduction in its scope 1 and 2 emissions from 2015 levels. These targets are reflected in Skanska's management incentive plan, having been established in 2019.

Consistent Decline In Emissions

Skanska - Scope 1 & 2 Emissions, Tonnes CO2e

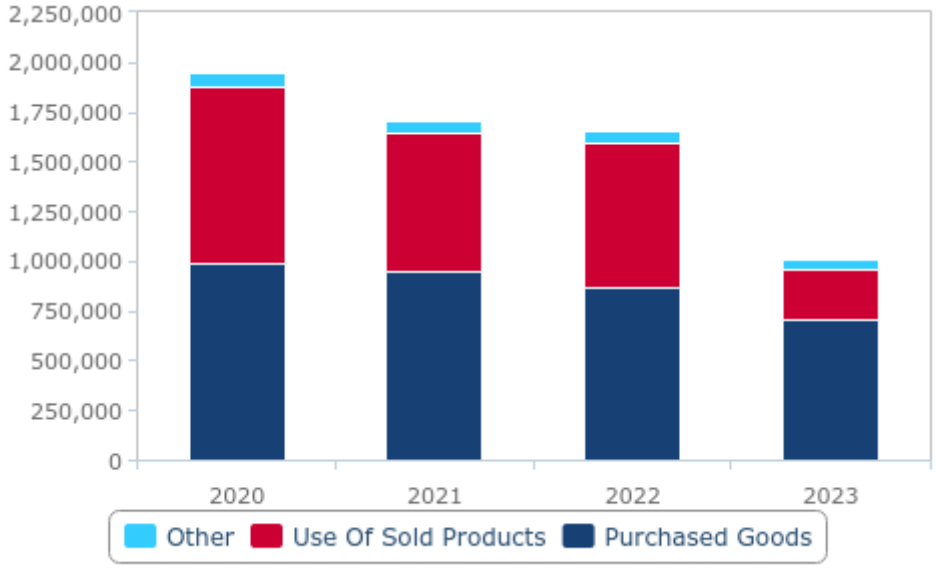


Source: Skanska

The realisation of Skanska's decarbonisation target for scope 3 emissions would require reduced use of cement, concrete, steel, bitumen and asphalt, alongside mitigating the operational emissions of the company's output. To this end, 2019 saw Skanska pilot low-carbon concrete mixes on its sites in Sweden; involving cement mixed with slag from steel mills, or fly ash from power plants. Similarly, Skanska has used timber as a replacement material for steel and concrete where appropriate. We have successively highlighted the outsized need for contractors to adopt less carbon-intensive building materials, with Skanska's ongoing efforts to adopt such materials offering a significant advantage in securing supply over its peers.

Scope 3 Emissions In Steady Decline

Skanska - Scope 3 Emissions, Tonnes CO2e



Note: Purchased goods include cement, concrete, steel, bitumen and asphalt. Assumes a 50-year expected lifetime for a sold building, and a 100-year lifetime for infrastructure.
Source: Skanska

Outlook

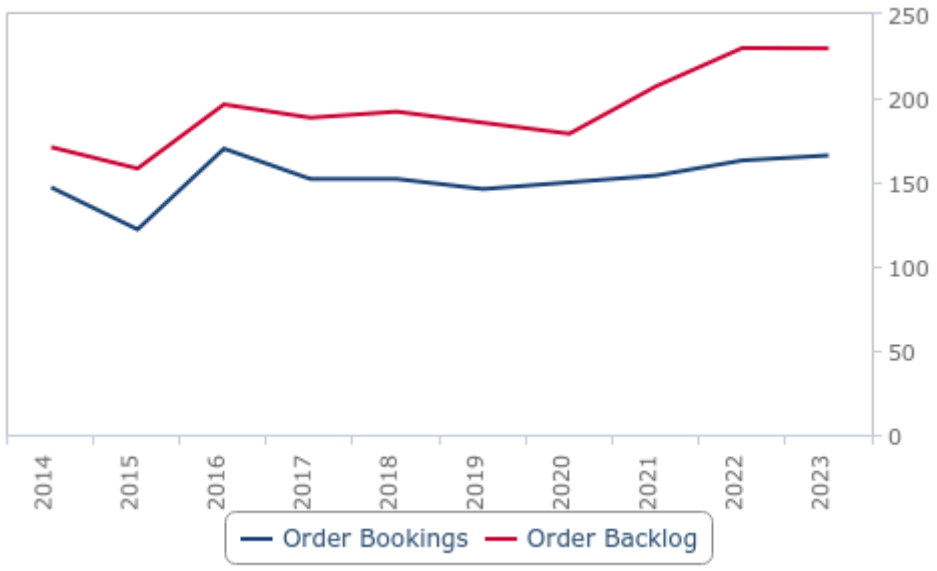
We expect a stable but moderate outlook for real growth in the construction industry across all of Skanska's key markets over our forecast period to 2033, though a broad economic slowdown will characterise the company's operating environment in the near term. As outlined in our Infrastructure Key Themes for 2024, global construction activity is characterised by weak but stable activity levels, a persistent cost burden on industry participants and the overhang of tight monetary policy conditions. This is especially pertinent in more cyclical construction works, namely residential building construction. As Skanska's most cyclical business line, Residential Development thus remains exposed to tight financing conditions, weak consumer confidence and any material increase in unemployment in the near term. By developing well-located, multi-tenant properties with low vacancy rates, Skanska's Commercial Property Development and Investment Properties segments are less vulnerable to cyclical fluctuations in economic activity, without compromising their aim to generate sufficient leasing activity among high-quality tenants.

Similarly, weakness in the US commercial real estate (CRE) market will likely remain a drag on Skanska's activities in the market. As noted by our Country Risk team, CRE faces structural challenges linked to changes in working and spending patterns across key geographic hubs of activity. Whereas retail real estate in the US has long suffered amid a shift to e-commerce, challenges in the commercial office space are a relatively new development, exemplified by elevated vacancy rates and structurally lower utilisation rates since 2020.

As of 2023, Skanska exhibits an order backlog of SEK229.6bn, just below the record-high of SEK229.8bn set in 2022. Skanska estimates that 50% of this figure relates to civil construction, 46% to non-residential building construction, 3% to residential building construction, and 1% to service-related activities.

Order Backlog Remaining At Record-High

Skanska - Order Bookings And Backlog

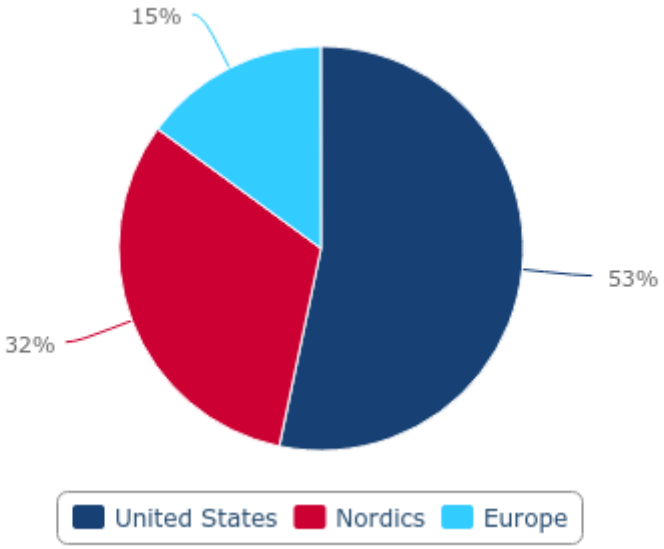


Source: Skanska

Regarding the geographic distribution of Skanska's order backlog, SEK122bn relates to its activities in the United States, equivalent to 53%.

US Remains Primary Location Of Order Backlog

Skanska - Order Backlog By Market



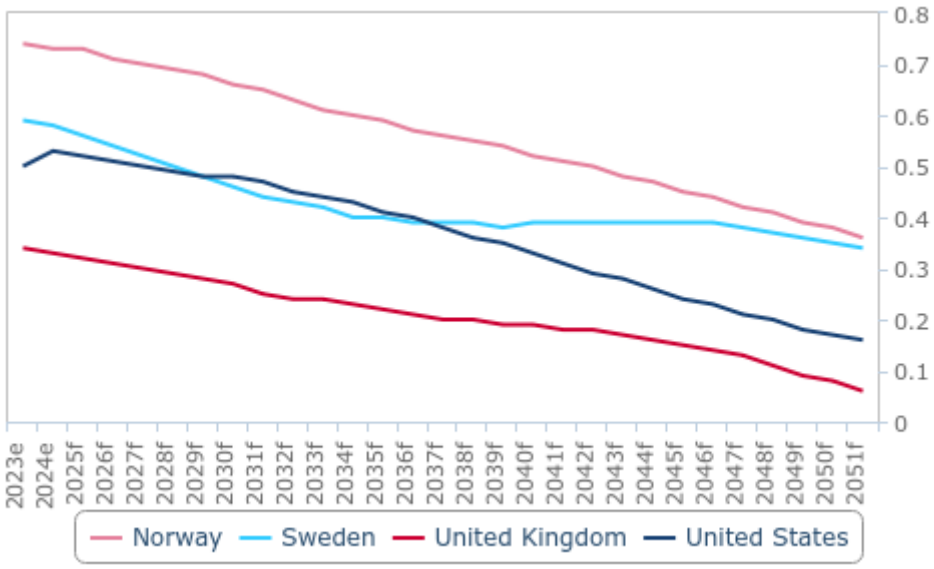
Source: Skanska

A structural shortage and declining affordability of residential property in several of Skanska's key markets, particularly in the United Kingdom, poses a significant medium-term opportunity for its Residential Property Development segment. Even among existing residential building stock across Skanska's key markets, overall weakness in energy efficiency performance offers the company prolonged potential to undertake renovation works, both to facilitate Skanska's decarbonisation efforts and to comply with tightening regulations regarding the operational emissions of buildings. The company's ability to leverage its existing expertise in low-emission construction and its established industry position, leave it well-placed to capitalise on this long-term societal trend. We note that, from 2025, the United Kingdom will require that all newly rented residential buildings have an energy performance certificate (EPC) rating of C, before aiming for all residential buildings to have an EPC rating of C by 2035. A building's EPC is a document rating a dwelling's energy efficiency, including any performance-related features, estimated energy costs and CO2 emissions. An energy efficiency rating is assigned for each dwelling, with A being the highest and G being the lowest. For commercial property, the United Kingdom prohibits the letting of properties with an EPC below C as of April 2023, with this threshold rising to C in 2027 and B in 2030.

In the long term, Skanska's activities remain vulnerable to slowing population growth and thus to declining household formation. The United States, for example, will see its population growth fall from 0.5% y-o-y as of 2023 to 0.17% y-o-y as of 2050.

Weakening Population Growth Poses Long-Term Challenge

Selected Markets - Population, % y-o-y



BMI/UN

The United States' gradual population growth decline, from an already low rate, is representative of the decline in population growth expected across Skanska's other key markets across Europe and the Nordics. Similarly, evolving work practices amongst professionals across Europe, brought about by the Covid-19 pandemic, risk effectively capping the level of commercial property demand growth in the long term.

Group Income Statement

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Revenue	143,325	153,049	145,365	157,877	171,730	172,846	160,344	143,865	163,174	167,168
Cost Of Sales	-130,215	-139,160	-131,119	-145,103	-157,465	-156,540	-143,457	-128,156	-146,483	-153,870
Gross Income	13,110	13,889	14,246	12,774	14,265	16,306	16,887	15,709	16,692	13,297
Income From Joint Ventures And Associated Companies	669	1,270	2,126	1,655	855	591	4,015	449	636	1,195
Operating Income	5,409	6,290	7,220	4,578	5,647	7,428	12,633	8,293	10,021	5,282
Net Financial Items	-280	-314	-119	45	39	-88	-229	-168	290	609
Taxes	-1,279	-1,185	-1,366	-512	-1,093	-1,286	-2,507	-1,238	-2,027	-861
Net Income	3,850	4,791	5,735	4,111	4,594	6,054	9,897	6,887	8,284	5,029
Gross Margin, %	*9.1%*	*9.1%*	*9.8%*	*8.1%*	*8.3%*	*9.4%*	*10.5%*	*10.9%*	*10.2%*	*8.0%*
Operating Margin, %	*3.8%*	*4.1%*	*5.0%*	*2.9%*	*3.3%*	*4.3%*	*7.9%*	*5.8%*	*6.1%*	*3.2%*
Net Margin, %	*2.7%*	*3.1%*	*3.9%*	*2.6%*	*2.7%*	*3.5%*	*6.2%*	*4.8%*	*5.1%*	*3.0%*
Order Bookings, SEKbn	*147*	*122*	*170*	*152*	*152*	*146*	*150*	*154*	*163*	*166*
Order Backlog, SEKbn	*171*	*158*	*196*	*188*	*192*	*185*	*179*	*207*	*230*	*230*

Note: IFRS results. Values in SEKmn unless otherwise stated. Source: Skanska

Group Balance Sheet

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Current-Asset Properties	26,115	27,020	33,678	39,010	42,391	46,373	44,948	49,745	58,474	58,660
Current-Asset Properties, Right-Of-Use Assets						3,980	2,980	3,289	3,676	3,613
Inventories	1,017	944	1,042	1,058	1,256	1,127	1,100	1,090	1,300	1,275
Contract Assets	5,472	5,692	5,751	6,997	6,661	5,898	4,599	5,451	7,772	7,865
Trade And Other Receivables	26,288	25,877	29,759	27,778	27,243	27,212	22,401	25,212	27,726	27,012
Total Current Assets	74,767	79,560	86,539	89,700	95,785	100,906	104,979	115,791	124,623	125,082
Investment Properties									3,758	5,141
Property, Plant And Equipment	7,122	6,504	6,837	6,874	7,645	7,742	6,816	7,279	7,803	8,035
Property, Plant And Equipment, Right-Of-Use Assets						4,616	3,930	3,314	3,256	3,082
Goodwill	5,276	5,256	5,270	4,554	4,325	4,057	3,713	3,934	4,160	3,919
Investments In Joint Ventures And Associated Companies	2,618	2,852	4,160	3,314	3,289	3,442	1,689	2,185	2,901	2,072
Total Non-Current Assets	18,007	18,107	19,966	19,737	20,510	25,112	20,653	23,247	26,970	30,108
Total Assets	92,774	97,667	106,505	109,437	116,296	126,018	125,631	139,039	151,593	155,189
Lease Liabilities						1,079	1,016	920	953	909
Contract Liabilities	14,545	15,821	18,473	16,636	20,739	20,419	19,462	22,664	24,059	23,220
Total Current Liabilities	58,636	64,332	68,950	71,557	76,657	74,679	69,162	76,955	82,462	80,020
Trade And Other Payables	33,496	34,964	36,080	38,428	38,071	37,979	31,812	36,642	41,840	40,410
Lease Liabilities						7,843	6,217	6,040	6,328	6,137
Total Non-Current Liabilities	12,733	9,129	10,049	10,695	10,292	18,318	17,752	16,619	13,876	18,822
Total Equity	21,405	24,206	27,506	27,185	29,347	33,021	38,717	45,465	55,255	56,347
Total Liabilities And Equity	92,774	97,667	106,505	109,437	116,296	126,018	125,631	139,039	151,593	155,189

Note: IFRS results. All figures refer to December 31 of indicated year. Values in SEKmn unless otherwise stated. Source: Skanska

Group Cash Flow Statement

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cash Flow From Operating Activities	4,756	8,584	-883	2,846	9,454	6,038	11,284	7,436	510	3,207
Cash Flow From Investment Activities	232	-1,385	-1,593	1,590	-2,367	-1,214	1,571	-11,368	4,847	5,997
Cash Flow From Financing Activities	-3,609	-4,544	-4,090	-2,817	-3,509	-6,898	-1,184	-5,053	-6,530	-1,255
Cash Flow For The Period	1,379	2,655	-6,566	1,619	3,578	-2,074	11,671	-8,984	-1,173	7,949
Free Cash Flow	*3,016*	*6,865*	*-3,855*	*521*	*7,041*	*3,472*	*9,797*	*5,612*	*-1,193*	*1,405*

Note: IFRS results. Values in SEKmn unless otherwise stated. Source: Skanska

Key Financials By Segment

	2019	2020	2021	2022	2023
Revenue					
Construction	159,579	140,483	132,587	156,004	160,636
Residential Development	12,483	13,070	13,351	8,751	5,013
Commercial Property Development	17,850	14,983	12,128	14,276	5,331
Investment Properties				40	186
Central and Eliminations	-13,130	-9,931	-10,490	-17,469	-14,114
Operating Income					
Construction	3,772	3,528	5,013	5,770	5,632
Residential Development	1,195	1,543	1,866	891	-1,262
Commercial Property Development	3,287	3,897	3,378	3,023	-1,365
Investment Properties				140	-62
Central and Eliminations	-426	2,891	-424	-527	288
Operating Margin, %					
Construction	*2.4%*	*2.5%*	*3.8%*	*3.7%*	*3.5%*
Residential Development	*9.6%*	*11.8%*	*14.0%*	*10.2%*	*-25.2%*
Capital Employed					
Residential Development	*13,000*	*13,600*	*14,400*	*16,300*	*14,400*
Commercial Property Development	*34,500*	*30,900*	*32,700*	*38,500*	40,800
Investment Properties				*3,733*	*5,076*
Return On Capital Employed, %					
Residential Development	*9.8%*	*12.8%*	*14.1%*	*6.8%*	*-7.0%*
Commercial Property Development	*10.8%*	*11.9%*	*10.5%*	*8.7%*	*-2.6%*
Investment Properties				*13.6%*	*-1.6%*

Note: IFRS results. Values in SEKmn unless otherwise stated. Figures according to segment reporting. Source: Skanska

Infrastructure Key Players: EDF

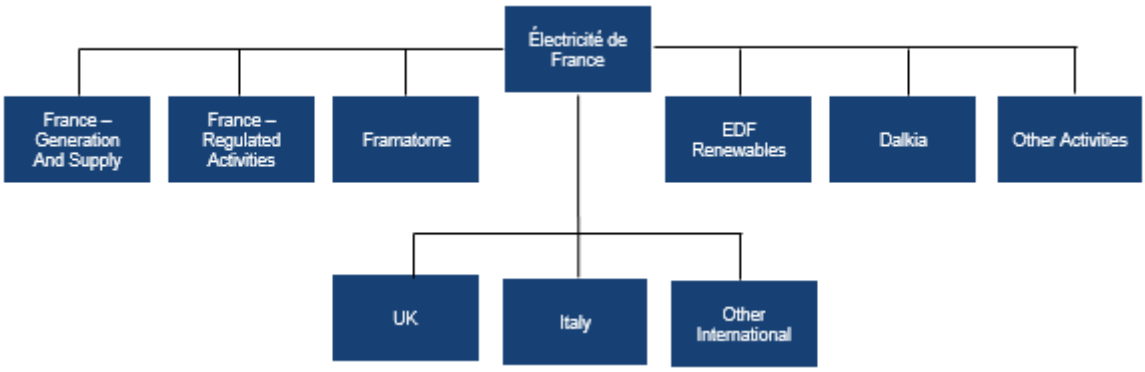
Overview

Électricité de France (EDF) is a France-based electric utility company, formed in 1946 and owned by the French government. The company employs almost 180,000 persons as of 2023, supplies around 34mn and 6.6mn customers with electricity and gas respectively, and is one of the largest producers of electricity globally.

EDF maintains nine business lines, segmented by both geography and activity:

- **France - Generation And Supply:** Energy production and sales activities undertaken in France-based energy companies within the EDF Group. This segment also includes downstream activities, including business-to-business and business-to-consumer activities.
- **France - Regulated Activities:** Activities undertaken by Enedis, Électricité de Strasbourg and EDF's island entities.
- **Framatome:** Activities undertaken globally by nuclear energy company Framatome; an entity majority-owned by EDF alongside Mitsubishi Heavy Industries.
- **UK:** Activities undertaken by UK-based energy company EDF Energy.
- **Italy:** Activities undertaken by Italy-based energy company Edison.
- **Other International:** Activities undertaken by EDF international, Luminus and other entities across Asia, Europe, Latin America and North America.
- **EDF Renewables:** Activities undertaken globally by EDF Renewables.
- **Dalkia:** Activities undertaken by heating and cooling networks company Dalkia.
- **Other Activities:** EDF Trading, EDF Investissements Groupe and other Group activities.

EDF - Company Structure

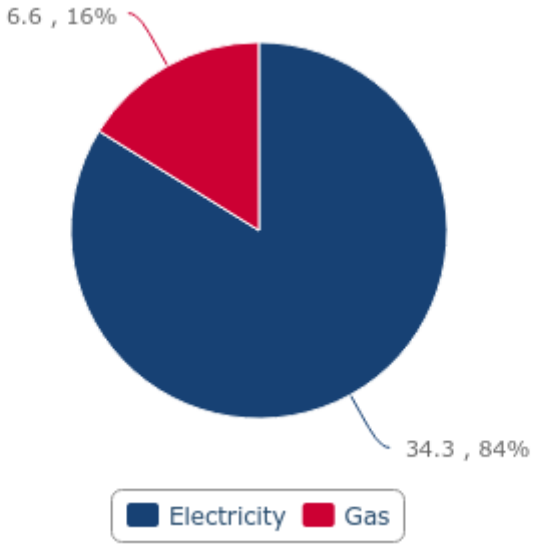


Source: EDF

Though EDF was founded as a state-owned Public Industrial and Commercial Establishment, the company was privatised in 2004 albeit with the government of France retaining a majority equity stake. However, amid an effort to ensure the financial viability of EDF and France's broader nuclear industry, the French Government announced its intention to renationalise the company in July 2022. Effective June 2023, the company returned to full state control.

Electricity Comprises The Bulk Of EDF's Customer Base

EDF - No. of Customers By Type, mn (2023)

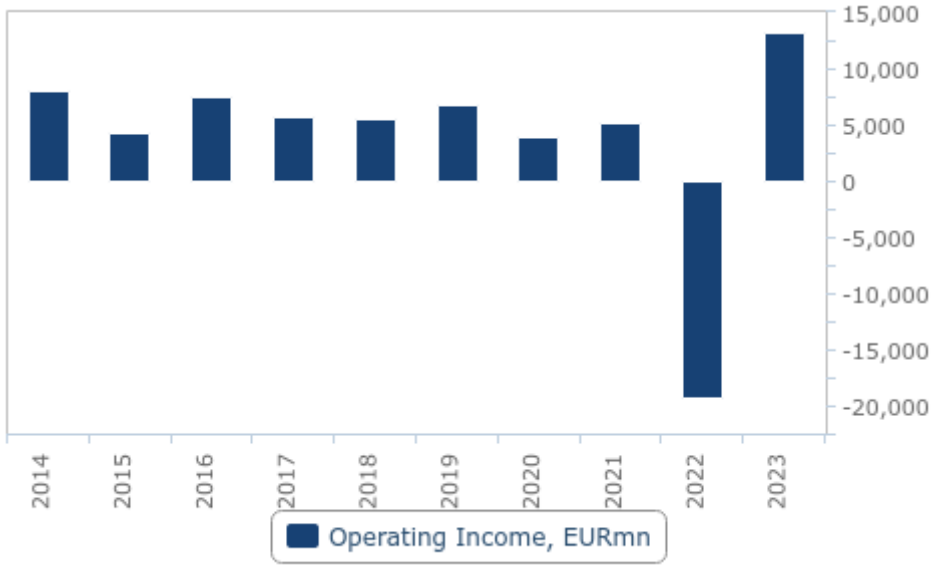


Source: EDF

EDF's latest full-year results, for the year ended 31 December 2023, show the company reported operating income of EUR13,174mn; a return to profitability after the company reported an exceptional operating loss of EUR19,363mn during 2022. The company's brief lossmaking period in 2022 was especially driven by a 173.2% y-o-y increase in fuel and energy purchases, which outstripped a 69.9% y-o-y increase in sales during the period. This partly stemmed from EDF's purchase obligations which effectively compelled EDF to purchase electricity at a time when electricity prices were elevated, along with an energy price cap for French households and a decline in EDF's nuclear output.

Return To Profitability Following Exceptional Operating Loss In 2022

EDF - Operating Income, EURmn (2014-2023)

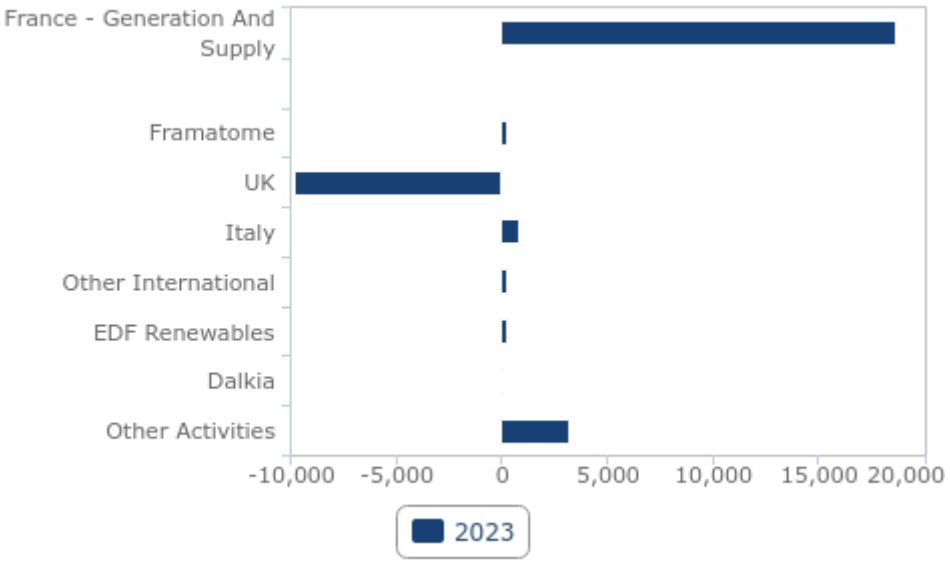


Note: IFRS results. Source: EDF, BMI

Within its 2023 operating income, EDF's activities under its France - Generation And Supply segment generated the bulk of its operating income; EUR18.7mn. While 7 of EDF's other segments also registered an operating profit during the year, the company's overall operating income was reduced following an -EUR9,823mn operating loss reported by its remaining United Kingdom segment amid an impairment loss on the Hinkley Point C power plant project.

Sizable EBIT From France Generation Offsetting UK Impairment

EDF - Operating Income By Segment, EURmn (2023)



Note: IFRS results. Source: EDF, BMI

Strategy

EDF's strategic advantage stems especially from its longstanding expertise in nuclear power, which leaves it highly embedded in France's energy system with the ability to earn regulated returns. The size, high output stability and the financial stability ensured by EDF's nuclear fleet underpins the company's long-term growth and capital investment planning, allowing it to develop low-emission power generation assets elsewhere, such as hydropower and non-hydropower renewables.

Two of the key factors relevant to EDF's earnings can be summarised as:

- **Generation And Supply:** The level of EDF's electricity generation and supply, and therefore the level of its installed capacity, directly determine its earnings. Maintaining and, where feasible, extending the useful life of its generation fleet is thus critical to ensuring EDF's long-term ability to generate and grow its revenue, alongside the construction of additional generation assets.
- **Regulatory Environment:** EDF's revenue generation is directly affected by the regulatory treatment of its tariffs, cash flows and assets, particularly in jurisdictions where the company generates regulated returns. Generally, utilities' regulatory environments seek to balance the costs faced by electricity consumers against the need to ensure the electricity supplier realises an adequate financial return to maintain and grow its asset base. The features of EDF's regulatory environment can, therefore, determine the company's ability to grow its revenue, to enact viable capital expenditures, and its competitive environment.

In 2023, EDF realised an operating margin of 9.4%. This was above the 6.1% average operating margin the company exhibited over the past decade, and well above its brief fall to a negative operating margin of -13.5% in 2022.

Operating Margin Back In Positive Territory

EDF - Operating Margin, % (2014-2023)

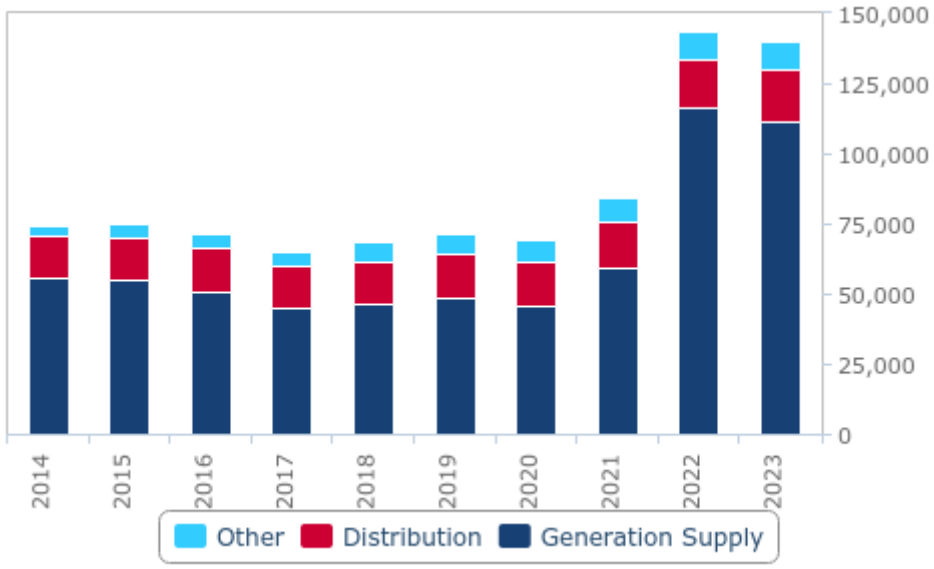
Note: IFRS results. Source: EDF, BMI

A key regulatory mechanism for EDF is France's Regulated Access to Incumbent Nuclear Electricity (ARENH), under which EDF's nuclear fleet operates. Implemented from 2011, ARENH provides electricity suppliers the right to purchase nuclear electricity generation from EDF at a regulated price and maximum annual volume determined by the French Energy Regulatory Commission (CRE). Since 2012, the regulated price has been fixed at EUR42/MWh, while the maximum annual volume was 100TWh until the end of 2019 before being raised to 150TWh. For context, EDF's annual nuclear output in 2023 was 320.4TWh.

We highlight that ARENH is due to end on December 31 2025, after which a replacement regulatory mechanism will enter force. At the time of writing, EDF has agreed an average price of EUR70/MWh for its nuclear output in a post-ARENH regulatory regime, that would extend to the entirety of EDF's nuclear output. In addition, this new mechanism would also entail price thresholds above which EDF would be compelled to redistribute revenue for any electricity sold above such thresholds. This agreement between EDF and the French government is currently subject to public consultation and would require EU approval.

Generation The Key Source Of Revenue

EDF - Revenue By Type, EURmn (2014-2023)



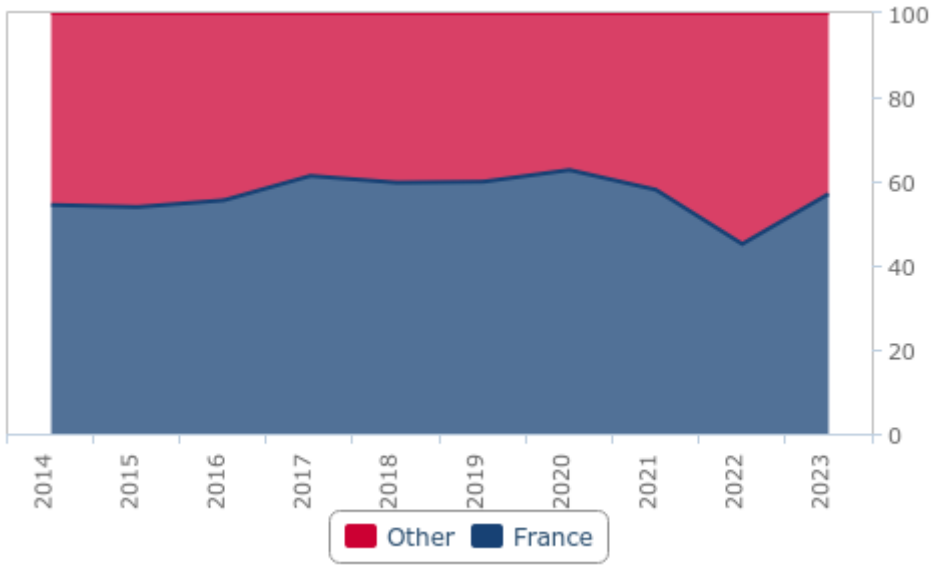
Note: IFRS results. Source: EDF, BMI

The stability of EDF's overall revenue generation is further bolstered by its entrenched position in its domestic market. Over the past decade, France has accounted for 57% of EDF's revenue in a given year. This share has remained largely stable, except for a brief fall to 45% during 2022 driven by the aforementioned energy price cap for French households and a decline in EDF's nuclear output in the market.

While the company continues to undertake activities internationally, the strategic importance of EDF to the French government and the long-lived nature of the company's nuclear fleet in France will ultimately ensure that this revenue split persists.

Significant France-Based Assets Ensure High Revenue Generation

EDF - % Of Group Revenue By Market (2014-2023)



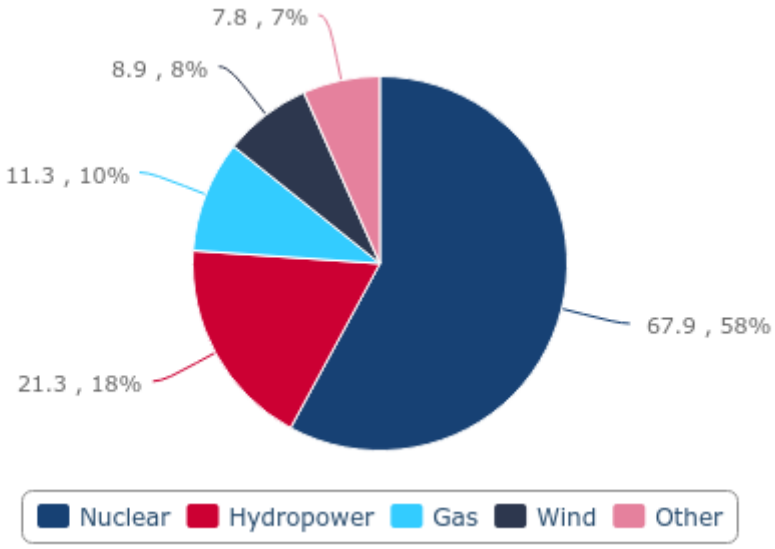
Note: IFRS results. Source: EDF, BMI

The dominance of nuclear in EDF's generation fleet is a significant strength for EDF's financial position as a source of baseload generation that entails limited variable costs. EDF's operational nuclear fleet spans 56 units in France, with a combined capacity of 61.4GW and an average age of 38 years.

The ability to feasibly extend the useful life of EDF's generation fleet is a key factor for the company's continued revenue generation. As such, the company undertakes work to extend the useful life of its existing nuclear fleet to at least an average age of 40 years. EDF's Grand Carénage programme, announced in 2011, encapsulates this work to refurbish the company's nuclear fleet. Currently in its second phase, EDF expects to enact EUR33bn of investment in the programme from 2022 to 2028. Again, while this programme entails sizable upfront capital investment, the variable costs of nuclear power remain low relative to other generation assets.

Nuclear The Majority Of EDF's Electricity Capacity

EDF - Installed Electricity Capacity By Type, GW (2023)



Source: EDF, BMI

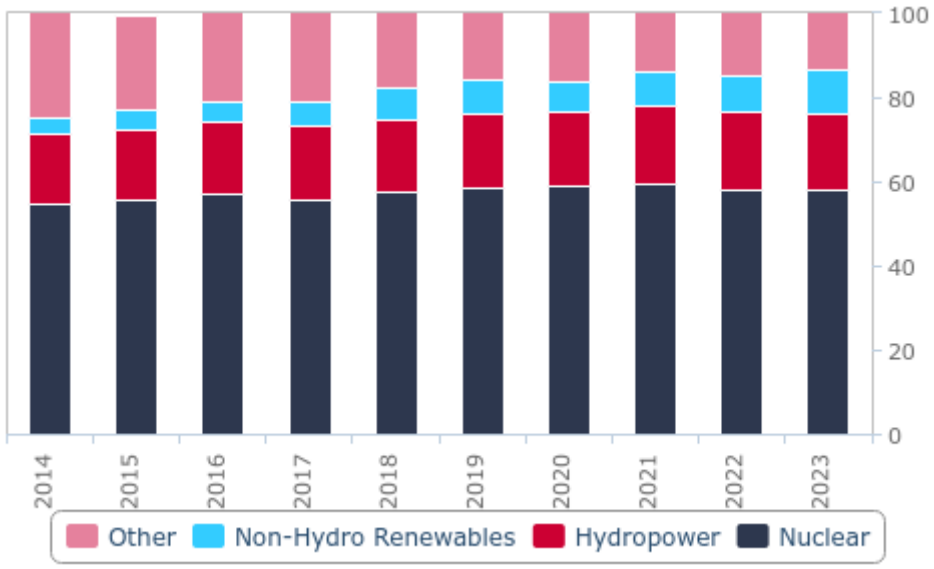
Beyond EDF's entrenched position within France, its means of expansion predominantly entails investment to deepen its presence in its existing markets. To ensure its continued alignment with the low-carbon energy transition, this has generally entailed investment in non-hydropower renewables assets such as wind and solar.

As of 2023, EDF operates 177.3GW of installed electricity capacity, of which 12.3GW are non-hydropower renewables. While this equates to only 10.5% of EDF's total electricity capacity, this segment has nonetheless seen solid growth over the past decade; in 2014, just 3.7% of EDF's electricity capacity was non-hydropower renewables.

Demonstrating the ability for EDF to diversify its geographic presence via renewables capacity installations, the company maintains both wind and power capacity across 15 markets aside from France. In the US, for example, EDF has 3.6GW of gross installed wind power capacity and is currently developing 1.5GW of offshore wind power capacity offshore from New York State. Elsewhere, in the UAE, EDF has 3.2GW of gross installed solar power capacity which includes the 2.1GW Al Dhafra solar power plant.

Non-Hydro Renewables A Small But Growing Segment

EDF - Installed Electricity Capacity By Type, % of total



Source: EDF, BMI

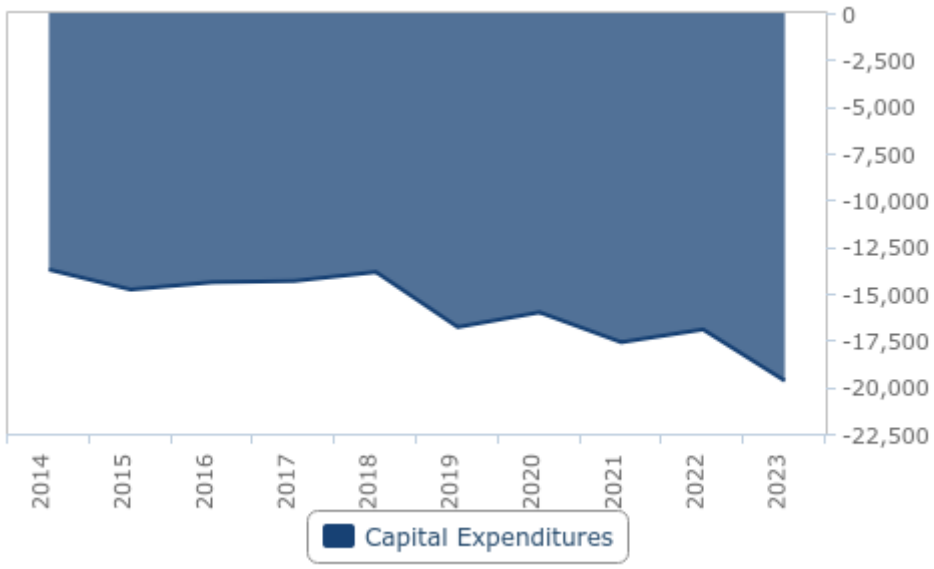
EDF's M&A activity has tended to involve bolt-on acquisitions, such as its recent acquisition of GE Vernova's steam nuclear activities. Completed in May 2024, GE Vernova undertakes the manufacturing of conventional island equipment for new nuclear power plants, with the transaction also including its Arabelle steam turbines and for first and second-generation European pressurised reactors (EPR and EPR2) and small modular reactors (SMR). Given EDF's small but growing activities regarding the deployment of EPR, EPR2 and SMR, EDF expects the acquisition offers a clear fit to provide expertise for a key growth area for the company.

EDF has historically completed larger transactions to deepen its presence in existing markets. 2009 saw EDF acquire nuclear power operator British Energy, having formally entered the UK electricity market in 2002. The acquisition helped propel EDF to become one of the so-called 'Big Six' largest retail gas and electricity suppliers in the UK.

In an example of EDF acquiring companies downstream in its value chain, February 2020 saw EDF acquire electric vehicle (EV) charging infrastructure provider Pod Point. The UK-based company supports EDF's Electric Mobility Plan, launched in 2018 to develop the company's EV charging infrastructure capabilities in the UK, France, Italy and Belgium; as of end-2023, EDF has deployed around 340,000 EV charging points. In Pod Point's case, EDF is seeking to complement its existing EDF Energy offering in the UK market, to offer favourable electricity tariffs for EV charging.

EDF's Capex Significant And Growing

EDF - Capital Expenditures, EURmn (2014-2023)



Note: IFRS results. Source: EDF, BMI

Outlook

EDF's continued effort to deploy renewable energy assets, alongside its continued baseload power generation, bodes well for the company's ability to directly facilitate the low carbon energy transition. Given EDF's longstanding expertise in nuclear power, the technology will remain at the core of the company's long-term growth prospects. This is despite periods of disagreement among European Union (EU) member states on the role, if any, for nuclear power in the low carbon energy transition. Ultimately, French authorities have proved successful in arguing that nuclear power will remain crucial to the bloc's energy mix and ensuring that nuclear, as with gas, is labelled under the EU Taxonomy as an environmentally sustainable activity. EDF is currently involved in the development of several new nuclear reactors, including at Flamanville 3 in France, Hinkley Point C and Sizewell C in the UK, and early-stage developments in the Czech Republic and Poland.

EDF's aforementioned effort to diversify its geographical presence via renewables capacity installations is also supportive for the company's outlook, particularly when targeting markets with greater economic growth prospects and thus greater electricity demand potential. At the time of writing, EDF maintains a target to reach 100GW of gross installed renewables capacity by 2030. This would largely be achieved via wind and solar power capacity installations, of which EDF currently has 20.7GW of gross installed renewables capacity.

EDF - Gross Installed Capacity By Market And Type, MW (2023)

Market	Wind	Solar
Belgium	325	-
Brazil	951	399
Canada	807	61
Chile	175	115
Egypt	-	167
France	2547	682
Germany	164	-
Greece	264	172
India	571	663
Ireland	-	27
Israel	-	589
China (Mainland)	1,001	299
Mexico	324	120
Morocco	87	-
Poland	68	-
Saudi Arabia	426	388
South Africa	145	-
UAE	-	3,165
UK	635	218
US	3623	1,474
Vietnam	-	83

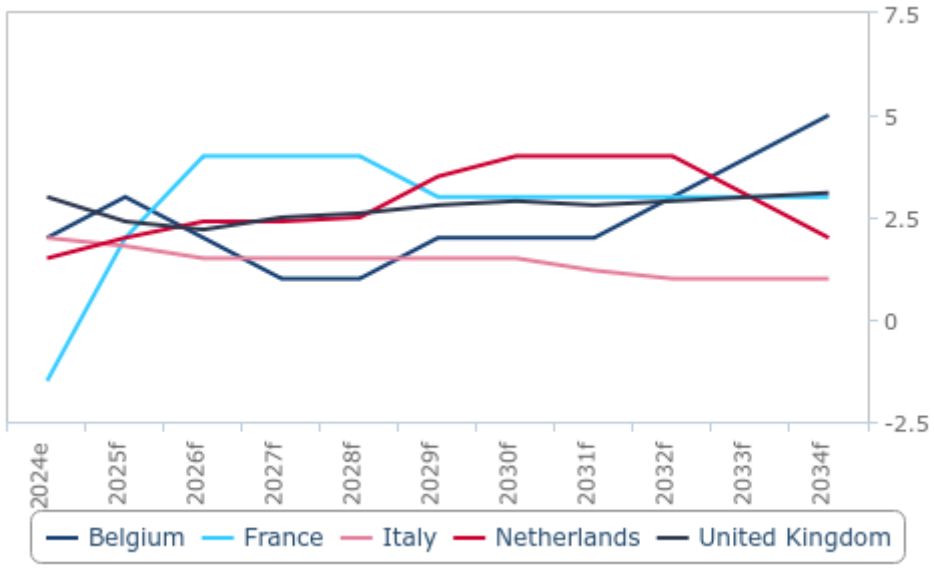
Note: Gross capacity denotes the total capacity of facilities in which EDF has a stake. May include territories, special administrative regions, provinces and autonomous regions.
Source: EDF, BMI

In addition to developing more-mature capacity types, EDF is seeking competitiveness in the development of hydrogen and electricity storage. On hydrogen, EDF launched in 2022 its Hydrogen Plan to achieve market leadership in the technology within Europe, targeting end-users in industrial processes and transport. To this end, the company has entered respective partnerships with cement producer Holcim to produce e-kerosene, LAT Nitrogen to decarbonise ammonia production, and Domo Chemicals to produce green hydrogen. Overall, EDF is primarily seeking to develop hydrogen in France, Italy, the UK and Belgium.

Elsewhere, in the development of electricity storage, EDF is seeking to develop at least 10GW of gross electricity storage assets by 2035. This entails both pumped storage and battery storage, with 1.7GW of capacity currently either in operation or development globally.

Moderate Consumption Growth Expected For Western Europe

Select European Markets - Net Electricity Consumption, % y-o-y



National Sources/BMI

Group Income Statement

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Sales	73,383	75,006	71,203	64,892	68,546	71,347	69,031	84,461	143,476	139,715
Fuel & Energy Purchases	-37,213	-38,775	-36,050	-32,901	-33,056	-35,091	-32,425	-44,299	-121,010	-80,989
Operating Income	7,984	4,280	7,514	5,637	5,454	6,757	3,875	5,225	-19,363	13,174
Taxes	1,839	483	1,388	147	-178	3,064	945	1,400	-3,926	2,470
Net Income	3,701	1,187	2,851	3,173	1,177	5,155	650	5,113	-17,940	10,016
Operating Margin, %	*10.9%*	*5.7%*	*10.6%*	*8.7%*	*8.0%*	*9.5%*	*5.6%*	*6.2%*	*-13.5%*	*9.4%*
Net Margin, %	*5.0%*	*1.6%*	*4.0%*	*4.9%*	*1.7%*	*7.2%*	*0.9%*	*6.1%*	*-12.5%*	*7.2%*

Note: IFRS Results. Values in EURmn unless otherwise stated. Source: EDF

Group Balance Sheet

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Inventories	14,747	14,714	14,101	14,138	14,227	14,049	14,738	16,197	17,661	18,092
Trade Receivables	23,176	22,259	23,296	16,843	15,910	15,606	14,521	22,235	24,844	26,833
Current Financial Assets	20,752	27,019	29,986	24,953	31,143	29,401	23,532	39,937	58,033	39,442
Total Current Assets	72,787	78,196	86,331	67,518	72,785	73,819	68,659	105,098	127,298	105,481
Goodwill	9,694	10,236	8,923	10,036	10,195	10,623	10,265	10,945	9,513	7,895
Property, Plant And Equipment	127,500	130,314	131,253	137,968	142,106	154,372	159,810	167,250	171,908	173,259
Non-Current Financial Assets	33,485	35,238	35,129	36,787	37,104	46,219	47,615	55,609	48,512	48,327
Total Non-Current Assets	195,202	200,745	195,309	204,324	210,384	229,465	237,232	255,868	260,834	259,331
Total Assets	267,989	278,941	281,640	271,842	283,169	303,284	305,891	360,966	388,132	364,812
Total Current Liabilities	57,892	60,239	63,490	46,857	52,815	55,044	52,520	97,139	137,579	93,317
Total Non-Current Liabilities	169,487	178,462	176,788	176,287	177,708	192,450	198,145	201,838	203,941	207,376
Total Equity	40,610	40,240	41,362	48,698	52,646	55,790	55,226	61,989	46,612	64,119
Total Liabilities And Equity	267,989	278,941	281,640	271,842	283,169	303,284	305,891	360,966	388,132	364,812

Note: IFRS Results. Values in EURmn. Source: EDF

Group Cash Flow Statement

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Cash Flow From Operating Activities	10,625	12,730	11,125	11,663	13,364	14,022	12,863	12,648	-7,425	29,808
Cash Flow From Investment Activities	-12,393	-18,839	-16,557	-11,713	-17,165	-15,650	-12,888	-14,577	-25,085	-23,045
Cash Flow From Financing Activities	1,223	5,574	4,138	712	3,530	2,223	2,591	4,973	33,943	-7,258
Cash Flow For The Period	-545	-535	-1,294	662	-271	595	2,566	3,044	1,433	-495
Free Cash Flow	*-3,096*	*-2,059*	*-3,272*	*-2,666*	*-486*	*-2,775*	*-3,144*	*-4,958*	*-24,348*	*10,141*

Note: IFRS Results. Values in EURmn. Source: EDF

Infrastructure Methodology

Connected Thinking

BMI employs a unique methodology known as 'Connected Thinking'. This means that our analysis captures the inter-relatedness of the global economy, and takes into account all of the relevant political, macroeconomic, financial market and industry factors that underpin a forecast and view. We then integrate them so as to explain how they interact and affect each other. Our Connected Thinking approach provides our customers with unique and valuable insight on all relevant macroeconomic, political and industry risk factors that will impact their operations and revenue-generating potential in the industry/industries within which they operate.

We use a transparent forecasting model as a base for our industry forecasts, but rely heavily on our analysts' expert judgement to ensure our forecasts capture all of the insights we derive using our unique Connected Thinking approach. We believe analyst expertise and judgement are the best ways to provide the most accurate, up-to-date and comprehensive insight to our customers.

Infrastructure Methodology

Our data and forecasts capture the entire spectrum of construction activities, including all areas of civil engineering and building construction, as defined under the ISIC Rev.4.

Our data and forecasts for Infrastructure are broken down into: transport (road, rail, ports and airports) and energy & utilities (power plants & transmission grids, water, oil & gas pipelines). Our building data and forecasts are broken down into residential and non-residential construction.

Construction Industry

Construction Industry Value

Our construction data is derived from national accounts from each market's national statistics office (or equivalent) or from international organisations which compile national account data, most notably the UN. Specifically, it measures the gross value added (GVA) of the construction industry over the reported 12-month period in nominal values. GVA (also known as GDP by industry) measures the contribution to overall GDP. The components of value added consist of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus. We source our construction industry value data in nominal local currency terms.

This data is used because it is reported by virtually all markets and can therefore be used for comparative purposes.

Construction Industry Value Real Growth

Our construction industry value forecasts are based on a regression model, using a market's own historical time series and key macroeconomic variables, such as gross fixed capital formation, from BMI Country Risk.

In addition, we will also apply analyst expert judgement to refine and finalise our construction industry value real growth forecast, based on exogenous and endogenous variables or events, not captured by our regression model. Real growth is defined as industry value nominal growth adjusted for industry-specific inflation (construction deflator).

Bearing in mind that other factors need to be taken into consideration, both quantitative and qualitative, our analysts also factor in

industry-specific issues in deriving our forecasts:

- Political risk - potential change in leadership, policy continuity
- Regulatory outlook - pricing structures of specific markets, bureaucracy, red tape
- Currency outlook - currency volatility, cost of imports
- Funding availability - fiscal health of the government, openness to private/foreign investment
- BMI Infrastructure Key Projects Data - indication of a market's infrastructure project pipeline by sector
- High Frequency Data – construction permits, starts, confidence etc
- Company developments - reflective of market dynamics and competitive landscap

Construction Industry, % Of GDP/Construction Value (USD)

These are derived indicators, calculated using our Country Risk team's GDP and exchange rate forecasts.

Construction Output

These figures refer to the gross output of the construction industry. Gross output measures the total sales or receipts of the industry, including sales to final users in the economy as well as sales to other industries. Gross output consists of construction industry value and intermediate consumption.

As in the case of construction industry value data, our construction output data is derived from national accounts from each market's national statistics office (or equivalent) or from international organisations which compile national account data, most notably the UN.

Forecasts are the result of a regression model, using a market's own historical time series as well as our construction industry value forecasts.

Construction Intermediate Consumption

These figures refer to the intermediate consumption of the construction industry. Intermediate consumption measures the goods and services employed in the production process of other goods and services and not for final consumption. Intermediate consumption is equivalent to the difference between gross output and GVA.

Our Construction Intermediate Consumption figures are a function of construction output minus construction industry value.

Cement Data

We forecast Portland cement production, consumption and net exports, in millions of tonnes.

Our historical national production data is sourced from the United States Geological Survey (USGS), while trade data is sourced from TradeMap by the International Trade Centre. By calculating production and net exports, we are able to determine historical consumption levels.

These consumption levels are then forecast over our 10-year forecast period using our construction growth forecasts, reflecting the changing demand picture for cement from the industry.

Construction Sector Employment

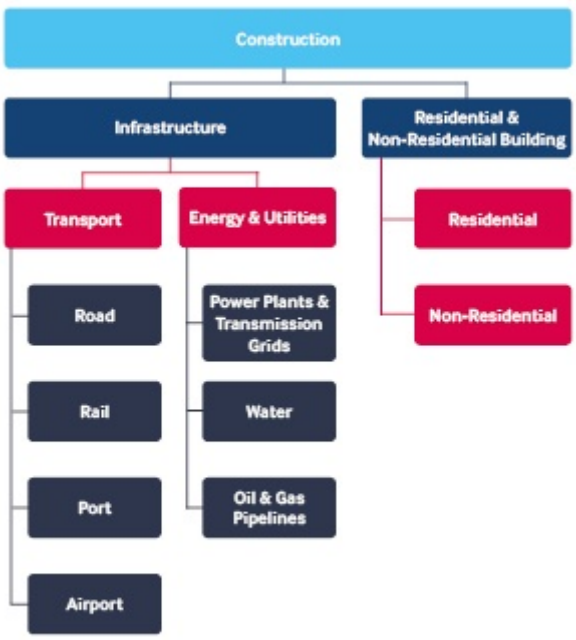
Total Construction Employment

This data is sourced from either the national statistics office or the International Labor Organization. It includes all those employed within the sector.

Our total construction employment forecasts are based on a regression model, using a market's own historical time series and key macroeconomic variables from our Country Risk service.

Infrastructure Data Sub-Sectors

Infrastructure Data Sub-Sectors



Source: BMI

For select markets, in addition to our construction industry value figures, we also provide industry value (gross value added) figures for subsectors of the construction industry.

We use a combination of historic data as reported by central banks, national statistics agencies and other official data sources, and leverage our analysts' knowledge of market and subsector dynamics and project information included in our proprietary BMI Infrastructure Key Projects Data, a comprehensive catalogue of the major power, transport, utilities, residential and non-residential projects in each market.

Given a variation in construction sub-sector classifications under various national accounts systems currently in use, we segment official construction sub-sector data into consistent and proprietary categories to compare industry value across sub-sectors. First,

our construction industry data is broken down into infrastructure construction on one hand and residential and non-residential building construction on the other. Infrastructure construction is then broken down where possible into transport infrastructure and energy and utilities infrastructure, which are then further broken down where possible into the categories illustrated in the figure above. Residential and non-residential building construction in turn is broken down where possible into residential building and non-residential building.

Our infrastructure sub-sectors industry value forecasts are based on a regression model, using a market's own historical time series and key macroeconomic variables, such as fixed capital formation, from our Country Risk service.

In addition, we also apply analyst expert judgement to refine and finalise industry value real growth forecasts, based on exogenous and endogenous variables or events, not captured by our regression model.

The residential and non-residential industry values are a function of construction minus infrastructure industry value. We further rely on national sources and our BMI Infrastructure Key Projects Data to further estimate the separation between the two areas of building when historic data is not available.

Infrastructure Risk/Reward Index

Our Infrastructure Risk/Reward Index (RRI) quantifies and ranks a market's attractiveness within the context of the Infrastructure industry, based on the balance between the **Risks** and **Rewards** of entering and operating in different markets.

We combine industry-specific characteristics with broader economic, political and operational market characteristics. We weight these inputs in terms of their importance to investor decision-making in a given industry. The result is a nuanced and accurate reflection of the realities facing investors in terms of first the balance between opportunities and risk and second between industry-specific and broader market traits. This enables users of the index to assess a market's attractiveness in a regional and global context.

The index uses a combination of our proprietary forecasts and analyst assessment of the regulatory climate. As regulations evolve and forecasts change, so the index scores change providing a highly dynamic and forward-looking result.

The Infrastructure Risk/Reward Index universe comprises **104 markets**.

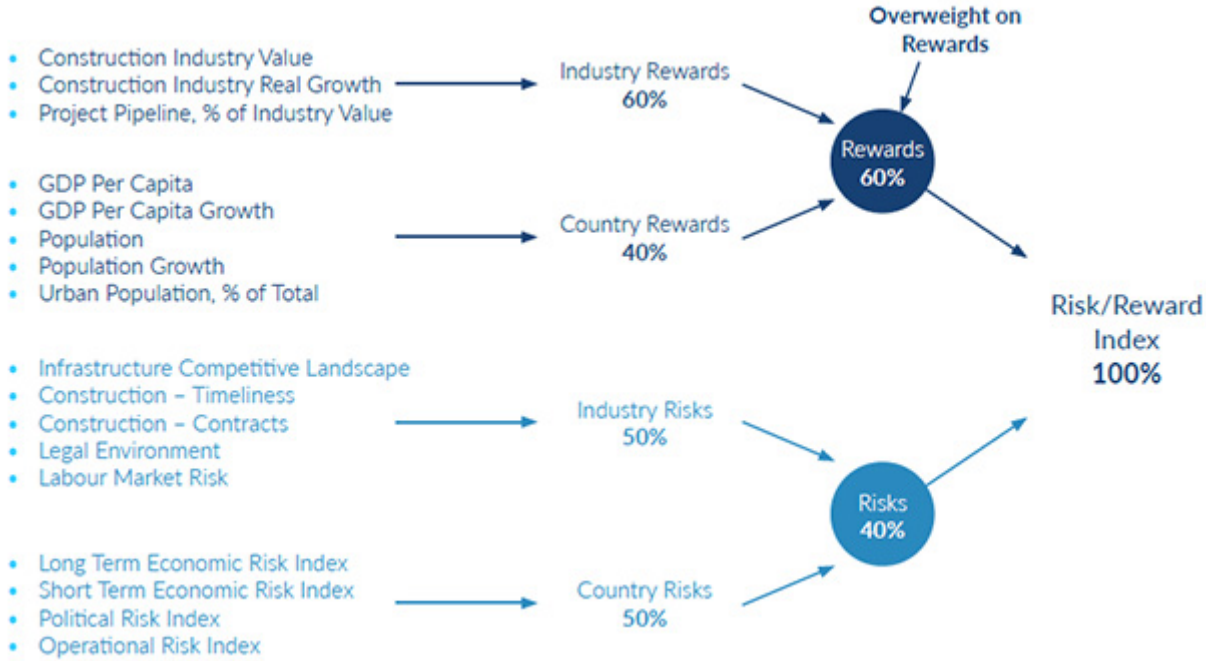
Benefits Of Using Our Infrastructure RRI

- **Global Rankings:** One global table, ranking all the markets in our universe for Infrastructure from most attractive (closest to zero) to most risk (closest to 100).
- **Accessibility:** Easily accessible, top-down view of the global, regional or sub-regional Risk/Reward profile.
- **Comparability:** Identical methodology across 104 markets for Infrastructure allows users to build lists of markets they wish to compare, beyond the confines of a global or regional grouping.
- **Scoring:** Scores out of 100 with a wide distribution, provide nuanced investment comparisons. The higher the score, the less favourable the market profile.
- **Quantifiable:** Quantifies the Rewards and Risks of doing business in the infrastructure industry in different markets around the world and helps identify specific flashpoints in the overall business environment.
- **Comprehensive:** Comprehensive set of indicators, assessing industry-specific risks and rewards alongside political, economic and operating risks.
- **Entry Point:** A starting point to assess the outlook for the infrastructure industry, from which users can dive into more granular forecasts and analysis to gain a deeper understanding of the market.
- **Balanced:** Multi-indicator structure prevents outliers and extremes from distorting final scores and rankings.

- **Methodology:** The index is a combination of proprietary BMI forecasts, analyst insights and globally acceptable benchmark indicators.

Weightings Of Categories And Indicators

Infrastructure Risk/Reward Index



Source: BMI

The RRI matrix divides into two distinct categories:

Rewards: Evaluation of an industry's size and growth potential (**Industry Rewards**), and macro characteristics that directly impact the size of business opportunities in a specific industry (**Country Rewards**).

Risks: Evaluation of micro, industry-specific characteristics, crucial for an industry to develop to its potential (**Industry Risks**) and a quantifiable assessment of the political, economic and operational profile (**Country Risks**).

Assessing Our Weightings

Our matrix is deliberately overweight on **Rewards** (60% of the final RRI score for a market) and within that, the **Industry Rewards** segment (60% of final Rewards score). This is to reflect the fact that when it comes to long-term investment potential, industry size and growth potential carry the most weight in indicating opportunities, with other structural factors (demographic, labour statistics and infrastructure availability) weighing in, but to a slightly lesser extent. In addition, our focus and expertise in emerging and frontier markets has dictated this bias towards industry size and growth to ensure we are able to identify opportunities in markets where regulatory frameworks are not as developed and industry sizes not as big as in developed markets, but where we know there is a strong desire to invest.

Infrastructure RRI Indicators - Explanation And Sources

	Source	Rationale
Rewards		
Industry Rewards		
Construction Industry Value	BMI Forecast	Size of the construction industry indicates potential for opportunities and scale of operations. USDbn, Five Year Average Forecast.
Construction Industry Value	BMI Forecast	Growth of the construction industry indicates potential for growth in opportunities. Real Growth, % Change y-o-y, Five Year Average Forecast.
Project Pipeline, % of Industry Value	BMI Key Projects Data/BMI Forecast	Size of the project pipeline in the pre- and under-construction phase relative to the construction industry size, indicates the potential for project opportunities, progression of projects through the pipeline and growth of pipeline.
Country Rewards		
GDP Per Capita	BMI Forecast	The wealth of the population indicates demand for infrastructure. USD, Five Year Average Forecast
GDP Per Capita Growth	BMI Forecast	As a population gets richer, we would expect to see greater demand for infrastructure, especially transport. Local Currency, % Change y-o-y, Five Year Average Forecast. Except: Zimbabwe & Venezuela where USD is used.
Population	BMI Forecast	Larger population creates greater demand for infrastructure. Five Year Average Forecast
Population Growth	BMI Forecast	Growth of population necessitates increased infrastructure stock. % Change y-o-y, Five Year Forecast.
Urban Population % Of Total	BMI Forecast	High and growing concentration of population in urban areas indicates greater pressure on infrastructure assets. Five Year Average Forecast.
Risks		
Industry Risks		
Infrastructure Competitive Landscape	BMI Subjective Indicator	Assesses the openness of the competitive landscape. Considers the sophistication and saturation of the existing market, the ability to compete fairly in tenders and barriers to international companies entering the market.
Construction – Timeliness	BMI Project Risk Index	Measures the risk of delays to project development. Based on ability to secure permits and the potential for protracted bureaucracy to delay or increase the cost of operations.
Construction – Contracts	BMI Project Risk Index	Measures the risk of contracting issues. Assesses both the efficiency of contract resolution and the sophistication of local regulations.
Legal Environment	BMI Operational Risk Index	Measures risk stemming from lack of transparency and legal protection. Assesses the strength of rule of law, transparency and investor protection.
Labour Market Risk	BMI Operational Risk Index	Measures the risk to project development based on the labour market. Assesses the size, education levels and cost of employment.
Country Risks		
Long-Term Economic Risk Index	BMI Country Risk Index	Takes into account the structural characteristics of economic growth, the labour market, price stability, exchange rate stability and the sustainability of the balance of payments, as well as fiscal and external debt outlooks for the coming decade.

	Source	Rationale
Short-Term Economic Risk Index	BMI Country Risk Index	Seeks to define current vulnerabilities and assess real GDP growth, inflation, unemployment, exchange rate fluctuation, balance of payments dynamics, as well as fiscal and external debt credentials over the coming two years.
Political Risk Index	BMI Country Risk Index	The Political Risk Index is a score made up of the mean average across three distinct pillars: Governance Risk, Society Risk and Security Risk. These are aggregated into an overall assessment of Political Risk.
Operational Risk Index	BMI Operational Risk Index	Focuses on existing conditions relating to four main risk areas: Labour Market, Trade & Investment, Logistics, and Crime & Security.

Source: BMI

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