

billion 2015 dollars

								Average annual percentage change, 2020–2050
Region and sector	2020	2025	2030	2035	2040	2045	2050	
OECD								
United States								
Energy-intensive manufacturing	\$2,575	\$3,141	\$3,496	\$3,893	\$4,313	\$4,752	\$5,247	2.4
Non-energy-intensive manufacturing	\$3,666	\$4,829	\$5,429	\$6,226	\$7,120	\$8,105	\$9,274	3.1
Nonmanufacturing	\$2,456	\$3,009	\$3,349	\$3,734	\$4,161	\$4,623	\$5,170	2.5
Services	\$25,509	\$32,004	\$35,993	\$40,769	\$45,894	\$51,314	\$57,423	2.7
Total	\$34,206	\$42,983	\$48,267	\$54,623	\$61,489	\$68,794	\$77,113	2.7
Canada								
Energy-intensive manufacturing	\$245	\$307	\$349	\$399	\$453	\$513	\$579	2.9
Non-energy-intensive manufacturing	\$311	\$410	\$457	\$515	\$579	\$650	\$730	2.9
Nonmanufacturing	\$458	\$526	\$583	\$649	\$712	\$779	\$853	2.1
Services	\$1,577	\$2,038	\$2,264	\$2,528	\$2,822	\$3,144	\$3,497	2.7
Total	\$2,590	\$3,281	\$3,654	\$4,091	\$4,567	\$5,087	\$5,658	2.6
Mexico and other OECD Americas								
Energy-intensive manufacturing	\$811	\$960	\$1,083	\$1,224	\$1,372	\$1,531	\$1,703	2.5
Non-energy-intensive manufacturing	\$926	\$1,207	\$1,347	\$1,527	\$1,737	\$1,985	\$2,291	3.1
Nonmanufacturing	\$755	\$891	\$1,003	\$1,136	\$1,279	\$1,414	\$1,532	2.4
Services	\$2,888	\$3,660	\$4,203	\$4,840	\$5,533	\$6,253	\$6,988	3.0
Total	\$5,380	\$6,718	\$7,636	\$8,726	\$9,922	\$11,183	\$12,514	2.9
OECD Europe								
Energy-intensive manufacturing	\$4,488	\$5,140	\$5,498	\$5,893	\$6,302	\$6,728	\$7,197	1.6
Non-energy-intensive manufacturing	\$7,156	\$8,944	\$9,816	\$10,876	\$12,042	\$13,335	\$14,816	2.5
Nonmanufacturing	\$4,159	\$4,898	\$5,327	\$5,777	\$6,250	\$6,743	\$7,279	1.9
Services	\$27,308	\$32,327	\$35,408	\$38,582	\$42,062	\$45,886	\$50,160	2.0
Total	\$43,112	\$51,309	\$56,049	\$61,127	\$66,655	\$72,692	\$79,452	2.1
Japan								
Energy-intensive manufacturing	\$1,013	\$1,132	\$1,152	\$1,157	\$1,161	\$1,169	\$1,182	0.5
Non-energy-intensive manufacturing	\$2,584	\$3,211	\$3,366	\$3,496	\$3,637	\$3,783	\$3,950	1.4
Nonmanufacturing	\$630	\$692	\$696	\$698	\$702	\$702	\$704	0.4
Services	\$5,566	\$6,111	\$6,392	\$6,556	\$6,723	\$6,896	\$7,106	0.8
Total	\$9,793	\$11,146	\$11,607	\$11,907	\$12,224	\$12,550	\$12,942	0.9
South Korea								
Energy-intensive manufacturing	\$1,084	\$1,251	\$1,358	\$1,444	\$1,516	\$1,588	\$1,658	1.4
Non-energy-intensive manufacturing	\$1,508	\$1,875	\$2,084	\$2,242	\$2,380	\$2,538	\$2,700	2.0
Nonmanufacturing	\$372	\$432	\$476	\$520	\$557	\$594	\$631	1.8
Services	\$2,345	\$2,728	\$3,025	\$3,241	\$3,424	\$3,621	\$3,811	1.6
Total	\$5,309	\$6,286	\$6,943	\$7,447	\$7,877	\$8,341	\$8,800	1.7
Australia and New Zealand								
Energy-intensive manufacturing	\$175	\$187	\$205	\$223	\$241	\$258	\$275	1.5
Non-energy-intensive manufacturing	\$123	\$137	\$150	\$165	\$180	\$194	\$207	1.7
Nonmanufacturing	\$527	\$646	\$739	\$859	\$980	\$1,111	\$1,256	2.9
Services	\$1,801	\$2,142	\$2,487	\$2,843	\$3,190	\$3,535	\$3,892	2.6
Total	\$2,626	\$3,112	\$3,581	\$4,089	\$4,591	\$5,098	\$5,630	2.6
Total OECD								
Energy-intensive manufacturing	\$10,390	\$12,119	\$13,141	\$14,232	\$15,359	\$16,539	\$17,840	1.8
Non-energy-intensive manufacturing	\$16,274	\$20,613	\$22,650	\$25,047	\$27,676	\$30,590	\$33,967	2.5
Nonmanufacturing	\$9,358	\$11,094	\$12,173	\$13,372	\$14,641	\$15,967	\$17,423	2.1
Services	\$66,994	\$81,010	\$89,773	\$99,360	\$109,649	\$120,649	\$132,879	2.3
Total	\$103,016	\$124,835	\$137,736	\$152,011	\$167,325	\$183,744	\$202,109	2.3
Non-OECD								
Russia								

**Table A15. Gross output by region and sector, High Economic Growth case**

billion 2015 dollars

Region and sector	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
Energy-intensive manufacturing	\$721	\$891	\$1,010	\$1,142	\$1,275	\$1,403	\$1,517	2.5
Non-energy-intensive manufacturing	\$578	\$746	\$831	\$944	\$1,067	\$1,194	\$1,332	2.8
Nonmanufacturing	\$1,192	\$1,424	\$1,562	\$1,709	\$1,839	\$1,956	\$2,062	1.8
Services	\$3,553	\$4,425	\$4,836	\$5,486	\$6,166	\$6,925	\$7,822	2.7
<b>Total</b>	<b>\$6,044</b>	<b>\$7,486</b>	<b>\$8,239</b>	<b>\$9,282</b>	<b>\$10,347</b>	<b>\$11,478</b>	<b>\$12,732</b>	<b>2.5</b>
<b>Other Europe and Eurasia</b>								
Energy-intensive manufacturing	\$584	\$702	\$785	\$898	\$1,022	\$1,158	\$1,306	2.7
Non-energy-intensive manufacturing	\$460	\$580	\$636	\$705	\$779	\$860	\$948	2.4
Nonmanufacturing	\$996	\$1,193	\$1,392	\$1,633	\$1,900	\$2,182	\$2,475	3.1
Services	\$2,672	\$3,456	\$4,028	\$4,730	\$5,496	\$6,375	\$7,417	3.5
<b>Total</b>	<b>\$4,712</b>	<b>\$5,931</b>	<b>\$6,841</b>	<b>\$7,966</b>	<b>\$9,198</b>	<b>\$10,576</b>	<b>\$12,146</b>	<b>3.2</b>
<b>China</b>								
Energy-intensive manufacturing	\$13,218	\$17,008	\$19,749	\$22,213	\$24,388	\$26,508	\$28,472	2.6
Non-energy-intensive manufacturing	\$23,190	\$31,918	\$38,951	\$46,324	\$53,235	\$60,110	\$66,227	3.6
Nonmanufacturing	\$10,745	\$13,363	\$15,378	\$17,311	\$19,003	\$20,629	\$22,398	2.5
Services	\$29,694	\$43,409	\$57,447	\$73,266	\$90,334	\$109,362	\$128,879	5.0
<b>Total</b>	<b>\$76,846</b>	<b>\$105,698</b>	<b>\$131,525</b>	<b>\$159,114</b>	<b>\$186,960</b>	<b>\$216,608</b>	<b>\$245,976</b>	<b>4.0</b>
<b>India</b>								
Energy-intensive manufacturing	\$3,317	\$5,262	\$8,028	\$11,336	\$15,138	\$19,557	\$24,660	6.9
Non-energy-intensive manufacturing	\$2,531	\$4,442	\$6,862	\$9,709	\$13,138	\$17,321	\$22,494	7.6
Nonmanufacturing	\$3,801	\$5,770	\$7,391	\$9,570	\$12,435	\$15,774	\$19,644	5.6
Services	\$6,641	\$10,041	\$15,379	\$21,532	\$28,362	\$36,351	\$45,616	6.6
<b>Total</b>	<b>\$16,290</b>	<b>\$25,516</b>	<b>\$37,660</b>	<b>\$52,147</b>	<b>\$69,073</b>	<b>\$89,003</b>	<b>\$112,415</b>	<b>6.7</b>
<b>Other Asia</b>								
Energy-intensive manufacturing	\$3,226	\$4,237	\$5,312	\$6,671	\$8,258	\$10,026	\$11,989	4.5
Non-energy-intensive manufacturing	\$6,063	\$8,183	\$10,179	\$12,507	\$15,017	\$17,682	\$20,535	4.2
Nonmanufacturing	\$4,109	\$5,372	\$6,889	\$8,724	\$10,927	\$13,452	\$16,288	4.7
Services	\$11,758	\$16,008	\$20,829	\$26,336	\$32,698	\$39,889	\$47,800	4.8
<b>Total</b>	<b>\$25,156</b>	<b>\$33,799</b>	<b>\$43,209</b>	<b>\$54,239</b>	<b>\$66,900</b>	<b>\$81,049</b>	<b>\$96,612</b>	<b>4.6</b>
<b>Middle East</b>								
Energy-intensive manufacturing	\$1,392	\$1,756	\$1,995	\$2,236	\$2,457	\$2,656	\$2,827	2.4
Non-energy-intensive manufacturing	\$383	\$519	\$611	\$701	\$785	\$862	\$932	3.0
Nonmanufacturing	\$2,435	\$2,825	\$3,113	\$3,392	\$3,674	\$3,966	\$4,257	1.9
Services	\$4,545	\$5,989	\$7,279	\$8,755	\$10,327	\$12,079	\$13,790	3.8
<b>Total</b>	<b>\$8,755</b>	<b>\$11,089</b>	<b>\$12,999</b>	<b>\$15,083</b>	<b>\$17,244</b>	<b>\$19,564</b>	<b>\$21,806</b>	<b>3.1</b>
<b>Africa</b>								
Energy-intensive manufacturing	\$1,256	\$1,561	\$1,957	\$2,456	\$3,067	\$3,769	\$4,546	4.4
Non-energy-intensive manufacturing	\$921	\$1,200	\$1,507	\$1,886	\$2,342	\$2,856	\$3,391	4.4
Nonmanufacturing	\$3,114	\$3,655	\$4,339	\$5,100	\$5,979	\$6,950	\$7,972	3.2
Services	\$6,095	\$7,549	\$9,393	\$11,636	\$14,393	\$17,550	\$21,191	4.2
<b>Total</b>	<b>\$11,386</b>	<b>\$13,965</b>	<b>\$17,197</b>	<b>\$21,078</b>	<b>\$25,782</b>	<b>\$31,125</b>	<b>\$37,100</b>	<b>4.0</b>
<b>Brazil</b>								
Energy-intensive manufacturing	\$777	\$945	\$1,093	\$1,225	\$1,331	\$1,418	\$1,496	2.2
Non-energy-intensive manufacturing	\$481	\$662	\$765	\$861	\$944	\$1,020	\$1,096	2.8
Nonmanufacturing	\$668	\$805	\$914	\$1,034	\$1,157	\$1,285	\$1,419	2.5
Services	\$2,997	\$3,545	\$4,060	\$4,576	\$5,029	\$5,439	\$5,830	2.2
<b>Total</b>	<b>\$4,922</b>	<b>\$5,957</b>	<b>\$6,832</b>	<b>\$7,696</b>	<b>\$8,461</b>	<b>\$9,162</b>	<b>\$9,842</b>	<b>2.3</b>
<b>Other Non-OECD Americas</b>								
Energy-intensive manufacturing	\$449	\$540	\$638	\$712	\$788	\$863	\$934	2.5
Non-energy-intensive manufacturing	\$473	\$607	\$715	\$818	\$930	\$1,048	\$1,178	3.1
Nonmanufacturing	\$677	\$827	\$956	\$1,070	\$1,190	\$1,311	\$1,436	2.5

**Table A15. Gross output by region and sector, High Economic Growth case**

billion 2015 dollars

Region and sector	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
Services	\$2,295	\$2,960	\$3,650	\$4,367	\$5,206	\$6,155	\$7,187	3.9
<b>Total</b>	<b>\$3,895</b>	<b>\$4,935</b>	<b>\$5,959</b>	<b>\$6,967</b>	<b>\$8,114</b>	<b>\$9,378</b>	<b>\$10,735</b>	<b>3.4</b>
<b>Total Non-OECD</b>								
Energy-intensive manufacturing	\$24,939	\$32,903	\$40,568	\$48,889	\$57,725	\$67,358	\$77,748	3.9
Non-energy-intensive manufacturing	\$35,080	\$48,857	\$61,058	\$74,454	\$88,237	\$102,952	\$118,132	4.1
Nonmanufacturing	\$27,736	\$35,234	\$41,933	\$49,543	\$58,104	\$67,507	\$77,951	3.5
Services	\$70,250	\$97,382	\$126,901	\$160,685	\$198,013	\$240,126	\$285,533	4.8
<b>Total</b>	<b>\$158,006</b>	<b>\$214,376</b>	<b>\$270,461</b>	<b>\$333,571</b>	<b>\$402,079</b>	<b>\$477,943</b>	<b>\$559,364</b>	<b>4.3</b>
<b>World</b>								
Energy-intensive manufacturing	\$35,329	\$45,022	\$53,708	\$63,121	\$73,084	\$83,896	\$95,587	3.4
Non-energy-intensive manufacturing	\$51,354	\$69,470	\$83,708	\$99,501	\$115,914	\$133,543	\$152,099	3.7
Nonmanufacturing	\$37,094	\$46,328	\$54,106	\$62,915	\$72,745	\$83,474	\$95,374	3.2
Services	\$137,244	\$178,392	\$216,674	\$260,044	\$307,662	\$360,775	\$418,412	3.8
<b>Total</b>	<b>\$261,021</b>	<b>\$339,211</b>	<b>\$408,197</b>	<b>\$485,582</b>	<b>\$569,404</b>	<b>\$661,687</b>	<b>\$761,473</b>	<b>3.6</b>

Sources: Table by the U.S. Energy Information Administration (EIA), based on Oxford Global Industry Model, (March 2021), [www.oxfordeconomics.com](http://www.oxfordeconomics.com)(subscription site); EIA, World Energy Projection System (2021), run hm\_210719.163753; and EIA, *Annual Energy Outlook 2021*, (February 2021), [www.eia.gov/aeo](http://www.eia.gov/aeo)

Notes:

\* Totals may not equal sum of components due to independent rounding.

\* *Gross output* is sales or revenue, including final and intermediate goods and services, measured in purchasing power parity (PPP).